Great Basin College Land Surveying/Geomatics Program Graduates

Nicholas F. Carter

Nicholas F. Carter (Fall 2008) is the first graduate of the Program. He began his studies as the lead surveyor on the Hoover Dam Bypass Project. He had already earned a four year degree in Construction Engineering and was licensed as a Professional Engineer. One of the surveying challenges on the Hoover Dam Bypass Project was establishing vertical control on the site which would allow the bridge spans to be placed within a tolerance of 1/16 inch. Nick used his research on the required vertical control to satisfy the Program Capstone course. This research was published as Establishing Vertical Control on the Hoover Dam Bypass-Colorado River Bridge. Surveying and Land Information Science Journal (SALIS), Vol. 69, No. 1, March 2009. He is now a licensed land surveyor in Iowa. Nick presented the challenges of the bridge layout at the joint California-Nevada Annual Conference in Las Vegas in 2010. I became interested in surveying while working on the Nevada Approach portion of the Hoover Dam Bypass project. I was looking online for any offerings of survey courses in the Las Vegas area and found the Great Basin College Land Surveying/Geomatics Program in an Internet search. My initial intent was not to obtain a degree, but to take a couple of courses to gain some additional knowledge in the area of surveying. After taking the first semester of courses I became very intrigued by the program. Having previously earned a bachelor's degree in engineering from Iowa State University, I had anticipated the course material to be elementary and fairly routine. To my surprise, the program proved to be highly challenging and the course content was very thorough. Due to the excellent instruction and academic challenges that highly exceeded my expectations, I decided to pursue the Great Basin College Bachelor's of Applied Science. After completing my work on the Nevada approach of the Hoover Dam Bypass project, I began working for the Obayashi / PSM Joint Venture on the Hoover Dam Bypass, Colorado River Bridge project, now known as the Pat Tillman – Mike O'Callaghan Memorial Bridge. My primary duties on this project were to manage the design and implementation of the geometry control system for the fabrication and erection of the precast column segments and to implement the geometry control for the cast-in-place arch segments. Additionally, I performed all other surveying on this project as a one-man crew with the use of a robotic total station and a high accuracy control network developed by Artisan Spatial Technology. I did not know it at the time I decided to pursue my degree in Land Surveying and Geomatics through the Great Basin Program, but the knowledge I obtained in completing the courses was essential in allowing me to properly complete my work and confidently establish procedures and systems that would drive the work on the bypass bridge over the Colorado River. One notable example of my use of skills obtained through the GBC Land Surveying /Geomatics Program was using propagation of error to identify any measurement errors in the geometry control process for fabricating the precast column segments. This allowed for a better understanding of how the geometry

control system needed to be established and also gave me the confidence to implement this system. Error propagation was also performed in establishing the vertical control network at the bridge site which allowed for consistency in the high-accuracy survey of the cast-in-place arch segments. After obtaining my degree through the GBC Land Surveying/Geomatics Program and completing my work on the Hoover Dam Bypass project, I moved to Des Moines, Iowa where I currently work for the Metropolitan Wastewater Reclamation Authority. My primary tasks include managing multiple pump station and wastewater conveyance projects. In accepting my current position, I did not initially see much of a use for the knowledge and skills I obtained through the GBC Land Surveying/Geomatics program. Fortunately, however, I have been able to become heavily involved in expanding the GIS system maintained by the city of Des Moines. Some of the courses offered in the program gave me extensive insight into the need for, and the implementation of a standardized source of geographic information. With this knowledge, I have been able to expand the city's system and consolidate the information with other agencies making it a more usable asset. While there is no substitute for proper field experience, I have been able to use my Land Surveying/Geomatics education to meet and exceed my goals and also provide me with a level of understanding of the surveying profession and practice that could not have been obtained by field work alone.

Kevin German

Kevin German (Spring 2009) researched the problems associated with the archival of survey records over time for his capstone project. This included developing a prototype database for the indexing, archival, and retrieval of land survey records. This was a most difficult project and Kevin's challenge was limiting the scope of his project to fit it into a one semester effort. Upon graduation, Kevin distinguished himself by immediately earning licensure in both Nevada and California. Kevin works for CFA, Inc. in Reno as a Survey Project Manager and has recently become a partner in the firm. He has generously given his time to help the GBC Program as a member of the GBC Land Surveying/ Geomatics Advisory Committee. Kevin is also an active member of the Nevada Association of Land Surveyors currently serving as President-Elect of the Lahontan Chapter. I began the Great Basin Land Surveying/Geomatics Program in the fall of 2006. I was able to transfer in much of my lower division and general education from coursework completed at previous institutions; it took me 3 years (6 semesters) to complete my degree. I started out taking two classes per semester but ramped it up to 4 classes in order to expedite the process. The online nature of the program gave me the flexibility to do this while working full time and raising a family. Weekdays were limited as to the time I could devote so I ended up spending much of my weekends catching up on school work. Much of the motivation to get my degree came from my daughter Morgan who would be heading to college herself in a few years. When emphasizing how important college was and pushing her towards getting a degree, I wanted to be able to say that I had

done it myself. Additionally, I knew if I was to stay in surveying, licensure was a must and the degree was the only way to reach that goal due to the legislative requirement for a four year degree for licensure effective July 1, 2010. After a number of different majors over the years and attendance at four different institutions of higher learning, I graduated from Great Basin College in May of 2009 and successfully tested for licensure as a Professional Land Surveyor in Nevada in October of 2009 and California in April of 2010. After enjoying a few years without homework and exams, I am gearing up for my next endeavor which is going to be the Certified Federal Surveyor Program (CFedS).

Troy Hicks

Troy Hicks (Spring 2009) began his studies in the GBC Land Surveying/Geomatics Program living in the Reno area, and had made substantial progress toward the four year degree, when he and his family moved to Alaska. Due to the fact that our Land Surveying/Geomatics Program is online, he was able to complete his studies, and graduate. Troy used the Capstone Project to investigate and learn Alaska Boundary Laws under the mentorship of a land surveyor licensed in Alaska. I heard that the state of Nevada was going to be requiring a bachelor's degree specifically in Land Surveying as part of their licensing requirements for Professional Land Surveying. To satisfy the requirement a college program had to be put in place. What I heard motivated me to justify taking the time to get the formal education, I already felt like I needed, and that I really wanted. So I looked into it and found Great Basin College. Back then I lived in Reno and Great Basin College is in Elko. So I was a bit concerned about how I would be able to do the classes. They were offering remote televised classes (Interactive Video) and I tried it out and that worked very well. And there were some lab (field work) requirements for some of the early classes that required local land surveyors to take time to come help out with on the weekends. That also worked out well. They would bring over some of their equipment and help us do our lab work for the classes. It was very beneficial to have different people teach us their methods and experiences. I expected the classes to finally answer some of my questions and give me a much fuller understanding of various aspects of the profession. To that end I was not at all let down. Frankly, I plan to take a few of the classes again under audit status, particularly Boundary Surveying and Public Lands. One benefit from the education there at Great Basin College is that I can confidently prove to prospective employers that I have the knowledge they are looking for. Aside from being employable, the benefits of the education are realized in every day practice. I am very comfortable doing any type of survey field work, writing legal descriptions, computing traverse adjustments, organizing field work, reducing GPS measurements, advising field crews on how to utilize the equipment, advising clients regarding boundary issues, preparing survey plats, designing subdivisions, mapping in various datums and projections, and now in project management. Before I finished the degree program I found myself needing to move my family to Alaska. So I timed the move to coincide with the GBC Land

Surveying/Geomatics Program completely moving to an Online Program. After moving I did not miss a beat and was registered for another semester and finished the remaining classes by utilizing the Internet via a web browser while at home in Alaska. Great Basin College had made the survey classes available through the Internet while maintaining the same standard as the live classroom. I was able to complete the degree and graduate, all while living in Alaska. Since then I have gone on to working for RCH Surveying in Fairbanks, Alaska, as a project manager. I finally have applied for registration as a Professional Land Surveyor. I will be sitting for the final exams either this year or next depending on replies to letters I sent out. I plan to get more involved with the local chapter of the Alaska Society of Professional Land Surveyors. One area I plan to promote is the benefits of formal education and how it shapes the profession and serves the public.

Ron Wilhoit

Ron Willhoit (Fall 2011) was licensed in Kentucky before choosing to earn his BAS Degree in Land Surveying/Geomatics from Great Basin College. An exceptional student, he assisted in identifying weak spots in the Program and finding solutions for these problems. As his capstone project, he developed an instructional module for the SUR 320 GIS for Land Surveyors course consisting of step by step instruction on how to input a local Elko subdivision plat into ESRI ArcGIS software creating a parcel fabric. Much credit for the current quality of the Program is due to Ron's ability to communicate and his patience in demanding the best GBC could offer. I have always been driven by the passion of attaining a four-year degree to complement my associate degree professional courses in order to add value to my career. For me, I must say, I welcomed the online program offered by the Great Basin College in Land survey/Geomatics program as a moment of joy in my life. I first learned about the program as I perused through the POB magazine classified advertising, where I later gained interest in it. It has been more that thirty-five years since I received my associate degree, and about twenty-three years since I passed the NCEE LSIT & LS and got a license to practice land survey in the State of Kentucky. It has not been an easy road towards achieving a four-year degree. I had earned my associate degree in 1978. Since then I enrolled in related courses from one college to another trying to achieve my goal, earning over 156 college credits, but never attaining a four year degree. This was mainly because of the fact that most of the courses I wanted to enroll in, the colleges' mode of study was never offered either in the evening or part-time, but only in fulltime. More so, because I had a fulltime job and family responsibilities, the only choice was to quit my job, which would have proved to be costly. I had many expectations for the degree program, but I must acknowledge that the program GBC offers surpassed my expectations by far due to its uniqueness and student-focused learning. Dr. Elithorp was quick to reply to my earlier letter to him about the four-year degree program, whereby he provided me with a personal learning plan, which finally became my road map to success. Unlike other colleges or universities, the Great Basin

College took time to prepare a study outline for my benefit. The studies allowed me to participate in the course work, clarify what I do not understand while at the same time exposing me to fieldwork activities to enhance my understanding in my studies. Though it took me three years to complete the four-year program, the courses came with its challenges, while at the same time demanding my full attention with no breaks at all. I began the program in the fall of 2008 and by the fall of 2011, I was through; attaining 52 college credits, averaging just above 7 credited hours per seminar with a GPA of 3.73. This was a great achievement for me. My studies at GBC came along with so much benefit. More so, it helped me achieve my professional goal of attaining a BAS in Land surveying/Geomatics, which is job related. The BAS from GBC resulted in an educational achievement award from the Kentucky Transportation/Personnel Cabinet. It is required in Nevada and many other states in order for one to be confirmed as a professional and be issued with a license to practice. I do not intend to stop here after accomplishing academic honors; this was just a stepping-stone towards a brighter future ahead. I shall continue to practice in the geomatics field with an emphasis to further my skills and learn about 3-D Laser Scanning, High definition Survey, LIDAR, and improve the recordation of boundary survey both for the private and public sector with a dream of one day surveying in the Public Land System.

Cory Smith

Cory Smith (Spring 2011) received his Associate of Applied Science Degree from the College of Southern Nevada and transferred to Great Basin College to complete the four year degree in Land Surveying/Geomatics while working in Lincoln County, Nevada. Cory achieved licensure in Nevada shortly after graduation from Great Basin College and is currently working for Newmont Gold Corporation at their Phoenix Mine Property as a Survey Lead Man. It is one of life's ironic circumstances that Cory achieved his education at distance just to move to the Elko Area after graduation. We are happy to have him at the Great Basin Chapter of NALS. I started college at the College of Southern Nevada (then Community College of Southern Nevada) in 2004. My goal was to graduate in 2010. Shortly after starting the Land Surveying program at CSN, I moved to Caliente, NV to work with my grandfather, Lenard Smith, in his Land Surveying business. I had hoped to obtain my professional land surveying license and eventually acquire my grandfather's company in Lincoln County, Nevada. Being able to take advantage of distance learning enabled me to work full time and get my degree at the same time, even though I didn't live in a city with a college. While I was attending CSN, I learned of the Great Basin College Land Surveying/Geomatics Program, which would allow me to receive my bachelor's degree through long distance education. I graduated with my associate degree in 2007 from CSN and entered immediately into the GBC Land Surveying /Geomatics Program. I was able to take 3 classes a semester and continue to work full time utilizing the Internet classes as well as interactive video courses as offered. Even though Great Basin College did not have a campus in town I was able to find locations

in the area that allowed me to use their technology to attend class this way. The Interactive Video and Internet courses allowed me to work in the profession concurrently while attending school. I was able to learn the theory and the field practice at the same time which I feel helped me understand more thoroughly the profession as a whole. I graduated from Great Basin College in 2011, passed the Licensure Exams, and achieved licensure in July of 2012. I am currently working for Newmont Mining Corporation as an Engineer Tech Senior and Survey Lead Man. Although it took me longer to graduate than attending full time, the knowledge I gained through CSN and GBC programs have been invaluable in aiding me in my career thus far. I am currently trying to decide where I want my career path to take me, either continuing with mining, or going back into land boundary surveying which I experienced while working with my grandfather as I attended school. I know that the knowledge I gained through these programs will aid me in whichever avenue I choose.

Ross Doyle

Ross Doyle (Spring 2012) received his Associate of Applied Science Degree in Land Surveying in 2009 from CSN, and then transferred to the Great Basin College Land Surveying/Geomatics Program. Ross is an employee of VTN Consulting in Las Vegas, Nevada and is on track to gaining the necessary work experience to be licensed in Nevada. My experience with Ross is that he is a very capable student of surveying. In his personal statement below, Ross states that he always thought that survey education was important. That attitude was evident in the classroom. As a student at the University of Nevada, Las Vegas, I wasn't really sure what I wanted to do. I probably fell into the majority of college students and just went through the motions and eventually ended up in a business major because that's what everyone else was doing. I started at VTN back in 2005 during the residential boom and at the time we were running 30 crews. When I found that very few people working around me had a college education I knew that getting a degree in Land Surveying would set me apart from everybody else. I had always wanted a college degree because I felt it was important so I started taking classes in pursuit of a Land Surveying degree. Little did I know that a few years later they would start requiring a Bachelor's degree from all applicants wishing to take the Professional Land Surveying Examinations. Once I found this out I knew I had made the right decisions in pursuing both a career and an education in Land Surveying. I originally got my job with VTN Consulting through a friend and at the time I didn't even know there were such things as Land Surveyors. I started out as a chainman (2005 – 2007), then to an instrument technician (2007 – 2011), then to what I am now, in a kind of limbo area where I deal with 3-D scanning data, drafting software, and on occasion party chief. So I just call my position now a "Land Surveyor" for lack of a better word or title. I am thankful to have been involved with several important projects with VTN. The first was the McCarran International Airport Terminal 3 early package (2008 – 2010) where I performed quality control surveying for the parking garage and the basement level of McCarran's

Terminal 3. The second major project was the P19A Pump Room (2011) where I created a 3-D model of the interior of a water pump room for the City of Henderson through the use of a scanner. Throughout the years I owe much of my gratitude towards VTN for their encouragement towards higher learning and giving me opportunities that many people my age have not had the privilege of experiencing. My number one goal is to be successful. With Land Surveying there are so many different areas of expertise such as Geodetic Surveying, Construction Surveying, Boundary Surveying, Boundary Law, Topographical Surveying, and now 3 Dimensional Modeling or BIM, it's hard to choose a specific goal or achievement that I wish to accomplish. Whatever branch of Land Surveying I finally end up at I just want to make sure I'm successful at doing it.

Jolene Hoffman

Jolene Hoffman (Fall 2012) had earned a BS in Business Administration and chose a career change due to the lack of opportunities provided in the 2008 recession. She has set an excellent example for all those individuals exercising a career change. She regularly attended our NALS Great Basin Chapter monthly meetings as a student, and now as a graduate of the Great Basin College Land Surveying Program. She is our 2013 Chapter Secretary. Her choice to meet and build relationships with practicing land surveyors is the very best way for a student to gain employment and enter the profession. I previously served in the US Air Force as an Instrumentation and Telemetry Technician, and then worked as a Financial Planner and Loan Officer after finishing a BS in Business. The real estate market dropped and awarded me the opportunity to look at a new career. Landing in Elko, NV I reviewed the programs at Great Basin College to add more specific, technical and updated skills to my resume to get me out from behind a computer every day. Land Surveying fit the bill. The reason I followed through with this choice is largely because of the people I met and aligned with through the GBC program, NALS Great Basin Chapter, technical users groups and annual land surveying conventions. Although not largely populated with women, surveyors in general fit my personality and work ethic much better than stuffy bankers. While attending Great Basin College I accumulated cadastral surveying experience as a seasonal intern for the Forest Service and later mine surveying experience with a local gold mine. Upon completion of the Land Surveying/Geomatics degree, I took a Survey Analyst position with Wallace Morris Surveying which is a technical savvy company who has managed to grow its business in this economy and recently opened a new office in Elko, NV. Here I have had the chance to get my feet in the dirt on some construction surveying and be intimately involved in positioning to take on pipeline projects. Down the road I see my business and technology background complimenting the evolution of Land Surveying to date and incorporating future developments of the industry. Every day I learn something new from a surveying, technical and/or business perspective; I don't expect that will ever change. The endless options are exactly what I was looking for.