FIBER OPTIC FOCUS

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Union Pacific Prepares for Floods in the Heartlands

With record snowfalls in the northwest last winter coupled with record rainfall in Montana this spring and summer, Union Pacific along with many of its neighbors in the Midwest prepared to deal with a swollen and continuously rising Missouri River.

Union Pacific concentrated its efforts along its lines close to the Missouri River including the Blair, Boone, Fall City, Jefferson City, Kearney, Omaha, River, and Sioux City Subdivisions.

Rising waters spilling over the banks near Missouri Valley, Iowa resulted in intense efforts from Union Pacific Engineering to insure that rail facilities remain above water and in service. Maintenance crews worked continuously, raising track and bridges where anticipated water levels appeared to threaten the rail.

Union Pacific Telecom crews took precautions in Missouri Valley to ensure communications remain intact by constructing a sand bag berm around the facility and installing a diesel powered sump system to drain the site if water should breach the area. The microwave site provides Telecom services for three Subdivisions as well as dispatch radios and Signal Operations code lines. Ron Frisse, Regional Director Telecom for the Northern Region, commented "Workers from at least four or five different Telecom field locations, Omaha technicians from the Harriman Dispatch Center (HDC), Union Pacific Center Headquarters (UPC), Telecom Service Center (TSC), including people from Telecom Engineering and the Fiber Optics group all worked together to protect the site. Many volunteered to leave their normal jobsites to help move and place sand bags. In only one week we were able to flood proof the site. I want to personally thank all the people who worked on this project."

Union Pacific's fiber customers contributed to the effort by quickly mobilizing contractors to make adjustments to bridge mounted fiber systems in the event bridges need to be raised as water levels rise to critical levels.

Union Pacific is closely watching water levels in the Missouri River from Omaha, Nebraska to St. Louis, Missouri with contingency plans for flooding conditions. Water levels are expected to remain at extremely high levels for the remainder of the summer.

From left to right are Volunteers: Tim Junkman, Carolyn Wilson and Ryan Zeilinger from Union Pacific's Telecom Department preparing for arrival of additional sand bags for placement at the Missouri Valley, Iowa microwave site.

Union Pacific's Call Before You Dig Hotline

As a matter of necessity the railroad industry operates with strict adherence to the rules books. Our rules allow for the many complex and vital operations of railroading to take place in a safe and effective manner.

When important changes and events occur, rules are then adopted or changed to meet the needs of the railroad. Upon occasion a rule may seem innocuous or relatively minor in scope until the basis for the rule is understood. Such is the case for Union Pacific's rule 44.5.

Rule 44.5 requires anyone working on the railroad's right of way to call Union Pacific's CBUD or "Call Before You Dig" hotline (800-336-9193) a minimum of two business days in advance of any planned construction activity to protect the longitudinal fiber optic cables installed along the right of way. Once the necessary information has been supplied by the caller, a "dig ticket" will be issued to the affected facility owner for the work to be done. The call is free, takes only a few minutes, and protects the employee, contractor, or facility owner from severe financial loss in the event of a fiber cable cut. Costs associated with a fiber cable cut can easily reach into the hundreds of thousands of dollars or more.

Nearly every aspect of modern life moves through the fiber optic cables running along Union Pacific right of way. Included within these lines are circuits carrying credit card information necessary each time a credit card is swiped at a store or gas station, ATM transactions, critical circuits for NASA ,Homeland Security, air traffic control, 911, plus effective exchanges of medical information and much more, all traveling at the speed of light through glass fibers buried along our rails throughout the Union Pacific system.

A lesser known commodity traveling through the fiber are those systems belonging to Union Pacific. As part of the initial agreements made between Union Pacific and its fiber customers, capacity on many fiber systems was obtained for railroad use. Systems originating at the Harriman Dispatch Center in Omaha, the Southern Region Headquarters in Spring, Texas and numerous other sites, carry signal code lines, dispatch radio, and telecom services to nearly every part of the Union Pacific system via these fiber optic cables. When combined with the existing microwave facilities Union Pacific operates one of the nation's largest private communication systems.

As presence of fiber optic cables increased along UP's right of way, a reporting system for protecting those underground facilities became necessary. The heart of that protection is Union Pacific's Response Management Communication Center (RMCC), located at company headquarters in Omaha. RMCC handles a host of both emergency and non-emergency calls, including the CBUD hotline. On an average day approximately 50 dig tickets are generated and then sent to 100+ telecommunication customers. The CBUD hotline is operated primarily by Bobbie Clark,


Nicole Irwin

Bob Giery Marks 40 Years of Railroad Service

On June 14, 2011, one of Union Pacific's "Fiber Group" employees celebrated his fortieth year as a railroad employee.

Systems Consultant Bob Giery, a member of the group since 2009, is involved with the fiber agreements area of the group and works as the liaison with Union Pacific's Real Estate department for property sales, abandonments, and permitting for new customers. Bob began as an Information Technology employee with the Chicago and Northwestern Railway Company working for 24 years until the merger between the Union Pacific and the Chicago and Northwestern occurred.

As a member of the Union Pacific IT Department Bob was involved with projects such as the "Wireless Yard Infrastructure Upgrade" enabling employees access to company computer systems anywhere in the Yard areas. Much of Bob's previous work with Union Pacific has been directly linked to the Operating Department resulting in improvements in Train Operations and safety. Some of the projects Bob has participated in include the Dispatcher Support System, Computer Aided Dispatching (CAD system), Electronic Timetable and Train Line up Accuracy systems.

"Bob was recognized for his 40th Anniversary with a Union Pacific Service Award representing our sincere appreciation for his dedication and hard work. Although Bob has only worked with our group since 2009, his background and prior work experience has proved to be very helpful for our overall operations and the development of good business relationships with our customers", said Craig Johnston, Director-Fiber Optics & Asset Utilization.

Bob has received an IT Vice Presidents award for his work linking the Southern Pacific's "Digicon" dispatch system with Union Pacific's "Union Switch" dispatch system following the merger of the two railroads.

Bill Wright Makes the Thirty Year Mark

On April 6, 2011 another one of Union Pacific's Construction Coordinators reached a notable service milestone

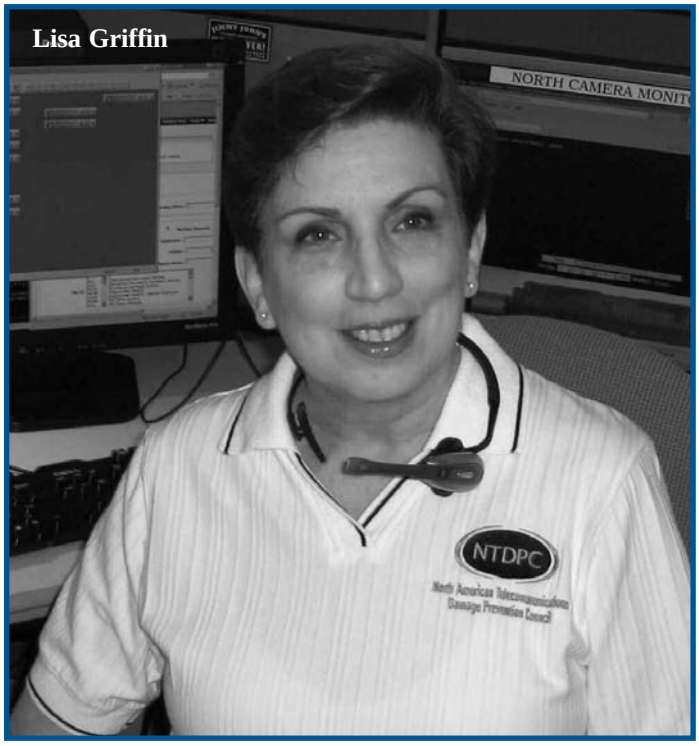
Bill Wright, Construction Coordinator for south central Texas reached thirty years of service with Union Pacific. Bill has been with the Fiber Group as a Construction Coordinator since 2000. Bill also worked as a Precision Measurement Vehicle (PMV) Operator from 1995 to 1998. Bill had begun his railroad career in 1980 as a Trackman for the Fort Worth and Denver Railroad Railway.

Having started with the Missouri Pacific Railroad as a Trainman in 1981, Bill moved to the Engineering Department in 1982 as a member of the Bridge and Building (B&B) organization. Working in various segments of the Bridge Department, Bill worked his way to the positions of Assistant B&B Foreman, System Hoisting Engineer, and System B&B Welder. During 1982, Union Pacific Corporation (UPC) acquired control of the Missouri Pacific Railroad Company (MPRR) and became a "sister" company as a wholly-owned subsidiary of UPC. On January 1, 1997, the Missouri Pacific merged into Union Pacific Railroad Company.

Bill, working as a PMV Operator, was a member of the first PMV crew to map the track and facilities of the Southern Pacific Transportation Company as the merger began in 1996. Returning to Texas in 1998, Bill accepted a job as a Southern Region B&B Supervisor working in the railroad's Regional office in Spring, Texas. Bill returned to the Fiber Optics & Asset Utilization Group two years later as a Construction Coordinator.

Craig Johnston, Director-Fiber Optics & Asset Utilization, said, "We have benefited from Bill's 30 years of practical field experience as a part of our work group. We also had the pleasure of working with Bill during his duties as a PMV operator and now in his current position as a Regional Construction Coordinator. Of course, the entire work group was delighted when Bill graciously volunteered to edit and assist with publishing this Fiber Optic Focus newsletter to keep our customers informed".

Bill's area of responsibility in Texas stretches westward from Brownsville to San Antonio and El Paso, and northward to Hearne, Austin and the Midland - Odessa areas.



Lisa Griffin

Nicole Irwin, Donald McDonough and Lisa Griffin. These dedicated employees also handle other hotlines, including the Presidents Safety Hotline, Vegetation Abatement Hotline, Unsafe Motorist Hotline, Rough Crossing Hotline, Blocked Crossing Hotline and General Information Calls. The RMCC has approximately 38 total employees and five to ten employees are working at any given time around the clock.

The Response Management Communication Center (RMCC) plays a crucial role to preserve Safety as UP's #1 priority. Union Pacific encourages reporting unusual or suspicious occurrences and environmental hazards to RMCC by calling 1-888-UPRRCOP (877-7267) or 402-544-RMCC (544-7622). Other circumstances to contact RMCC include any unauthorized digging, trespassing, illegal dumping, criminal activity, any track obstruction, hazardous materials releases, injuries / fatalities, or any incident involving on-track equipment (collision, derailment, etc). These types of calls are directed to the emergency hotlines within RMCC, and appropriate steps are taken to protect the area from train movement and notify local emergency agencies & critical Union Pacific responders.

When calling the CBUD hotline, callers should have the subdivision name, the milepost where work will be performed, a description of the work to be done, and a contact number where they can be reached. A valid phone number is especially important for callers creating multiple tickets over long distances such as track undercutter or ditching crews. Union Pacific's fiber customers can then coordinate with the employee-in-charge to insure the systems are properly located where the work is to be done each day.

A common misunderstanding is that Union Pacific's Signal Department is notified by CBUD tickets and will locate Signal facilities in response. This is not the case. The Signal Department must be notified separately by calling the area Manager of Signal Maintenance and requesting locates. Real Estate customers issued Permits have this information listed on their permits as a requirement before starting work. Union Pacific crews preparing to perform work on the rail right of way should evaluate the need of obtaining a State One-Call ticket in addition to the Union

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Bobbie Clark

In The Spirit of Cooperation

On Sunday, June 5, 2011, Union Pacific Fiber Optics Project Engineer, Paul Pino made an urgent request to one of Union Pacific's fiber customers for help.

Responding to threats of massive flooding from a rapidly rising Missouri river, Union Pacific Engineers made the decision to raise a number of bridge structures, along with miles of track, on the Omaha Subdivision to insure uninterrupted rail service on the corridor.

A call was made to Dan Hilliard of Sprint to assist the effort by initiating an emergency project to alter Sprint's bridge mounted fiber systems on affected bridges to allow the bridges to be raised without harming the cable systems.

The following morning Sprint Technician Mike Chebul met with Pino and Union Pacific's Manager Structure Design, Gary Voogd in Missouri Valley, Iowa to review the structures along the routes where Sprint could be affected by the proposed rail projects.

It was determined that three structures on the Blair and Omaha Subdivisions with Sprint bridge mounts would need to be raised. Immediately following the review a "CBUD" Emergency Notification was sent to Dan Hilliard who in turn arranged for a contractor to begin work within 24 hours.

As Union Pacific continued preparations in response to Army Corps of Engineers actions and predictions, it was determined that the bridges thought to be endangered would not see the water levels originally thought. Levees in Missouri and Iowa downstream from the Omaha area were breached, reducing predicted water levels allowing the Sprint forces to stand down.

As fears were easing with bridge concerns Paul Pino received a call from Union Pacific's Manager of Special Projects, Pat Prososki informing him that in order to equalize water pressure on the rail bed it would be necessary to install culverts at multiple locations. Once again "CBUD" Emergency notifications would be needed. As the week progressed, Sprint's Mike Chebul time and again rose to the occasion providing locates without delay. As a result of this cooperation Union Pacific incurred no delay on any of the emergency flood projects.

South of the Omaha area flood estimates were rising for the railroad's Fall City Subdivision near Atchison, Kansas. Union Pacific's Engineering Department dispatched a large ditching machine to assist with anticipated water levels. The local Manager of Track Maintenance, Zeb Kreifels, contacted McCoy Ingalls, OSP Engineer for Sprint, and asked for assistance. McCoy arranged for a Technician to locate ahead of the ditcher and arranged for two contract locators the next day to assist. Again, as a result of working together, the ditcher was able to complete 16 miles of ditching work with no delay.

On June 22, Union Pacific was making emergency repairs to Bridge 328.82 on the Fall City Subdivision near Atchison, Kansas in advance of rising flood waters. Due to conflicting information from the field, a call was made to Sprint's business contact Charlene White for additional assistance. The appropriate Engineers and Technicians were contacted and responded immediately to the railroads request for assistance. With the railroad's work on this bridge continuing through the upcoming weekend, coupled with a critical maintenance situation within Sprint's fiber system, Sprint requested additional information from Union Pacific to coordinate a sensitive operation on its network planned for that Saturday. Effective information was provided that allowed both companies to proceed with their respective critical plans. These exchanges during a time of emergency exemplify the Union Pacific Fiber Program's core philosophy of working closely and cooperatively with each other to insure our respective needs are met.

Chicago's O'Hare and Union Pacific Team Up for Progress

SOURCE: www.Cityofchicago.org

Beginning in 2005 Union Pacific joined a host of governmental and municipal agencies contributing to the modernization of Chicago's O'Hare airport by participating in one of the largest construction projects in the country at one of the nation's busiest airports.

The O'Hare Modernization Project is a $6.6 billion effort to modernize the runway systems at O'Hare for increased efficiencies coupled with the ability to handle larger aircraft. Union Pacific's Milwaukee Subdivision runs along the western edge of the airport and the properties where existing tracks were laying were needed for the runway expansion projects.

Between Mile Post 2 to Mile Post 7, Union Pacific agreed to a two-phase project creating distinct line changes between both phases. A number of residential areas scattered along the periphery of the airport were obtained in a large land acquisition project and new tracks have been built where houses and buildings once stood. The land acquisition has taken place in four Illinois cities; Chicago, Des Plains, Elk Grove Village, and Bensenville with a total of 433 acres acquired. A new bridge over a nearby Canadian Pacific rail yard was required as well.

In the first phase the Union Pacific tracks were moved to a temporary alignment to allow work to begin while property was acquired for the final alignment. One of Union Pacific's fiber customers has a cable system on the Milwaukee Subdivision and was required to relocate its fiber cable as well. An accommodation was reached and construction began creating a temporary route for both rails and fiber optic facilities. Most of the duct for the new fiber system was installed prior to the construction of the new rail. Elevated fills required months of work with compaction and grading.

The Phase One relocation moved the railroad's main line approximately 100 feet from the original line. Phase Two, scheduled to begin later this year will require fiber and rail to move approximately 1000 feet from the original location. Most of the fiber relocation for Phase Two will take place between Mile Posts 3.5 and 8.0. As with Phase One the construction for the new fiber duct system will be completed before track construction begins.

Aerial view of O'Hare Airport

Union Pacific's Call Before You Dig Hotline *Continued from page 3*

Pacific "Call Before You Dig" ticket. The Union Pacific CBUD ticket is designed to provide protection for the railroad's telecommunication customers only. For all other facilities, including all pipelines and other non-railroad facilities, the notification process is handled by calling "811" which will route any caller to its State One-Call center.


Donald McDonough

The importance of receiving a valid CBUD ticket before beginning work on railroad property cannot be over emphasized. It is equally important to verify that locates have been completed in the area designated by the CBUD ticket in which work is to be performed. If necessary an emergency dig ticket may be obtained for work which must be done immediately. Miscommunication is often the basis for cable accidents. Always remember, call before you dig. ***It's the rule.***

Getting the Focus?

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Bill Wright/Editor
BJWRIGHT@UP.COM

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Union Pacific Railroad
1400 Douglas St., MS0640
Omaha, Nebraska 68179-0640

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