FED team visits Tangsan Bridge Replacement Site

by Douglas A. Bliss

On October 29, 1997, staff members from Engineering Division's Foundations and Materials Branch and Design Branch had the opportunity of an on-site briefing and tour of the Tangsan Railway Bridge Replacement Project in Seoul.

The Tangsan Bridge provides a crossing over the Han River for Seoul Subway Line #2, and was first opened to traffic in May 1994. The bridge was closed in December 1996, after a study found serious structural defects were present.

The Seoul Metropolitan Subway Corporation (SMSC) contracted with Hyundai Heavy Industrial Company, Ltd. for the design and construction of a replacement bridge. Construction will be completed in December 1999. Hyundai subcontracted to Daniel, Mann, Johnson, and Mendenhall (DMJM), a U.S. architect-engineering firm, to supervise.

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From the Commander

Seasons Greetings! We are headed for an exciting year in 1998. Our program continues to grow.

We are reshaping ourselves to meet our customers' expectations. Our vision is our guide to the future. I encourage each of you to prepare a written statement of your personal commitment to achieving our vision. Once you commit, your daily work will become focused.

With your personal commitment established, you will make contributions to our goals: revolutionize effectiveness, seek growth opportunities and invest in people. Each day dedicate yourselves to making an investment in our goals.

FY98 is a year of consolidation for FED. We will execute our IM initiatives from earlier years. We will reorganize to execute the PPM team concept. We will round out our personnel growth. We will reorient our structure, systems, and culture to become Korea's premier engineering organization.

I am very proud of the accomplishments you achieve everyday. Push back the boundaries of achievement by creating engineering solutions for US Forces Korea. Live daily the FED Model for Action.

Best wishes for a joyful holiday season! May good health, prosperity and happiness be a part of your lives.

Building for peace on the frontiers of freedom!

COL James L. Hickey

My Personal Commitment to Each Member of the Team

1. To level obstacles so energy is not wasted and routes are easier to travel.
2. To catch you doing things right.
3. To follow up.
4. To tell the FED story.
5. To be a way finder.

FED Model for Action

1. Say what you do
2. Do what you say
3. Evaluate
4. Take action
Holiday Food Preparation Tips

It's that time of year again! The time for giving thanks, visiting relatives, preparing holiday meals and just getting ready for the "long awaited" Christmas season!

Here are a few tips for a healthy holiday meal. Poultry can be quite dangerous if handled and prepared inappropriately. Bacteria is the main culprit which can lead to food-borne illnesses (such as salmonella poisoning). This can be most harmful to pregnant women, the elderly and people with weakened immune systems.

Never thaw a turkey at room temperature - this promotes bacteria growth on the outside even though the turkey is frozen inside. A frozen bird should stay in the freezer until time to cook it. Thawing a turkey in the refrigerator can take from one to five days depending on size. If you must thaw more quickly, place the bird in its unopened bag in a sink or large container and cover with cold water. Thawing in cold water can take from four to 12 hours. Change the water every 30 minutes to keep it cold. If you buy fresh turkey, refrigerate it at 40 degrees Fahrenheit for no more than one to two days before cooking. Microwave oven instruction manuals provide thawing times and setting information.

ROASTING CHART

<table>
<thead>
<tr>
<th>Weight</th>
<th>Time</th>
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<tbody>
<tr>
<td>8-12 lbs.</td>
<td>3-3 1/2hrs.</td>
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<tr>
<td>12-16 lbs.</td>
<td>3 1/2-4hrs.</td>
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<tr>
<td>16-20 lbs.</td>
<td>4-4 1/2hrs.</td>
</tr>
<tr>
<td>20-24 lbs.</td>
<td>4 1/2-5hrs.</td>
</tr>
</tbody>
</table>

Allow an additional 15-30 minutes for stuffed turkey.
Internal temperature for stuffing should be 165 degrees.

After cooking, transfer food to shallow containers - you don't have to let food cool before refrigerating, but refrigerate leftover turkey within two hours after cooking. The best way to store turkey is to divide it and place it into small containers. Turkey stored in the refrigerator will keep three or four days, but stuffing will keep for only two days.

Don't use the same dishes that held raw poultry before thoroughly washing with hot soapy water - the same goes for any serving utensils. Wash anything that touches raw poultry with soapy water before it's used again to prevent the spread of any bacteria. This includes hands, utensils, kitchen counters, sink and cutting boards. Wooden cutting boards should be carefully cleaned after cutting raw poultry. If not, the bacteria can remain in the wood contaminating anything else cut on the board. Supermarkets now carry sprays which kill bacteria and are excellent for cleaning countertops.

The Department of Agriculture has a toll-free, year-round meat and poultry hotline -- (800) 535-4555 or (202) 720-3333 in the Washington, D.C. area. The hotline is open Monday through Thursday, 10 a.m. to 4 p.m. Eastern time.

Other constant reminders of everyday safety: exercise good judgment on the highways and byways; don't drink and drive; and allow extra time to reach destinations due to increased traffic congestion caused by Christmas shoppers, tourists, and visitors.

HAVE A SAFE AND HAPPY HOLIDAY SEASON!

From the Safety and Occupational Health Office
Holiday Message

From the Chief of Engineers

This past year ranks as one of the best of my career. I am truly blessed to be leading this great organization and working with some of the finest people in the Department of Defense.

As I reflect on the past year, I have ample reason to be proud of the way you have supported the United States and our soldiers. The Corps has protected U.S. forces in the Middle East and continues to support our soldiers in Bosnia. We built numerous facilities at Army and Air Force bases around the nation to enhance their capabilities as power-projection platforms and to enhance the quality of life of families. We also have the lead in renovating the Pentagon, the nerve center of the entire Department of Defense.

As always, our support to the nation remains steady. Corps team members saved lives and property by fighting floods in California, the Pacific Northwest and the Ohio River and Mississippi Valleys.

The Corps continues to restore wetlands and wildlife habitat, including taking an active part in restoring the Everglades, the world's largest environmental restoration project.

We cleaned and decontaminated toxic waste sites, including former defense sites in order to turn them back to public use.

Perhaps most importantly, we continue to look to the future, and we have established a Vision and Strategic Plan to guide us as we face the coming challenges. I look forward to the coming year with great anticipation of what we can accomplish together.

The Corps family wishes you and your family happy holidays and a joyous and prosperous new year.

Joe N. Ballard
Lieutenant General
Commanding

Safety Message

Army Chief of Staff

Although 1997 was a busy year, we finished it with a commendable safety record. I was extremely pleased by this result, especially given the rate of our OPTEMPO. An accomplishment like this is only possible when leaders at all levels are incorporating risk management in their training events and other activities. I appreciate and applaud your efforts but caution you that we must not rest on our laurels.

At the same time that I encourage you to continue conducting tough, realistic training - pushing the edge whenever possible - I also expect you to take a hard look at the risks inherent in each event and mitigate them. Risk management techniques must continue to be an integral part of your unit training events, leader development programs, and materiel systems designs. My experience leads me to believe that careful risk analysis and focused attention on safety will ensure the result we seek: our soldiers accomplishing their missions safely and successfully.

The Army's FY97 aviation safety record was one of our great success stories. Our third best ever, it positively reflected your unremitting efforts in managing risks across the force. Nonetheless, we cannot let our guard down. We have already experienced three Class A Aviation accidents during the first 35 days of this fiscal year, and this concerns me because it is an increase over last year's rate. I urge you to watch this area closely and continue taking active measures to ensure we promote safe flying practices. As our junior leaders get fewer flying hours and less experience in the cockpit, we senior leaders must provide them with the right training, guidance, and supervision to make them successful. Our Army's future rests with these young leaders and others like them.

Also of great pride to me is our highway safety record. The number and rate of highway fatalities and injuries continue to drop from previous years. Still, the loss of one soldier is one too many. On our highways, too many soldiers die unnecessarily or are seriously injured because they fail to use seat belts or mix drinking and driving. We all

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Military Corner

by LTC Dale Knieriemen

Doing nothing is the most tiring job in the world simply because you can't stop and rest.

We have some new members to our FED military force.

Sergeant First Class James Gilbert arrived in November and is working at Tongduchon Resident Office as a Quality Assurance Representative for the next year.

Staff Sergeant Tae K. Kwon with his wife Mi Im and children Kristin and Nathaniel also arrived in November for a two stay with the district. They will be living in the Osan area and Staff Sergeant Kwon will be a Quality Assurance Representative at the Central Resident Office.

Unfortunately, we will be soon losing two captains that will be sorely missed. Both are from Central Resident Office. Captains Carl Phelps and Lee Snodgrass will both be leaving for the United States on 15 December. Captain Phelps will be going to Mobile and Captain Snodgrass to Baltimore Districts. We wish them the best of luck in their new jobs.

We have more folks coming to the district in the upcoming months:

Sergeant First Class Steven Turley, arriving in December
Sergeant First Class David McBride, arriving in December
Captain John Parrot, arriving in March 1998
Captain Rafael Lopez, arriving in June 1998
Lieutenant Mark Cain, arriving in June 1998 (My replacement!!)

Top 10 List

LTC Knieriemen's thoughts when he found out he was leaving

10. Why me? Why me? Why me?
9. Helllllooo!? There's no CPX's in the South! Not yet...at least.
8. Hope the post ain't that big! I get tired just jogging around the FED compound one time.
7. LTC Knieriemen's Farewell Luncheon. Date: 1 Apr 98. Place: LTC K's Telecommunications Center.
6. Got to get used to stopping for those darn pedestrians and stop lights again.
5. Wonder if the Admin Staff used Hawaiian time also?
4. I love it! 24-hour free home pizza delivery from Dominos.
3. Hope my new boss doesn't drive so I can get a reserved space again.
2. Aigu! CEFMS again? Should have been a 4-letter acronym.
1. More civilians?! You can't live with'em and you can't shoot'em!!!
**New Team Members**

Staff Sergeant Kwon, Tae K. joined the FED team on Nov. 11 to serve as a construction inspector. He was born in Su-Won, South Korea, but with his family's immigration to the United States, he completed high school then enlisted in the U.S. Army in May 1987. Upon completion of the Army Carpentry and Masonry Specialist Course, he served with the 92nd Engineer Battalion at Ft. Stewart, Georgia. The unit successfully completed four construction and engineering missions in Equador, Costa Rica, Panama, and Honduras. The unit was awarded the Itchner Award, Meritorious Unit Citation, and the Humanitarian Award for Successful Missions. His next assignment was with the 18th Engineer Brigade in the former Republic of Germany, where he was chosen for missions in Desert Storm and Operation Provide Comfort in Iraq. Upon completion, the unit was awarded the Joint Meritorious Unit Award and Valorous Unit Citation. He also served as an instructor/writer at the Engineer Center at Ft. Leonard Wood, Mo., for a year. At Ft. Wainwright, Alaska, he served as a squad leader and a platoon sergeant in the 47th Engineer Maintenance Battalion, Ft. Hood, Texas. He attended Jump School at Ft. Benning, Ga. and was then assigned to 1-508 Infantry Battalion, 82nd Airborne Division at Ft. Bragg, N.C. In August 1979, he reenlisted, changed his MOS, and in April 1980, served as a Squad Leader at Ft. Rucker, Alabama for B Company, 46th Engineer Battalion. There he supervised the carpentry and plumbing for several projects. During a previous tour in Korea, Gilbert served as a squad leader and supervised the masonry, carpentry, and steel structure work during the construction of a motor pool on Camp Casey, and the renovation of Camp Mercer. He and his wife, Sunet, have a daughter, Dawn, 23, and a son, Franklin, 25.

**CSA Safety Message**

(continued from page 4)

know, or have known, individuals who were high risk drivers. These individuals were hazards to public safety because they either drove too fast for the road conditions, drank and drove, did not wear a seat belt, or who were otherwise too immature to operate their motor vehicles safely. Educating our soldiers on the dangers associated with this type of hazardous and destructive behavior must be an unrelenting effort, and I know you will continue to press for safe driving practices across the force.

Safety is a key part of caring for our soldiers. Whether on the ground, in the air, or around water, safe operations are a key part of force protection. Always an important consideration in the past, safe practices have become absolutely essential in this leaner, meaner Army. We cannot afford to lose a single soldier as a result of an action or circumstances that could have been prevented.

Soldiers are our credentials!

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Dennis J. Reimer
General, US Army
Chief of Staff, Army
FED will install Ultra Enterprise 3000

by John McSweeney

In December, FED will install the most powerful computer server ever purchased by FED. The Ultra Enterprise 3000 enables you to deploy sophisticated business applications with the kind of performance and reliability previously available only in very expensive large-scale systems. For the new generation of network-based business programs - PROMIS and Standard Procurement System - you need application servers with tremendous network responsiveness and processing power -- plus very high levels of availability. The Enterprise 3000 is the first server to offer all that in a compact, easily affordable package.

The new Ultra Enterprise 3000 computer server will allow us to incorporate new technologies as they become available.

The Enterprise 3000 is well-suited for business-critical applications because it gives you all the industry's leading reliability features found in high-end servers. The ability to tolerate power-supply failures with no system disruption and the ability to service most components while the system continues to run means less downtime due to hardware problems.

It even has the ability to predict potential system failures with monitoring software that will automatically warn the system administrator so preventive action can be taken.

As an application server, the Enterprise 3000 delivers unprecedented performance. It unites the power of up to six UltraSPARC processors, the fast I/O of 2.6-GB/sec Gigaplane system interconnect, high-bandwidth networking, high-speed disk I/O, and up to 6 GB of main memory.

Its modular design means that you can continue to upgrade the performance of the system. You can add more CPUs, I/O channels, and memory as needed and incorporate new technologies as they become available. This system delivers true investment protection.

There is a limited number of tickets available so buy yours soon so you don't miss the #1 holiday event.

<table>
<thead>
<tr>
<th>Ten Commandments of Customer Care</th>
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<tr>
<td>1. Accept small and dirty work.</td>
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<tr>
<td>2. Bend over backward.</td>
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<tr>
<td>4. Emphasize total service.</td>
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<tr>
<td>5. Be imaginative.</td>
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<tr>
<td>6. Know pressure points.</td>
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<tr>
<td>7. Give customer a boost.</td>
</tr>
<tr>
<td>8. Make customer's problems ours.</td>
</tr>
<tr>
<td>9. Maintain a sense of humor.</td>
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FED's Mr. Kim, Hwa-Yong is a delegate

by Kim, Hwa-Yong and Olson Okada

"Tae" meaning to strike back or block with the foot or to kick or jump; "Kwon" meaning fist or to strike back with the hand; and "Do" meaning the way or the art -- Put it all together and you have Tae Kwon Do, the traditional Korean martial art characterized by its fast pace and spinning high kicks. The Far East District has its own master of this art, Mr. Kim, Hwa-Yong.

"Tae Kwon Do" Kim, as he is affectionately known, has been an engineering technician in Design Branch for the past 18 years. During this time, Mr. Kim has shared his passion with FED by arranging demonstrations by the famous Yongin College Tae Kwon Do Club for organizational days and other functions. The high-flying kicks and ferocious punches are always highlights of the event, drawing oohs and ahhs from the crowd.

In November, Mr. Kim had the opportunity to demonstrate his expertise on the international stage. He was one of two referees from Korea chosen by the World Tae Kwon Do Federation to officiate during the 13th World Tae Kwon Do Championships and 6th Women's World Championships held in Hong Kong. Between November 19-23, 1997, teams from 84 countries competed.

"It was a great honor to be part of the Korean delegation and to share this part of the Korean culture with so many people," Kim said.

The athletes are divided into eight classes from Fin weight to Heavy weight. Each match involves full contact sparring with points awarded for scoring blows and kicks to the body and head. Each combatant wears protective equipment to prevent injury. The referee is in the center of the action, calling out points and penalties.

"My main goal as a referee is to insure fair competition and safety," says Kim.

The Republic of Korea team was highly successful at the tournament capturing 11 gold, one silver and two bronze medals in the Men's and Women's competition, and the overall championship in both the Men's and Women's competition. No other country has won the overall championships since the inception of the world championship tournament.

The 1998 World Championships will be held in Canada. "Tae Kwon Do" Kim hopes to be there too.
After watching the action very intently, "Tae Kwon Do" Kim decides the winner of one of several matches he refereed.
Building for peace on the frontiers of freedom

And With Electronic Bid Sets Yet!

by Nancy Tullis

The Far East District (FED) is a microcosm of its host nation when it comes to interesting blends of the old with the new caused by the breakneck speed of economic and technological development in South Korea known as the Miracle on the Han River. In a Korean department store you can find traditional Korean hanbok dresses next to the latest Paris fashions. On the streets of Seoul, you can see hand-pulled carts next to entries to brand new subway lines. At FED job sites you may occasionally still see bricks carried on Korean workers' backs while the same

company is receiving a Request for Proposal via Electronic Bid Sets (EBS).

EBS at FED? Yes that's right! During the week of November 3-7, a team of Fort Worth District employees visited FED and conducted intensive training for FED EBS team members. While here, the Fort Worth team also conducted an EBS presentation for 22 Korean construction companies. The result of the one-week training was the first CD-ROM solicitation package for an actual FED project. The Request for Proposal was released on November 14th to a group of prequalified Korean construction contractors.

The CD-ROM version of EBS is more appropriate for the FED program at the moment. However, all FED and contractor participants involved in this effort agree that full-blown internet EBS could greatly improve the solicitation process in Seoul, where contractors' preference not to rely on the local mail requires them to endure another product of the Han River Miracle - incredible traffic jams that would impress any Washington, D.C. or Los Angeles resident.

Tangsan Bridge

(continued from page 1)
bridge design and construction. Under a "definite policy" issued by the Mayor of Seoul in December 1994, foreign engineering firms must be used for quality assurance supervision on all local bridge construction and repair work. This policy was adopted following the disastrous collapse of the Songsu Bridge across the Han River in October 1994, which resulted in 32 fatalities.

Instability of the Tangsan Bridge has been attributed to problems in construction, repair and maintenance, and certain design deficiencies. Fatigue cracking, missing bolts in steel members, and defects in steel fabrication and welding were obvious signs that the Tangsan Bridge was in serious trouble.

The entire superstructure of the Tangsan Bridge has been demolished and the new structure will be placed along the original alignment. Foundation construction is in progress. The center bridge section (arched truss) will be supported with large oval-shaped, cast-in-place caissons bearing on the underlying granite bedrock. These new caissons will actually encompass small-diameter piers remaining from the original structure. Two riverbank approaches (box girder) will be supported on a combination of large cast-in-place caissons and

(continued on page 12)
Groundbreaking Ceremony at Osan

Dignitaries break ground for unaccompanied officer personnel housing (UOPH) project
by Lynn Ray and Fred Davis

On November 20, 1997, officials from the Far East District, the U.S. Air Force, and Woo Bang Housing and Construction Co., Ltd. participated in a groundbreaking ceremony for an unaccompanied officer personnel (UOPH) housing project.

It was 1991, when Osan Air Base was determined to be the site of a new UOPH project. Since the U.S. Air Force no longer had a military construction program in Korea, the UOPH was programmed into the CY92 Host Nation ROK Funded Construction Program as a quality of life improvement project. Because the programming priorities established by the U.S. Air Force kept changing with every new program year, the total funding for this dorm was broken out into several increments over a five-year period, with total funds for construction finally programmed in 1996.

Design for the project initially started in 1994, but due to siting problems was put on hold until the resiting was resolved. In fact, according to Steve Kim, Project Manager for Design, siting was changed five times over a two-year period due to constraints on building size or zoning issues. Also, the project went from two 3-story buildings to one 4-story building with two distinct wings sitting in a slight v-configuration.

"The 56,238 square-foot facility will provide modern, updated and efficient living quarters for military officers at Osan Air Base," said Lynn Ray, FED Project Manager.

Scheduled for completion in 1999, the new dorm will provide individual apartment-type quarters for 86 officers. Each apartment will be equipped with a kitchen, bathroom, living room and bedroom. The dorm will be located adjacent to the Mustang housing area, and will be literally cut into the hillside providing a natural setting for landscaping and relaxing, natural scenic views.

The project was awarded on September 30, 1997, to Woo Bang Housing and Construction Co., Ltd., for $7,748,785.48. This is the company's first major construction contract with FED. They did, however, construct facilities at Camp Walker, in Taegu, as part of the Apsan Overpass project. The firm's director, Mr. Kim, S. K., stated he is very excited about working directly for FED.
FED bid farewell to the "CRO Twins" Captain Lee Snodgrass, Project Engineer, Kunsan Project Office, and Captain Carl Phelps, Project Engineer, Humphrey's Project Office, at a luncheon held at the East Gate Club on Dec. 2, 1997. Snodgrass and Phelps both completed their Masters Degree program during their assignments here. COL James Hickey, District Commander, presented both of the soldiers with Army Commendation Medals. Phelps will be going to the Mobile District as a project engineer and Snodgrass will be a technical manager for the Baltimore District.

Tangsan Bridge
(continued from page 10)

Driven precast concrete piles. FED engineers got an up close view of caisson placement in the Han River. The work is truly impressive! Individual caissons are being constructed by first installing steel sheet piling in a large oval configuration around two existing piers. In the middle of the river, sheet piles extend through 18 meters of water and are driven through 15 meters of alluvial soil to bedrock level. Unconsolidated soil deposits are excavated from the sheet pile enclosure by suction tube dredging. Resistant soil layers and decomposed rock are later removed using a small dozer lowered into the excavation. Of course, steel ring wales and cross struts must be installed to support the sheet piles against lateral pressures from water and earth, and the ever-present Han River water must be continually pumped out during the entire process. The alluvial soil is also pressure grouted outside the sheet piles to reduce seepage into the excavation.

Condolences

Our sincere condolences to Scott and Shirly Bearden. Scott's mother, Rusty, passed away November 9.

Steel reinforcement and pumped concrete will finally complete the new caissons. The field visit provided an opportunity to observe site conditions and techniques not typically encountered on FED projects.

FED team members listen as Chaplain Gary Sanford, "Sam the Preacher Man", 121st Hospital, Yongsan, uses a staff for a prop during his inspiring message encouraging everyone to have an "attitude of gratitude". The prayer breakfast was held at the East Gate Club on November 21, 1997.