Pg 373

dc-9

CITY COUNCIL MEETING

FEBRUARY 16, 1983

PRESENTATIONS

PROCLAMATION — Mayor Reid presented a Proclamation proclaiming "National Engineers Week" to Wayne West, Civil Engineer, with R. W. Siegfried and Associates.

SAN JOAQUIN ENGINEERS COUNCIL

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ALICE M. REIMCHE
CITY CLERK
CITY OF LODI

PARTICIPATING SOCIETIES:
American Public Works Association
American Society of Civil Engineers
California Society of Professional Engineers
Consulting Engineers of San Joaquin County
Institute of Traffic Engineers
Professional Engineers in California Government

January 27, 1983

Fred Reid, Mayor
City of Lodi
City Hall
221 W. Pine Street
Lodi, CA 95240

NATIONAL ENGINEERS WEEK - 1983

As the Publicity Chairman for the San Joaquin Engineers Council, in our observance of National Engineer's Week for 1983, I am requesting your assistance in having your City Council proclaim February 20 to 26 as National Engineer's Week with the theme "Engineers: Turning Ideas Into Reality."

I have included the letter and attachments which were provided to the local newspaper along with a copy of the Proclamation by the City of Stockton in the hopes that these items would provide you with the necessary information to respond to the request.

It would be greatly appreciated if action by the your City Council could be completed prior to February 23rd so that the Proclamation can be presented at the Awards Banquet.

Please feel free to call me if I can be of any further assistance in this matter. I can be reached during the day at 944-8339 and during the evening at 957-1219.

Harry W. Montgomery

HARRY W. MONTGOMERY, P.E.
SAN JOAQUIN ENGINEERS COUNCIL
1983 PUBLICITY CHAIRMAN

HWM:ca

Attachments

SAN JOAQUIN ENGINEERS COUNCIL

PARTICIPATING SOCIETIES:
American Public Works Association
American Society of Civil Engineers
California Society of Professional Engineers
Consulting Engineers of San Joaquin County
Institute of Traffic Engineers
Professional Engineers in California Government

January 27, 1983

News Editor
Manteca News
P.O. Box 2247
Manteca, CA 95336

ENGINEERS WEEK - 1983

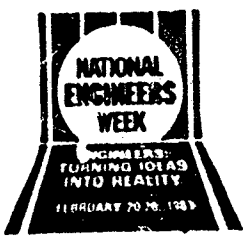
I am taking this opportunity to introduce myself as the Publicity Chairman for the San Joaquin Engineers Council in our observance of National Engineer's Week in 1983.

The annual celebration will be held during the week of Washington's birthday, February 20 to 26, since our first President was himself a notable engineer. The theme selected for 1983 is "Engineers: Turning Ideas Into Realty."

The San Joaquin Engineers Council, which represents six local engineering societies and approximately 1500 engineers in the area, will be hosting their annual Engineer's Week Award and Scholarship Banquet on February 23, 1983 at the Hilton Hotel in Stockton.

A local engineer selected by the San Joaquin Council of Engineers to be awarded the Engineer of the Year will be announced at the Award Banquet. We will supply you with a biographical sketch and photograph of the Engineer of the Year when announced.

As in the past, this year's program will include the awarding of scholarships to several high school seniors desiring to pursue a college degree in the field of engineering. The scholarship recipients, previously screened from applications received from high schools in San Joaquin, Calaveras, and Amador Counties, will be selected through a process of personal interviews. Local area finalists then proceed on to further competition at the Western Regional and National levels.



As the local Publicity Chairman, I have taken the liberty of including a media release about U.O.P. student tour and articles of interest regarding National Engineers Week. Please feel free to use any or all of the enclosed material in enlightening your readers about the role of engineers, both local and national.

I welcome any inquiries you may have regarding this matter. I can be reached during the day at (209) 944-8339 and during the evening at (209) 957-1219.

HARRY W. MONTGOMERY
SAN JOAQUIN ENGINEERS COUNCIL
1983 PUBLICITY CHAIRMAN

HWM:ca

Attachments

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Ripon, CA 95266

News Editor
Manteca News
P.O. Box 2247
Manteca, CA 95336

The attached letter was mailed to this list of news editors.

January 26, 1983

Contact Person:

Harry Montgomery
944-8339

FOR IMMEDIATE RELEASE

PROFESSIONAL ENGINEERS SPONSOR TOUR OF THE UNIVERSITY OF THE PACIFIC FOR HIGH SCHOOL STUDENTS

On February 23, 1983, high school seniors from San Joaquin, Calaveras and Amador Counties will be invited by local engineers to spend a day with them at the University of the Pacific and at their place of business as part of the observance of National Engineers Week.

Approximately 25 seniors are expected to participate. All have indicated an interest in college engineering studies after their graduation from high school.

The local engineers and students will spend the morning at the University of the Pacific where a program has been planned which will include a presentation by UOP engineering students followed by a tour of the university engineering labs. After a UOP luncheon the student and his local engineering sponsor will return to the engineer's office to learn more about the engineering profession.

THE SIGNIFICANCE OF THE THEME FOR NATIONAL ENGINEERS WEEK 1983

"ENGINEERS: TURNING IDEAS INTO REALITY"

What do weather radar, the Space Shuttle and an artificial kidney have in common? They are all ideas that became reality through engineering. "Engineers: Turning Ideas Into Reality" is the reason we celebrate National Engineers Week, February 20-26, 1983.

The theme is intended to highlight the image of the engineer as an innovator. Too often people think engineers only apply scientific discoveries made by others. But engineers are problem solvers. They use their knowledge of science and mathematics in creative ways to find answers to questions posed by society's needs.

Where will we find future energy supplies? Will the country have enough water? How well will America compete in the universal technology marketplace? As you can see many of the problems faced by this country require engineering solutions. It is through engineering that America will progress and prosper.

Touch the thermostat and the heat goes on. Turn a knob and the television goes on. Lift the telephone receiver and you can reach almost anywhere in the world. Many of the conveniences we use everyday are the results of engineering. But many of these everyday wonders are taken for granted. We don't think about the engineering that made them possible. During National Engineers Week the National Society of Professional Engineers hopes everyone will pause to salute our nation's engineers. They are "Turning Ideas Into Reality."

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BACKGROUND INFORMATION ON NATIONAL ENGINEERS WEEK

The National Society of Professional Engineers, with a membership of over 80,000 professional engineers from all disciplines of the profession, began sponsoring National Engineers Week in February, 1951. The purpose of the Week is to familiarize the public with the work of engineers and to honor outstanding members of the profession. The week of George Washington's birthday is traditionally observed as National Engineers Week because our nation's first President was himself a land surveyor and a designer of roads, fortifications, and other structures. He also had the educational background of a civil engineer in the 18th century.

In 33 years of NSPE sponsorship, the annual observance has grown from a few scattered proclamations, dinners, and speeches to elaborate programs and week-long activities in urban and rural areas throughout every state and territory of the Union. The activities involve thousands of professional engineers in industry, government, construction, private practice, and education. During the Week, thousands of students in junior and senior high schools and colleges are introduced to many facets of the engineering profession: tours and exhibits are staged in the nation's industrial and research facilities; scholarships are awarded to deserving and needy youngsters; local newspapers publish special sections calling attention

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to challenging careers in engineering; and radio and television panels discuss outstanding engineering achievements and explain what it takes to become a professional engineer.

For the past 33 years, the Presidents of the United States have sent Engineers Week messages to the engineering profession through the National Society of Professional Engineers. Outstanding American engineers are honored for their contributions to society during Engineers Week by various governmental agencies, technical professional organizations, and by citizen groups.

In 1983 National Engineers Week will be celebrated from February 20-26. The theme for the Week is "Engineers: Turning Ideas Into Reality." It is intended to highlight the image of the engineer as an innovator.

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"ENGINEERING CONTINUES TO GROW AS CAREER FIELD"

by Kathryn W. Hickerson
Staff Writer
National Society of Professional Engineers

An economy increasingly dependent on technology has meant a steadily increasing need for skilled engineers, despite the tough economic times of recent years. And, while inflation has taken its toll on engineers' salaries as it has in other fields, engineers, especially in their first employment, continue to command higher salaries than many of their colleagues in business, the sciences, and the humanities.

"Statistics show that there is a need for about 100,000 new engineers a year just to maintain current levels of productivity," says Don Weinert, P.E., Executive Director of the National Society of Professional Engineers (NSPE), a Washington-based national association representing some 80,000 licensed professional engineers in all disciplines. "Indications are that among the real growth areas in the next few years will be telecommunications, computer-related engineering fields, energy, and agricultural, environmental, transportation, and genetic engineering."

While it is difficult to make precise forecasts, "engineering salaries probably will continue to escalate, and will continue to compare very favorably with starting salaries in other career fields," Weinert predicts.

According to the latest edition of NSPE's annual Income and Salary Survey (based on data from January 1982), the median salary for an engineer with a B.S. in engineering and less than one year of experience is $24,320. In contrast, the College Placement Council reports that the current average salary offer to bachelor's-degree job candidates in accounting is $18,540--the highest average starting salary in any business field. The median salary for an engineer with a master's degree in engineering and less than one year of experience is $27,000, according to the NSPE survey.

Engineers with bachelor's degrees in engineering and five to nine years of

experience earn a median salary of $31,104. With a master's degree in engineering, the figure for five to nine years of experience rises to $32,637. And an engineer who has an M.B.A. degree and five to nine years' experience earns a median salary of $35,000. "In some cases," Weinert points out, "the figures can be considerably higher."

Petroleum and mining engineers, for example, currently command a median salary of $29,500 with less than one year of job experience--a hefty $4,520 above the $24,980 median salary of all engineers with under a year of experience. With two years' experience, petroleum and mining engineers earn $34,150 (compared to a median of $25,146 for all engineers with two years' experience), and with five to nine years' experience, these engineers earn $41,800 (compared to the median of $31,825), according to the NSPE data.

An electrical/electronics engineer with under a year of experience earns a median salary of $23,950. With two years' experience, the figure rises to $26,000. An electrical/electronics engineer with five to nine years of experience can expect to make $32,500 a year.

Weinert's predictions of major growth areas stem from the current situation of high demand in certain engineering fields. "Computer-related engineering fields are an example of a great area of opportunity where there already are some severe shortages," he notes. "All indications are that this trend will continue."

He foresees a need for engineers to design computers, to develop computer-aided manufacturing processes, to design facilities (both for industrial and home applications) incorporating computer technology, and to conduct the research and development work necessary for future computer advances.

"Energy production and distribution obviously is another area of increasing opportunities," Weinert says, "both in traditional fossil fuel technologies and in the development of alternative energy sources as oil prices rise and supplies dwindle." Among the jobs for engineers in this area will be extracting raw

materials from the ground, processing these materials, producing energy from the processed fuel, and distributing the energy to users throughout the country. And, despite the recent delay by Exxon in its major synthetic fuels projects, Weinert believes that the harsh realities of world oil supply will eventually assure work for many engineers in the synthetic fuels industry.

As the population of the U.S. continues to grow, engineers will become increasingly important in the complex process of providing food and fiber, Weinert says. Agricultural engineers will be relied on to improve production, harvesting, processing, and distribution of food to meet the population's needs.

Similarly, engineers will be the key to maintaining water and air quality as stresses on the environment become more severe and complex. They also will lead the way in maintaining an equally complex network of air, water, and land transportation.

Engineers also will be at the forefront of future developments in biomedical and genetic fields. The scientists have made key discoveries in these fields, and "It is the engineers who will be responsible for applying these discoveries to the processes and products that will yield important benefits to society and the economy," Weinert stresses.

"Engineering also is a field of great potential for women," he indicates. More than 15% of all freshman engineering students in 1981 were women, and they are among the top engineering students in terms of academic performance. "Women engineers are performing superbly in this once male-dominated profession, and by the turn of the century, I wouldn't be surprised to see 25% of the practicing engineering profession composed of women," Weinert says.

The basic educational requirement for any engineering career is a four- or five-year bachelor's degree in engineering. Many firms will pay a premium for job candidates with advanced degrees in certain engineering fields. Students interested in preparing for an engineering career should look for a school with an engineering

program in their area of interest that is accredited by the Accreditation Board for Engineering and Technology (ABET), Weinert advises. Currently, there are 1,212 ABET-accredited engineering programs in the U.S. in some 250 colleges and universities. These programs cover a wide variety of engineering specialties which should appeal to almost any individual interest. In addition to the basic disciplines of electrical and electronic, chemical, civil, mining and metallurgical, and mechanical engineering, there are dozens of other programs covering such fields as petroleum, agricultural, manufacturing, industrial, heating and refrigeration, automotive, ceramic, and fire protection engineering, to name only a few.

"Regardless of the area of specialty, the first two years of engineering study usually emphasize a sound grounding in mathematics and the physical sciences. There is plenty of opportunity for a student to make a decision on a specialty area during his or her course of study, so a student entering engineering school need not be discouraged if he or she is not absolutely certain about which specialty to pursue," Weinert says.

Of more concern than finding a specialty should be the courses a prospective engineer takes before he or she reaches college. "Inadequate preparation in math and science at the precollege level can be a critical problem," he warns, "and students, parents, and schools should be aware that engineering careers require adequate math and science preparation starting as early as the seventh grade--and continuing without interruption throughout high school."

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