

8 March 1957

Honorable Carl Hayden  
United States Senate  
Washington 25, D. C.

Dear Senator Hayden:

On the 16th of March I have been asked to present to the Third Arizona Industrial Development Conference at the University of Arizona, a twenty minute talk entitled "Looking Forward with Fort Huachuca."

This conference is scheduled to bring to it about 500 people from industry in the State of Arizona. One of the speakers, I understand, will be Secretary of Labor Mitchell.

I am taking the liberty of sending you a draft copy of my talk together with the black and white photographs of the colored slides which I intend to use in my presentation. While the talk may not interest you in any way, I feel certain that the charts will give you a pretty complete story of our annual financial impact upon the economy of the State of Arizona.

As you may know, the Chambers of Commerce use the monthly payroll of \$1,500,000 as a yardstick in comparing our net worth to the State, whereas our total expenditures this year approximate \$50,000,000. Another significant factor which I would like to call to your attention is that we put a considerable amount of emphasis on our local procurement. By local procurement I mean the supplies we buy from within the State of Arizona and this does not reflect the supplies and building material bought by contractors. This year our local procurement is roughly \$5,000,000.

I thought you might be interested in getting a copy of this material.

Sincerely yours,

- 2 Incl  
1. Draft of Speech  
2. Photographs (8)

EMIL LENZNER  
Major General, USA  
Commanding

MAR 12 1957

USF200000701

PRESIDENT HARVILL, MR. CHAIRMAN, DISTINGUISHED GUESTS.

THE UNITED STATES ARMY ELECTRONIC PROVING GROUND AT FORT HUACHUCA, ESTABLISHED JUST THREE YEARS AGO, IS NOT OF THE COMMON GARDEN VARIETY OF MILITARY POSTS AS GENERALLY KNOWN TO THE PUBLIC. OF THE HUNDREDS OF MILITARY ESTABLISHMENTS OPERATED BY OUR NATIONAL DEFENSE LESS THAN TWENTY-FIVE FALL INTO THE PATTERN OF FORT HUACHUCA. CERTAINLY, THE DIRECTION, CONTROL AND OPERATION IS EXERCISED BY PERSONNEL IN ARMY UNIFORM BUT IN EVERY OTHER RESPECT FORT HUACHUCA IS NOT UNLIKE A MULTI-MILLION DOLLAR INDUSTRIAL ORGANIZATION. THE ANNUAL PAY ROLL IS FREQUENTLY USED BY CHAMBERS OF COMMERCE AS A YARD STICK IN MEASURING THE NET WORTH OF A COMMERCIAL AND MILITARY ESTABLISHMENT AS AN IMPACT UPON THE ECONOMY OF THE COMMUNITY. YOU WILL NOTE LATER THAT THE PAY ROLL OF FORT HUACHUCA REPRESENTS ONLY A SMALL FRACTION OF THE DOLLAR VALUE OF OUR OPERATIONS.

IN ORDER TO COVER THE WIDE VARIETY OF INTERESTS REPRESENTED HERE TODAY, I WILL FIRST COVER THE BUSINESS ASPECT OF FORT HUACHUCA.

I WILL DEVOTE THE LAST HALF OF MY PRESENTATION TO THE TECHNICAL PORTION OF THE PROVING GROUND.

THE CONVERSION OF AN OLD RUMDOWN MILITARY POST INTO A TECHNICAL FACILITY PRESENTS MANY COMPLEX PROBLEMS AND REQUIRES A CONSIDERABLE AMOUNT OF MONEY. EXISTING FACILITIES MUST BE CAREFULLY FITTED INTO NEW CONSTRUCTION SO THAT BOTH OLD AND NEW CAN BE DONE CONCURRENTLY. DURING FISCAL YEAR 1955 OUR NEW CONSTRUCTION WAS LIMITED TO A QUARTER MILLION. AS YOU CAN SEE FROM THIS CHART, IN 1956 OUR CONSTRUCTION PROGRAM REALLY GOT UNDER WAY TO THE TUNE OF \$12,000,000. IT MAY INTEREST YOU TO KNOW THAT ALL BUT \$2,000,000 WAS AWARDED TO ARIZONA CONTRACTORS. THIS FISCAL YEAR OUR CONSTRUCTION PROGRAM INVOLVES AN EXPENDITURE OF SOME \$16,000,000. HOW MUCH WE WILL HAVE IN THE IMMEDIATE FUTURE YEARS CANNOT BE DETERMINED AT THIS TIME, HOWEVER, OVER A FIVE YEAR PERIOD STARTING WITH FY 1956 WE HOPE TO ACQUIRE A TOTAL OF \$50,000,000 FOR THIS PURPOSE ALONE. MAJOR ITEMS IN THIS PROGRAM WORTH MENTIONING ARE 1600 FAMILY HOMES, TROOP BARRACKS AND A TECHNICAL ENGINEERING BUILDING.

CHART I

OUR CONSTRUCTION PROGRAM SHOULD LEVEL OFF IN ABOUT FIVE YEARS.

CHART II

I MENTIONED A FEW MINUTES AGO REHABILITATION OF EXISTING FACILITIES. THIS OF COURSE INCLUDES EXISTING BUILDINGS AND UTILITIES. OUR ANNUAL EXPENDITURES FOR THIS PURPOSE RAN PROGRESSIVELY FROM A FEW HUNDRED THOUSAND THE FIRST YEAR TO \$6,000,000. WE FEEL THAT THIS ACTIVITY WILL BE STABILIZED AT AN AMOUNT OF SIX TO SEVEN MILLION DOLLARS ANNUALLY. THE MAJOR PORTION OF THIS WORK IS DONE BY LOCAL CONTRACTORS.

IT IS THE POLICY OF MILITARY COMMANDERS TO PROCURE SUPPLIES LOCALLY WHENEVER POSSIBLE. IN MOST CASES THIS CAN BE ACCOMPLISHED AT A SAVING OF TIME. THE CHART YOU SEE HERE SHOWS OUR LOCAL PROCUREMENT

CHART III

EXPENDITURES FROM THE TIME THE PROVING GROUND WAS ACTIVATED. THE FIGURES SHOW THE AMOUNTS WE HAVE SPENT TO BUY SUPPLIES AND EQUIPMENT WITHIN THE STATE. IT DOES NOT INCLUDE THE MANY MILLIONS OF DOLLARS WORTH OF SUPPLIES BOUGHT LOCALLY BY CONTRACTORS. THE FIGURE FOR THIS YEAR OF \$5,000,000 WILL NOT GET ANY SMALLER. HOW MUCH BIGGER IT WILL GROW WILL DEPEND UPON OUR FUTURE EXPANSION AND ADDITIONAL SUPPLIERS MOVING INTO THE STATE AS WELL AS PRESENT SUPPLIERS HAVING IN THEIR STOREROOMS MORE OF WHAT WE NEED.

## CHART IV

THIS CHART SHOWS THE PROGRESSIVE INCREASE OF MONTHLY PAY ROLL OF MILITARY PERSONNEL. THE LAST FIGURE OF \$900,000 IS STABLE FOR THE PRESENT AND IMMEDIATE FUTURE YEARS. PRESENT PLANS BY THE DEPARTMENT OF ARMY DO NOT REFLECT BRINGING IN TO FORT HUACHUCA ANY ADDITIONAL TROOPS. IN FACT WE WILL NOT HAVE ADDITIONAL BARRACKS AVAILABLE FOR SEVERAL YEARS. OUR SATURATION FIGURE IS SEVEN THOUSAND AND WE HAVE ALMOST THAT MANY NOW.

OUR CIVILIAN MONTHLY PAY ROLL FIGURES REFLECT PROGRESSION TO THE AMOUNT OF OVER SIX HUNDRED THOUSAND DOLLARS. THIS FIGURE SHOULD INCREASE OVER THE NEXT THREE YEARS TO ABOUT ONE MILLION DOLLARS PER MONTH. THIS WILL DEPEND UPON OUR CAPABILITY TO RECRUIT FROM OUTSIDE OF THE STATE ABOUT 200 MORE PEOPLE IN THE PROFESSIONAL SKILLS SUCH AS ELECTRICAL AND ELECTRONIC ENGINEERS, PHYSICISTS, MATHEMATICIANS AND OTHERS.

## CHART VI

I SHALL NOT DWELL TOO LONG ON OUR MILITARY STRENGTH. IT REFLECTS OUR GRADUAL BUILD UP TO OUR PRESENT AUTHORIZED STRENGTH OF CLOSE TO 7,000. ABOUT TEN PERCENT OF OUR MILITARY STRENGTH IS OFFICERS, THE BALANCE ENLISTED PERSONNEL.

CHART VII

OUR CIVILIAN EMPLOYEES NOW TOTAL OVER 1800. HERE WE EXPECT A GROWTH OF 500 OVER THE NEXT TWO YEARS LARGELY IN THE PROFESSIONAL FIELDS. RECRUITMENT OF THIS TYPE OF PERSONNEL IS SLOW AND DIFFICULT. WE EXPEND, AS DOES INDUSTRY, A CONSIDERABLE EFFORT IN BRINGING PEOPLE IN FROM YOUR LOCAL UNIVERSITIES AS WELL AS FROM THOSE OUTSIDE OF THE STATE. TO ATTRACT INDIVIDUALS OF THIS KIND WE HAVE EMBARKED ON A COMPREHENSIVE PROGRAM. IT INVOLVES GIVING SUMMER EMPLOYMENT TO STUDENTS OF THE TWO ARIZONA UNIVERSITIES AS WELL AS UNIVERSITIES IN ALL PARTS OF THE COUNTRY. LAST YEAR OUR SUMMER UNIVERSITY STUDENTS REPRESENTED 10 DIFFERENT SCHOOLS. LAST SUMMER WE EMPLOYED OVER SIXTY HIGH SCHOOL GRADUATES FROM THE LOCAL HIGH SCHOOLS, MOST OF WHOM SHOWED AN INTENT TO ENTER A UNIVERSITY AT THE END OF THE SUMMER. THE PROGRAM WAS SO SUCCESSFUL AND THESE YOUNG MEN AND WOMEN SO ENTHUSIASTIC THAT WE ARE GOING TO REPEAT THE PROGRAM THIS YEAR. OUR COURSES OF INSTRUCTION CONDUCTED ON THE FORT BY MEMBERS OF THE FACULTY OF THIS UNIVERSITY ARE GOOD AS A STARTER. THEY SHOULD ALSO IMPROVE MATERIALLY AS WE MOVE CIVILIAN AND MILITARY FAMILIES FROM DISTANT POINTS TO FORT HUACHUCA.

I SHOULD NOW LIKE TO TURN FOR A MOMENT TO THE TECHNICAL PROGRAMS OF THE ARMY ELECTRONIC PROVING GROUND. AS YOU KNOW, HISTORICALLY, THE SIGNAL CORPS IS THE RESEARCHER AND DEVELOPER OF EQUIPMENT, DOCTRINE AND TECHNIQUES IN THE COMMUNICATIONS-ELECTRONIC FIELD FOR THE ARMY. IN MOST CASES WORK DONE, IMMEDIATELY AFTER WORLD WAR II, COULD SCARCELY BE TERMED RESEARCH AS WE KNOW IT TODAY, BUT RATHER IT WAS "PRODUCT IMPROVEMENT". TWO MAJOR OCCURRENCES OF THE PAST DECADE HAVE ABRUPTLY PUT TO AN END THAT RATHER TRANQUIL AND STEADY PRODUCT IMPROVEMENT PROGRAM. ONE WAS THE DROPPING OF THE FIRST ATOMIC BOMB AND THE SECOND WAS THE ALMOST UNBELIEVINGLY RAPID IMPROVEMENT IN THE QUALITY OF WEAPONS AND EQUIPMENT AND THE NUMERICAL MIGHT OF COMMUNIST AGGRESSORS. WHEN THE BOMB DROPPED, MILITARY PLANNERS EVERYWHERE BEGAN TO REASSESS THEIR TIME HONORED AND WELL PROVEN TACTICS IN LIGHT OF THE GREAT NEW WEAPON, AND OUR PLANNERS HAVE ALWAYS KNOWN WE COULD NEVER MATCH OUR ADVERSARIES MAN FOR MAN AS THERE SIMPLY WEREN'T ENOUGH OF US --- THEREFORE, WE MUST MAKE UP FOR OUR NUMERICAL INFERIORITY WITH A SUPERIORITY IN WEAPONS, TACTICS, TRAINING AND INDIVIDUAL BRAIN POWER. THIS IS WHERE THE ARMY ELECTRONIC PROVING GROUND GETS ITS MISSION.

WE ARE DEVELOPING COMMUNICATION-ELECTRONICS SYSTEMS COMPRISED OF ITEMS WHICH THE RESEARCH AND DEVELOPMENT COMMUNITY FURNISHES US. FROM OUR TESTS WE MAKE RECOMMENDATIONS FOR "PRODUCT IMPROVEMENT" TO KEEP THE ARMY EQUIPPED WITH THE BEST EQUIPMENT THIS NATION CAN PROVIDE TO INCREASE OUR WEAPONS SYSTEMS EFFECTIVENESS, TO INCREASE OUR MOBILITY AND TO PROVIDE THE COMMANDER WITH CONTROL OF HIS UP-TO-DATE TACTICS.

AS YOU KNOW, WITH THE EXCEPTION OF A SMALL PERCENTAGE OF FUNDS EXPENDED FOR SALARIES, OUR WORK IS DONE BY PRIVATE INDUSTRIALISTS SUCH AS YOURSELVES. OUR BUDGET FOR CONTRACTS FOR FISCAL YEARS 56, 57 AND PROJECTED FOR FY 58 IS SHOWN ON THIS SLIDE.

CHART VIII

THE CONTRACTS ARE USUALLY OF THE NEGOTIATED TYPE AND AS FAR AS I CAN ASCERTAIN ARE VERY SATISFACTORY BOTH TO INDUSTRY AND THE ARMY. WITHOUT THIS METHOD OF OPERATION I BELIEVE IT FAIR TO SAY, THE TECHNICAL PROGRAM OF THE PROVING GROUND WOULD NOT HAVE MADE THE MAJOR CONTRIBUTIONS IT HAS TO THE ARMY. YOUR COMPANIES CAN -- AND DO -- BRIDGE THE GAP BETWEEN OUR CAPABILITIES AND THE REQUIRED RESULTS. FURTHERMORE, THE PROVING GROUND COULD NOT BEGIN TO DUPLICATE THE VARIETY AND EXCELLENT FACILITIES NOW OWNED AND OPERATED BY PRIVATE INDUSTRY AND OUR UNIVERSITIES.

WE HOPE TO MAKE MORE AND MORE USE OF YOUR ENGINEERING PERSONNEL AND APPLIED ENGINEERING FACILITIES.

YOU ARE PROBABLY WONDERING HOW FAR THE PROVING GROUND WILL GO IN ITS CONTRACTING FOR THE FUTURE AND WHAT WILL BE THE BUDGET. WE FEEL OUR PROGRAM WILL LEVEL OFF AT ABOUT THE FY 1958 FIGURE. UNLESS THERE IS SOME UNUSUAL CHANGE IN THE OVERALL DEFENSE PROGRAM, WE FEEL THESE AMOUNTS OF FUNDS ON AN ANNUAL BUDGET RATE SHOULD CARRY US THROUGH THE NEXT FIVE YEARS.

BROADLY SPEAKING, OUR PROGRAM ENVISIONS PROGRESS IN FOUR MAJOR CATEGORIES:

FIRST, A NEW ARMY COMMUNICATION SYSTEM. WE ENVISAGE AN ALMOST REVOLUTIONARY CHANGE IN THE ORGANIZATION, DOCTRINE, AND COMMUNICATIONS MEANS PROVIDED THE ARMY OF THE FUTURE. THE REQUIREMENTS FOR MOBILITY, FLEXIBILITY AND COMMUNICATIONS RANGE WILL BE FAR MORE SEVERE THAN ANY TEST WE HAVE YET ENCOUNTERED.

SECONDLY, THE BATTLE AREA SURVEILLANCE PROGRAM, SOMETIMES REFERRED TO AS THE EYES AND EARS OF THE ARMY. HERE WE ARE ATTEMPTING TO EXPLOIT OUR TECHNOLOGY TO THE UTMOST IN EXPANDING MAN'S ABILITY TO SENSE THE FEATURES OF HIS ENVIRONMENT.

WE MUST PROVIDE ELECTRONIC SYSTEMS FOR LOCATING THE ENEMY, FOR GUIDANCE OF OUR OWN TROOPS OVER ALL TYPES TERRAIN, FOR AUTOMATICALLY EVALUATING RAPID CHANGES IN COMBAT SITUATIONS, AND EVEN METHODS FOR DESTROYING THE ENEMY ARE INCLUDED UNDER THIS CATEGORY.

THIRD, WE MUST CONTROL THE USE OF THE ELECTRO-MECHANICAL SPECTRUMS.

WE MUST BE ABLE TO MINIMIZE ENEMY JAMMING AND AT THE SAME TIME GREATLY IMPROVE OUR CAPABILITIES FOR DISRUPTING ENEMY USE OF HIS COMMUNICATION-ELECTRONIC FACILITIES.

FOURTH, WE MUST HAVE NAVIGATIONAL AIDS FOR OPERATION OF ARMY AIRCRAFT IN ALL WEATHER CONDITIONS AND IN UNCHARTED PARTS OF THE WORLD.

THE ARMY HAS, FOR THE FIRST TIME, AT THE ARMY ELECTRONIC PROVING GROUND, THE LONG NEEDED "PRODUCT IMPROVEMENT FACILITY", TO LAY OUT IN FULL SCALE THE COMMUNICATION-ELECTRONICS OPERATIONS OF AN ENTIRE FIELD ARMY FOR STUDY AND EVALUATION. THIS IS THE CRUCIBLE INTO WHICH IS Poured THE PRODUCTS OF ELECTRONIC RESEARCH AND DEVELOPMENT. IT IS THE FIELD LABORATORY IN WHICH WE CRYSTALLIZE CONCEPTS TO FULFILL THE DEMANDS OF THE NEW MODERN ARMY FOR COMMUNICATION-ELECTRONICS SYSTEMS.

WITH THE TREMENDOUS GROWTH OF THE ELECTRONIC INDUSTRY OVER THE PAST DECADE, I DO NOT BELIEVE THAT ELECTRONICS HAS YET BEEN CALLED UPON TO REALLY FLEX ITS TECHNOLOGICAL MUSCLES IN A MODERN WAR. I HOPE THAT THIS WILL NEVER BE NECESSARY. HOWEVER, IF THE POTENTIALITIES FOR PROTECTING OUR NATION ARE TO BE REALIZED, THERE REMAINS THE IMPORTANT AND VERY SENSITIVE JOB OF THE ARMY ELECTRONIC PROVING GROUND.