NIH-ORF
Oral History Project
Interview with Tony Clifford
Conducted on July 12, 2019 by Scott Vierick

SV: Today is Friday, July 12, 2019. This is Scott Vierick with History Associates and I'm here with F. Anthony Clifford, also known as Tony, the retired Chief Engineer of the Office of Research Facilities Development and Operations. So Tony, just to get started, can you briefly sketch out how you came to NIH?

TC: When I got out of engineering school in 1966, I started to work with a small company doing work with NASA and with the U.S. Navy. I got very much involved in NASA work. We were getting ready to go to the moon and there I was a young engineer. To me that was the most exciting thing in the world. I was traveling all around the world on assignments, practically everywhere that NASA and the Navy went, Pearl Harbor, Hawaii, east coast, west coast, you name it.

My father said I was having too much fun. So unbeknownst to me, in 1969, my dad saw an advertisement in the Washington Post, which said, "Mechanical Engineer wanted at NIH. Excellent Opportunity. Grade 11 or Grade 12." The salary was $11,000 to $12,000. Since he really supported public service, he filled out the NIH job application using my company resume, signed my name and mailed it in. I didn't know anything about this. I was having fun on the beaches of Waikiki working with the NAVY on their atomic powered submarines. One day I got a call that NIH wanted to interview me for a job that was advertised as "Mechanical Engineer". My first question was who is NIH then I asked about the position. It sounded interesting and since I lived in Bethesda, I said I would come for the interview. I came to NIH in April 1969 for the interview in the Plant Engineering Branch with a man who would soon be my boss.

SV: Who was that again?

TC: …A gentleman by the name of Al Orban.

SV: Okay.

TC: Al Orban was head of Maintenance Engineering who would turn out to be one of the totem poles of my career. After the interview with Al Orban he said we've got to take you over to Building 1 and you've

got to meet the Director of Engineering, Ross Holiday. This position was very important to him and he wanted to give the OK.

I went to Building 1 and met Mr. Ross Holiday. He literally had built this campus from the bottom up as the first head engineer. He talked to me about a job and I told him I really didn't come looking for a job. I enjoy my job now and if you want me to be a design engineer, which means sit at a drawing board and draw stuff all day long, I not interested. I've been working with NASA and with the Navy on submarines and I like the hands-on. I built my own car. I did all that. He said Tony, that's exactly what I'm looking for. I want somebody who is not sitting at a desk all day long. I want somebody who will go out and find out what's wrong with things and fix them. I asked what would I do? He said, "The Cancer Institute has a brand-new high containment Building 41 under construction. We'd like for you to work on that building to get it commissioned, get it up and running. It's your own job. You won't work on a team or anything. This would be your job and I hope you take the job because I've interviewed and contacted 32 people already and I turned everybody down. He said he liked the way I thought and wanted to hire me. I accepted.

The reason I mention Al Orban who was my real mentor in my early days is because on my first day at work he said to me, "Tony, before you report to your desk," (this was way before we had things called “onboarding) I want you to spend three weeks before you even come to the office, going around to every single building NIH has and meeting all the building engineers and see what goes on in every building. Go to mechanical rooms, learn how NIH works, how elevators work, how the central utility plant works, how underground utilities work and get to know the men and women who run this place."

I really got to learn my way around NIH, but more importantly, I got to meet the workers who were running the buildings, what we used to call the wage grade guys, (the blue shirts). As an engineer and growing up in Bethesda, I didn't have much of a relationship with craft persons except when I'm working with the Navy. These folks really knew how to operate these complex buildings and they liked the idea that I had a lot of questions and was interested in what they did. You might say I formed a connection with them in my early days.

For the next several years my boss sent me around the country to learn how other organizations worked. He also sent me to the Carrier Company school up in Syracuse, N.Y. for about a month to learn everything there was about air conditioning, the same way the Carrier engineers learned it. That was

great training because I never got into that detail at the university. Another reason I was traveling to other research facilities is because the new Cancer Building 41 was having trouble getting commissioned.

SV: How so?

TC: There were problems with the new technology supporting biocontainment. Building 41 was a new design for NIH as a biocontainment facility. We could not get proper air balance to work in the building—air needs to flow from low-risk areas to high-risk areas. Also, the bio decontamination equipment which cooks wastewater to kill germs didn't properly work. Building 41 was called the Emergency Virus Isolation Facility and NCI wanted the building online in nine months to search for a virus that they thought may cause cancer. It was like going to the moon in nine months.

To gain experience with this type of building, I traveled with our facility staff and Dr Barkley from NCI all around the country to visit other labs like ours. We went to the Houston Manned Spacecraft Center because they have several containment buildings to process the moon rocks. We also went to Plum Island, which is the Dept of Agriculture containment center plus Ames, Iowa to see another USDA containment facility.

On one important trip I was told by my office that I couldn't take facility building operators with me. Wage grade people don't travel I was told. I was also told that I was the engineer and I could come back and tell the operators what I had learned. I said to my boss, "I don't understand half this containment equipment. These building engineers do so let me take them on the trip." I then went to the National Cancer Institute and they paid for all travel. I had four people go with me to Houston. I learned the value taking our electricians, carpenters, and plumbers on the trip as they had great questions and were most professional. It was the right thing to do. My lesson was that it’s not your job or education that makes you valuable, it’s what you can do for the mission.

As I noted before, I really started to learn from my earliest time at NIH and DES that it is not the job title that makes you important, it's what you know and how you use that to the betterment of the organization. We came back with great responses to our questions and insight on what was wrong. Using that information, we got the systems in Building 41 up and working.

I want to talk for a moment about how my first boss, Al Orban. He was a great mentor for a young engineer. He sent me to several writing courses because he knew that not all engineers can write properly including me. I learned how to write and make presentations. He also provided a lot of formal and informal training. For example, he reviewed almost every memo I wrote in my early years (in those days, no email, everything was a memo) and would take a red pen to paper and say "No, no, you can't say it that way. It's too long. That's not the way you spell that word." But politely. He was a real supporter of my career. He would say, "Tony, you're going to go places at NIH, and you need to have these tools for the future".

After three years of doing all this work in the maintenance engineering department, I was approached by the chief of the DES design office, AL Perkins. I was getting very critical of their designs because they were not well thought thru. I told him that the design office should go out and ask the people who run the buildings what they need and how to make so it was repairable. I was somewhat critical of the existing process. So as a reward for being critical of the current status, the design office hired me away from the public works side of DES to be a GS-12 project officer in 1972 to run projects and hire AE firms to do designs. Within a year and a half, I was Head of Project Management. I remember one selling point for that position was that I would have my own office with a door- that was not common for folks of my grade. Up until that time I always had just a cubical.

TC: Al Perkins was Chief of Design. I remember my first day on that job in 1972 as a new project manager. Al Perkins said he was going on vacation for two weeks. He wanted me to start to work on a POR for our new NIEHS campus in Research Triangle Park, North Carolina. He said, "Tony, start on that and here are some guidelines, and I got to leave. Any questions?" I responded that I had only one—what the heck is a POR. Al Perkins said it was called a program of requirement. You must write down what the government wants in this new facility. He told me to get all the technical people in the office together and have them draft their requirements including mechanical, electrical, structural, and architectural, and then put it all in one clear document.

The RTP project was a great opportunity for me to help design a new 420-acre campus for the NIEHS. I remember going down to North Carolina to see the site many times. Back in those days this was the wild wooly west so to speak, two-engine DC-3s landings and one motel. This project was a great opportunity for me and a key point in my advancement at NIH. I remember one event that took place on that project in the early days. The Department of Health and Human Services (back then it was called the

Department of HEW, Health, Education and Welfare) wanted to get briefed on big projects at NIH particularly RTP. The Facility Leadership at the Department invited me, this little Grade 12 at the time, to go over to Navy Medical across the street and meet these six or so SES HEW big shots for lunch at the old officers club. A retired Army Colonel had just taken over as head of HEW facilities. At lunch it appeared everybody else at the table was kissing up to him. It was clear he was important. I'm sitting there and he says "What's your background son? What gives you the capability to build one of the nation's largest biomedical research campuses?" I thought about it for a minute, and I said, "I guess I don't have a lot of experience sir. I am a Grade 12 engineer and just started at NIH several years ago. And he said, "What did you do before that, before you came to NIH?" I said, "I worked on nuclear submarines for a time with the Special Projects Office in the Navy which was part of the Navy's that nuclear program." He noted to his staff that you don't get to work on that program unless you are well qualified. He then said I was a great American and that his office would back me up a hundred percent. He said to his staff around the lunch table "We are going to support Mr. Clifford on this endeavor. You all give him any assistance that he may need because he's a great American who has worked with the military on building this defense system and now, he's going to work with us to build this campus." I'm sitting there and thought I'm a Grade 12. I'm just an engineer who took a job and because I did some stuff with the Navy, he thought I was important. The bottom line is after that lunch, I got all the help I needed from the Department. We got the NIEHS campus built in NC for NIH and I am very proud of that accomplishment.

That is a summary of my early days at NIH learning what it really meant to be a federal public servant and learning what it meant to work with teams. All of this was important to my career. Learning that it wasn't the cut of the cloth, so to speak, that made you valuable, it's what you really knew and how you contributed. I also learned the value of office politics. It was this ability to work with people and get things done using your many contacts including your boss's boss.

Eventually the Deputy of the Facilities Program, then called the Division of Engineering Services, the predecessor to ORF, retired. That created an opening which I was interested in. They advertised for the job and I got the job. It had a lot to do with my ability to work with the leadership in Building 1. While our Director of Engineering was not on the best of terms with the ORS director, Dr Becker, I was. I started to spend time working on the facility budgets and understanding the policies that governed the use of federal funds and how to work with the department of HHS. I must say I did enjoy working almost every evening with Steve Ficca, who was then the Assoc Dir of ORS.

I kept moving up by taking management training, working with our engineers and the craft people, but particularly loved working with the craft folks. By the late 1980s, I was the deputy of DES. Then our Director of DES, Paul Jarvis, got reassigned to develop the POR for the Natcher Building and Dr Emmett Barkley took over as the DES Director. Dr. Emmett Barkley and I had worked together on the Cancer biocontainment Building 41 years ago when he was in NCI, so Emmett and I knew each other. One day Emmett called me and said, "Tony, I'm not a guy that really works with deputies. I do my own thing. I don't need a deputy right now." I had learned if you work for somebody who really doesn't want an understudy, then that is a poor fit. Some people really want an understudy because they've got a lot of work to do. Dr. Barkley then asked me to take over our largest division in DES—Public Works, with about 300 folks and a union operation. This is the area where the USRO (building engineers) work that run the facilities and then help him select a new chief of maintenance engineering office in about 6 months. I was not sure why he wanted me to run that Branch, but I saw the opportunity. I told him I needed to negotiate some conditions before I accepted. I had learned that when you want something, its best to get it before you accept a position and make the move. I said I wanted to keep my title as Deputy Director of the Division of Engineering Services. Number two request was that I wanted to manage all the maintenance and repair money in the organization because I knew I needed funds if I wanted to improve the maintenance and repair program. Dr Barkley said OK and is there anything else. I told him I wanted the person who had been chief and just moved out of the job to be reassigned back to me because he knew how to run office but didn't have the leadership skills the director wanted. I knew I could take that on. So, I got an OK on all my request to be successful.

Soon after I reported to that new position, I found out the maintenance branch didn't even have computers. Everybody else in DES had a computer, but they didn't have any. I also found out very little training was being given due to almost no training budget –a difficult issue given the technical complexity of biomedical labs and our utility plant. My staff noted to me that they had not been given training budgets as the supervisors thought operators should know how to operate the equipment. I said, "Here's $40,000. I want a training plan by Friday. Just spend it all." The other thing was the maintenance staff was not getting outstanding performance recognitions—just fully met. The professional engineers where I came from were always getting outstanding performance appraisals and all kinds of awards. I found out the reason maintenance operations staff did not get high performance ratings and awards is because the supervisor did not want to write up the necessary paperwork. I said, "Here's how we solve that problem. I am going to identify quotas." Shouldn't do that but in this case I

thought quotas would get the ball moving. I asked that supervisors identify 10 outstanding employees in each shop by Friday and develop nominations for Outstanding Performance. I told them if they needed help writing the nominations, we would provide it. Bottom line is that employees started to get the proper recognition and the work environment improved.

SV: What year is this?

TC: This would be in the late-80s I'm doing all this. You could see what's happening here. NIH is growing. What I'm trying to do is grow the capability of the organization. Eventually there are changes in Building 1. Dr. Barkley retired and I became the Acting Director of facilities, head of DES, so I was in charge. This is the late '80s as I said. The first thing I did was get a topflight staff around me and brought on a management consultant to help with new ideas and how to implement change. I knew my goals but needed help getting there- like a map.

Around 1990 NIH advertised for the Director of Facilities (DES Director) as a SES position. I did not get the job and that hurt. Another gentleman got it by the name of Jorge Urrutia. Jorge came out of NIST as their Plant Director. I met Jorge for the first time in Building 1 when Norm Mansfield, the associated director for ORS, my boss, said this is the new director of DES. He asked me to please go back to Bldg 13 and bring him up to speed. Jorge and I got to be very good friends. He really wanted me in the role of his deputy director. Early on Jorge called me into his office and said, "Tony, you were running this place for about three years before I came here. I want you to keep running it day to day while I work on a presentation related to the new Natcher Building for the NIH director." He said he was going to work on that full time and needed me to run DES for him as he worked on the presentation.

He had the briefing meeting with the new the Director of NIH, Dr. Bernadine Healey, and she loved it. She said it was one of the best presentations to date and the new use of PowerPoint was innovative. Jorge worked for about two and a half years at NIH before he left to go back to NIST for a top SES leadership job around mid-1992. He was a strong change agent. He believed in customer service. He trained every one of the 700 workforce himself on what it meant to be a customer service focused organization. He did things like that.

I remember one-time Jorge Urrutia really contributed to the NIH in general. Back in the early 1990s NIH had a lot of EEO problems, and they were selecting a new Director of Equal Employment

Opportunity at the SES level. Jorge sat on the evaluation board as he was the only SES Hispanic at HHS. The selection board wanted to select a person who was already in the position, just sign off and we all can go home, he was told. Jorge said, "No, you people at NIH have the worst relationships with your employees, particularly minorities, and this existing person believes in a situation of beating people up. You write them off. You're not going to change the culture at NIH using this approach." He got that committee turned around. They hired an African American lawyer by the name of Naomi Churchill. The previous EEO Director then filed an EEO grievance, but she didn't get hired. Jorge did a commendable job to improve the culture at NIH. He was outspoken on workplace culture and that is what NIH needed.

When Jorge left in 1992+, I had a meeting with the new Director of EEO about upper mobility and employee complaints. I felt that she was going to say DES had a poor reputation with EEO due to our many complaints. However, she said that while DES had many complaints, we had not been found guilty on most of them. She said you expect a lot of complaints in a wage grade organization like DES. People get upset, they're not happy, they file EEO complaints and grievances. However, they don't follow up with them. She said, "I'm more concerned more about institutes at NIH that don't have any EEO complaints because they don't hire any minorities. You got a very diverse workforce and that is good." So, I learned that we were doing something right for our employees and we were building a quality and diverse organization.

From late 1992 when Jorge left to go back to NIST to 2003, I was the Director, so I'm running the show. That was a time when a lot of changes were occurring. We're building buildings all over campus like Building 50, Building 29B for FDA, Building 33 for NIAID, the new Fire Station, upgrades to the utility plant, Bldg. 40 (the VRC) and other buildings. We also built the Clinical Research Center addition to the hospital. For over 50 years I was at NIH, we built about 50 percent of the buildings not including construction at Baltimore and Research Triangle Park N.C. I'll come back to some of the events that had a bearing on corporate NIH.

In 2003, we underwent a reorganization and created the Office of Research Facilities, ORF. That was created for several reasons such as Building 1 thought ORS was too large and because ORS had gotten into some issues with color of money and funding authorities on projects across the street working with the NAVY. We also were in trouble because the new CRC hospital was coming in way over budget. There were a lot of things that were going on. Corporate NIH said that Steve's ORS, which DES was

part of, was too big, so they created ORF, Office Research Facilities. Leonard Taylor who was the ORS Deputy to Steve Ficca was made acting director of ORF. In short there was no more DES. I asked Mr. Taylor what was to become of my position as the director of DES position since it was abolished. He said, "I want you to be the ORF Chief Engineer and report directly to me." That's how I got to be the Chief Engineer.

SV: I see.

TC: That was early in 2003. Shortly thereafter Leonard asked me to take on a special role given my experience as director of DES. We're going through an OMB required analysis called the A-76 review to see if ORF should be contracted out. In short it was to see if an outside contractor could run a facility program at a lower cost to the Govt than ORF. I focused on that for about a year as a member of the NIH Source Selection Board to evaluate the proposals of outside vendors. In short ORF won the competition and I stayed at that Chief Engineering job until I retired in 2018.

In 2007 NIH advertised for the position of Director of ORF, Mr. Dan Wheeland was selected, and he has been here ever since. What was funny about Dan's first day was I was not present when he met all his direct reports. I was at Fort Detrick in Frederick all day. I did a lot of work with the Army on biodefense and our new facility there. I came back to our office at 5:30 that night. Everybody else had met Dan Wheeland that day except for me. I went to his office and said "Hi, Dan I am Tony Clifford." He said, "I heard about you. You're my chief engineer, aren't you? If I have a lot of technical engineering problems to solve around here, I go to you, right?" I told him that if he had technical engineering problems, serious ones, go to Dr. Farhad Memarzadeh who is Head of DTR. Dan noted that he had met Farhad that afternoon and he appeared to be a pretty smart guy with a Ph.D. I told Dan that if you want to deal with NIH politics, which is like a university, I can help you out because I keep my finger on the pulse here at NIH. I told Dan that I would provide him honest guidance on why things were that way and would provide him my best advice based on my years of service, but I know he makes the final call.

From that day on Dan and I became very good friends. We set the track right from the beginning that I was his chief engineer and not his deputy. He did not want a deputy. Dan wanted me to act in his absents and to fill in for him at important meeting if he could not attend. He wanted me to solve problems for him by facilitating solutions, not by directing them. I learned early in my career you get

more with cooperative if you just sit down with somebody. For example, I would say, "Let's see if we can solve the problem and let's get Joe in because you and Joe don't get along, and let's try to figure out what we can do to solve the problem". That's what I did for Dan. It was a real-life Management 101 class on how to help run an organization but without being in charge.

That is the scan from A to Z. I can talk about some very special events that have occurred here at NIH that have changed at NIH that I have been a part of. Is that okay for your right now or would you like to ask questions?

SV: That's perfect. I have a couple questions.

TC: OK.

SV: But this is your story, so as we continue if there is something that I haven't gotten to yet, definitely free [to talk about it].

TC: I can talk about my career path and events that changed me and made me who I am and why I was valuable to Dan and why I wanted to build something out there. In all organizations, there are things that happen to you that have a historical significance. Not in any unique order, but for the sake of being putting them down, the big thing was what we call A-76, that's competitive sourcing. I spoke about that before, but I like to add more details to my earlier comments.

Back in 2004, a decision was made by the OMB that the government was going to contract out services, not use government employees. If you could find what you did in the Yellow Pages, you had to compete with the outside vendors and see who can do it cheaper. For example, I am a government engineer. OMB's view was if there are engineers working in the private sector and they can do your job cheaper than you can do it, you're out of a job. The military and NASA have done a lot of this outsourcing. Big companies have done such and it resulted in a reduction in force (RIF). That's what was hitting us. The first thing we had to do was they identified what services would be contracted or competed. One was facility services and I think the other was grant reviews. I asked management why aren't the scientists being competed? I was told they were essential. I responded how could they be essential if 85 percent of the NIH budget is contracted out to universities right now? If 85 percent is contracted out that means it's contractable, so why don't we just contract out everybody and just shut the

whole place down. They didn't want to hear that, and it would impact too many folks. In short facility folks were on the chopping block.

We started on a path by hiring contractors to help us prepare a work statement for outside contractors to bid on all our services. For that consultant I think NIH paid around $7 or $8 million. I was asked to take all the potential contractors around to each NIH campus so they could see firsthand what was involved—a site visit if you will. I also participated on the Source Selection Board to evaluate the final proposals. NIH then ran the competition. DES won the competition against a company called Johnson Controls Worldwide Services. This process took months and months, and months. It had a big impact on organization. We lost about 240 people. They left because they thought they could lose their job. In most agencies if you lose, you get a RIF (reduction in force). Our HHS secretary announced that HHS would not do a RIF at NIH. All employees would still have jobs but not their current one. I remember the Institute said they would hire our staff and set up their own plant operations with our plumbers and electricians. I said, "That won't work. Those people cannot get the same job they have. They have to be put into a job that's not being competed." In short NIH will have to train our plumbers, etc. to be administrators or researcher."

As I said, we ran the competition and won with the lowest cost. Johnson Controls protested to GAO. The decision by the court was to redo the competition again. Thrilling! We did it all again and but this time the government had to hold their bid price and Johnson Controls could make modifications and change their bid. This went on and on and additional money and time was expended by NIH. In the long run the government rewon the competition.

Eventually ORF stood up to the MEO (most efficient organization) and that got us into a whole new organizational structure. We were limited in the number of people we could hire so service times were extended, and our customers were not happy. I found out this process of A-76 cost NIH around $8 million so I asked management why when I asked for the ability to hire some consultants to help me run DES better, I was denied. I also asked for retreats with my senior staff and was told you get one day at a retreat and a thousand dollars to hire a consultant. I said, "But for A-76 we spent over $8 million and almost a year of critical DES leadership time". That is just the way it is in the government I was told. When Dan Wheeland came in 2003, he was confronted by an organization that was understaffed by over 200 people that he had to find and train in a short period of time. That was the A-76 in ORF, and it was a big event.

Another story is on the construction of the new CRC, the Clinical Research Center. The Clinical Center, the original hospital was built in the early 1950s and opened in 1955. Then in the 1980s we built the Ambulatory Care Research Center--ACRF which is the flash cube as we called it, the big glass building to the north of the original CC. As that building was ageing, there was a need for more research and new hospital space. NIH built the CRC in front of the ACRF.

I remember that one Christmas I invited all my senior staff to my house at Christmas time to have a catered party. My head of construction arrived the party and said, "I brought a bottle of wine, let's drink it and have a good a time because tomorrow we're going to be in a real mess. Remember were supposed to get the bids in for the next phase? Well they came in at about $165 million over budget." That created all kinds of problems for me and NIH. HHS was not happy nor was the Congress as they had just given the NIH director about $28 million to cover inflation and that was to be it. The big question was why we were so far off budget. My head of construction understood it. My boss understood it. The developer who was building it understood it, but they could never explain it in '25 words or less' to anybody. Things went from bad to worse. We got through it with a lot of pain and the building was built. In the end I asked the leadership at HHS if I could have done things differently. They said we should have involved them so they could help us instead of the NIH Director going around HHS and OMB to get that first additional $28 million. Sometimes you got to think out of the box. You got to have a solution that is not 'We're going to find the money.'

After 9/11, the Pentagon had major destruction that had to be rebuilt. DoD created a project called the Phoenix Project to rebuild the Pentagon. My friends who worked at the Pentagon in facilities told me the engineers who were in the process of renovating the Pentagon had monumental budget deficiency before 9/11. After 9/11 the focus was to get the Pentagon rebuilt in a year. Congress funded DoD with all the money they needed –no questions asked. Just get it rebuilt in one year. Shortly thereafter, NIH was also getting funds due to the anthrax scare to quickly build research facilities for biodefense research such as Building 33. The problem was that new facilities can take 3 or more years to design and build. I was told NIH needed Bldg 33 as soon as possible but Bldg 33 delivery was 3 years off because we were still in design. I said to my boss that while we are building Bldg 33, why not take the CRC project at NIH which was already out of the ground with most of its steel and walls erected and convert part of it to be this interim biodefense facility. We could put an American flag on the outside of the building, light up the whole building and work 24/7 just like the Pentagon was doing. We could call it the HHS Phoenix

Project and have the Secretary of HHS be like the Secretary of Defense, saying "We can bring the country back and deal with biodefense." My boss said the idea was foolish. Nobody is going to buy into that given all the stakeholders building the CRC. I said this is where you get emotions to solve problems like the Phoenix Project did after 9/11. These are monumental problems. This is how you run a country and get people behind fully funding the CRC to include biodefense and have the space available years ahead of Bldg 33.

To make a long story short, 10 or15 years later I was speaking to NIAID leadership and told them my old idea about using part of the CRC still under construction to be an interim Bldg 33. They said it would have been viable idea and would have worked but nobody put it on the table. Sometimes you really have to think out of the box and mix a little emotion into the soup, I said.

I also want to talk about my dealings with the local community and Congress.

SV: That was going to be my next question. I've read a lot about NIH's interactions with the broader community. Talk about after 9/11 when you saw fences going up around campus, a lot of community anger about that. Can you shed some light on that?

TC Sure. For that sake of discussion, NIH had created, back in the '80s, a community liaison council. The reason this all started was that we had 2 incinerators here at NIH that needed replacement. Our engineering consultants give us the technical support to get funding to buy new incinerators. The report also said our existing incinerators were falling apart and the air filters were not working. The neighbors read the report and said, "You guys are causing cancer. This is a cancer zone," So NIH was at war with the community because some folks in the community thought the effluent from our incinerators were giving everybody in Bethesda cancer. It was all written up in the papers. It was very political at the time with ORS Director Steve Ficca and the NIH Director Dr Varmus very much involved. The local papers had an article almost every week with some in the community call us irresponsible. I had very little to do with that, but I was cutting my teeth at the time on how to deal with the community and the press, mainly community. In the end NIH closed the incinerator down and sent our waste to the county. Dr Varmus had many meetings with the community leaders that resulted in a statement that NIH would no longer burn waste. As a result of all this community interaction NIH formed the Community Council (CLC) to have a formal vehicle to get the community input. They met monthly and included a staffer from then Congressman [Chris] Van Hollen's office.

We got over that disaster but still had to deal with noise pollution and traffic concern. We had these community meetings that went on for years. I found out that my strength dealing with community is with the politics of working with the individual members about things that were of interest to them. Everybody has an interest. They may want to complain about something, but they really have an interest. For example, some members wanted NIH to fix our property fence near their property and others wanted a soccer field on NIH land. Where did the big problems come from? When NIH had to install the perimeter security fence around our campus due to 9/11, we decided to put the fence inboard as much as possible. This idea was to provide more open green space for the community. At that time there was a large acreage of land on the south part of the campus, we called it the South Lawn. One of the community members wanted it for a soccer field for his kids. I told him that I could not use federal funds to build a soccer field. However, that field had marsh lands full of water and mosquitoes after heavy rainstorms. So, I got some money and tore up the field and put in underground pipes for drainage. The field was then leveled but was not call a soccer field.

The community has good people and most worked with me to help improve the land outside the security fence like a lighted path, etc. One day I got a call from a community member and he advised me that during a recent heavy rainstorm, he observed that a hidden county storm water pipe was dumping all this water onto our campus causing erosion of the new South Lawn. I went to the county to have them fix it but could not get anybody in the county government to deal with me. I briefed the CLC on the results of my contact with the county. I soon found out that Joan Kleinman from Congressman Van Hollen's office was in attendance as well as a reporter for the local Gazette paper. The story was picked up in the paper and with the pressure of the Congressman and the community, I started to get the attention of county government officials.

The neighbors are saying they can't believe the county will not fix their water problems. They said we going to get a hold of Ike Leggett, county executive, and get him to respond. Now I'm finding out about the power of the press and public opinion. I've got Congressman Van Hollen's office writing to Ike Legget about, "Why won't you talk to this guy Tony Clifford?" The head of the county's Public Works Division made an appointment with me and his staff. He assigned two of his civil engineers and we started to work together with the community. This was in the paper about how the NIH and they community were working to bring resolution to the flooding issues. Eventually we got a beautiful field

fixed right. It worked out to be a nice park for the community on NIH land but outside of our security buffer.

While we had many issues with the community, we developed a good relationship by listening to the community and being transparent. It was a good idea to have me as a member of the CLC as I had the authority to resolve many of the communities' concerns the next day. I became one of the faces of NIH facilities dealing with the community.

That was using all the skill sets that I had developed early on about thinking out of the box. What I found out is government tends to be very rigid. I was open to the community to come to me and they brought things to my attention things like that flood. For example, one of the community members was walking his dog on the South Lawn path and the dog got an electrical shock from a streetlight base. He brought that to my attention that day and we found out that the hot wire in the base had broken and was touching the metal of the fixture. It was fixed before a child could have been shock or worst. An example of how many community eyes on issues and knowing who to call can help.

When I retired and because I had such a good relationship with Senator Van Hollen's office, (then Congressman Van Hollen), he put together a certificate that that Senator Van Hollen read and published in the Congressional Record. It mentions my working with the community and 50 years of service to the NIH. I was impressed.

You asked that I speak about my work with the Children's Inn.

A couple years after the Children's Inn opened in 1990, Bethesda had a very bad storm late in the afternoon which caused the loss of electricity to the Inn. The Inn had to pack all the kids up and take them to local hotels. DES was just responsible for the building, so we didn't manage the Children's Inn as a program. On the way home that evening I noticed all the lights in the neighborhood were down. NIH was lit up like daylight because we had our own direct electrical feeds. The Children's Inn was on public power from Cedar Lane, so it didn't have the redundancy of the NIH campus. I drove back to campus and saw that the Inn was dark except for some small battery lights and the families were relocated to nearby hotels. I said we must get emergency generator power to this building. I worked the next few weeks to make that happen. I became a facility advocate for the Children's Inn, helping to make sure their federal facility was able to support the families. For example, when the Children's Inn was

starting to build their new addition (which is all gift money), I got called to Building 1 because the Children's Inn discovered they were building over the top of an underground storm sewer. You can't build over a storm sewer, it's not a good idea. It was going to cost a million and a half dollars to fix it and Inn didn't have it their budget. A big disagreement was taking place between my boss in Building 1 and the Children's Inn director about who is going to pay for this problem. I said let's not focus on who should fund this problem but let me have my engineers look and see if there's another way of solving this. I got with my civil engineers and they said for $700,000, we can redirect that storm drainpipe away from the footprint of the building. This was half the cost we started with and I helped ORS find the funds to move the pipe out of the construction footprint. Problem solved.

A wonderful part about this job has been the ability to help people solve problems by listening and offering solutions. It's also important to make sure you are solving the real problem and then look for many solutions that can help even if they are out of the box.

I really liked, whether I was the director of DES or chief engineer to solve problems on a small scale. One thing I did around 2000 for the Children's Inn occurred at their 10-year birthday party. I went to the Inn's birthday party with my wife and two boys (they were young kids at the time), and I met some parents of the young patients. My wife and I were at a table outside when another couple joined us. They were the mom and dad of a young boy, probably about 10, (same age as my kids at the time) staying at the Inn. Their son came over to the table to speak to his mom and he had an IV bottle wrapped around his arm, no hair, scars on his skull and he was playing with my kids, they were having fun, they were running around. I asked the mother how long they have had been at the Children's Inn. People would stay there for a period of time then go back home. I also asked her how long they were going to stay. Just curiosity. The mother said, "I hope I'm here forever. Until two months ago my child was on a path to die. There was no cure. My husband and I just looked at him in the hospital room and there was nothing we could do. He was going downhill fast. My husband went on the computer and he put in 'hospital of hope' and it came up NIH. He said this is what my son has, is there anybody that can help me? NIH said they have a protocol and could work with us. We came to NIH and the Inn and now my son is running around." I said to her that was a marvelous story. Is there anything I can do to make your stay here at NIH any better? She responded "No, this is perfect. This is wonderful place." Her husband said, "It would really be nice if we had Wi-Fi because I'm down here for most of the week with my son and I can't do business. I can't get on the internet." I said that should be an easy fix as I know people who do that stuff. I asked if they needed anything else. The mother responded, "After we get out of the

clinic at 6:30 at night, we're hungry and we got to get something to eat. We go to the Bldg 10 cafeteria. The food has been sitting there all afternoon and is all crusted over and dried out, and not very appetizing, I'm talking about the hospital cafeteria." I said hospital food can be bad.

The next day I went back to Steve Ficca, my boss in Building 1 and I told him the story. I asked why we can't get them internet so the poor father can maintain his job, and can't we improve the food so the family can eat in the afternoon without dried-out food being the only opinion? Steve took care of the internet. He got that hooked up. Then he called the head of GSI, the cafeteria provider. The president of the company came in and Steve told him my story. Steve said to the GSI official, "This marvelous institution where we're saving lives, the only thing this family can find wrong is the service you provide. How does that make you feel?" The reason I mention this is you can make a difference, and it doesn't have to be saving a life.

The last story I'll tell you that had a lot of impact on me was when I was Director of DES, that would be in the '90s. I got a telephone call in the afternoon, about 1:00, that we had electrical failure in the surgical facility of the Clinical Center. The power went out. Dr. Gallin, Head of the Clinical Center wanted to have a meeting in the medical boardroom at 3:00 or 4:00 that day to find out what the heck happened as there was a patient being operated on. I took that very seriously and I tried to get my people together. In the meantime, I started suffering from a heart condition called atrial fibrillation, which is stage fright. They had to take me to the hospital in an ambulance. The meeting with Dr Gallin was postponed and rescheduled for three weeks later. Before the meeting took place, I went over and had an appointment with the surgeon who was in the operating room when this event took place. I found out that one of my mechanics had a project to remove an old switch gear. However, there was still power going through the switch gear that was both emergency power and normal power at the same time.

I met with the surgeon and said, "Doctor, I know why it happened, but I want to find out from you how did that impact you? What was going through your mind when this event took place?" The doctor said, "I had a patient on the operating table, chest open when the room went dark, black except for some battery power instruments that were operating. The nurses said, 'We need to call a techie.' I said stay here. We can do this … you nurses can read the pulse and I can hold whatever organs together until the maintenance staff gets here. Let's focus on our patient.'" He then said, "Tony, I'm going to tell you something. Before I came to NIH, I did surgery in Vietnam on the battlefield. I had soldiers laying on rice patties in front of me with their chest opened and I was doing surgery, trying to hold it together with shots going over my

head. Having your lights go out in the middle of surgery, I can handle it." When I was leaving his office, he said, "I really appreciate your coming over because most people wouldn't do that."

That was very emotional, and I told my people. That context of asking how our action impacts science as opposed to telling them what we did wrong is very positive communication. For example, you can say: "Doctor, I know we had a bad flood, but how did that impact your research?" Because to us, it was only 50 gallons of water on the floor, for them, it's six months of research lost. I don't think we asked these questions enough. We really need to know how facilities impact science then from that we can go on. I try to instill that in my staff.

Those are my old stories, good, bad, and indifferent. I'm open to your 101 questions.

SV: Those are phenomenal. I think the history office is going to very happy to have those stories in their collection. Building off your last story, can you talk about, in the aftermath of that conversation any specific policies or endeavors you embarked on to try and better improve communication between you and the doctors.

TC: Sure. A lot of things we did to improve the safety--lessons learned if you will. One of the things that we did from that time on was a new policy to never to do any work near the surgery, near the operating rooms, if there is surgery going on. What we do now is check with the charge nurse and if they're planning to do surgeries, we will shut down all our work. We won't do any construction work; we won't do any maintenance work or try to change a valve or shut the water off. That was the big change we made. Before that we'd say this is not going impact you because that's just an old piece of equipment and therefore it doesn't have any impact on anything. The odds are that's right, but in this case, we could have killed somebody.

For example, I'm working on a project now for Dan. We had a flood in Building 31 while the top floor conference center was being renovated. When the contractor was removing the old sprinkler lines, he was told our staff had secured the water to the sprinkler's lines. They were supposed to be shut down, but they weren't, and water flooded all over the place. We knew we had a flood. The question was: why did it happen? Everybody did their job the right way. I haven't finished the report yet, but the bottom line is that everybody followed procedure, but nobody checked to see if the actions were done. The

procedure now is to shut the water off and verify once more if it was done. Nobody went back and verified that the action took place. Those are small things you could have done.

SV: Absolutely.

TC: What we learned here in ORF is to take what happens in the field, not to become defensive because things will happen, but what can we do to correct the problem.

Remember that NASA had the O-Ring problem that destroyed a Shuttle. They had a piece of Styrofoam banged into the side of their wing and put a hole in it. Nobody believed that could happen. All said it's impossible. A piece of foam is not going to put a hole through the wing of the Shuttle. Yeah, well, you're probably right. But if you fire it at 300 miles an hour and aim it at the wing, it went right through the edge of the wing. That's why we try to figure that stuff out before hand and help our people who are there every day doing their job, helping the scientists.

SV: You mentioned the recruitment and going to career fairs. When did you first start with that and why you continued to do that throughout your career?

TC: Here's a picture of me at a STEM event in 2014. I'm a graduate of the University of Maryland. In the early days, interns didn't have to go through USA Jobs to get a position like the do today. Students would come here who basically wanted to become a summer intern. My youngest boy became a volunteer intern and now works here as an engineer. Several years ago, when we wanted to fill our intern positions, I went over to visit the University of Maryland and asked the engineering students if they wanted a summer intern job. All they had to do was get a letter from the Dean saying you're engaged in school, you're a respectable student and our administrative office signs off on the paperwork, you then have a job. I thought that was good because I remember my early training. Now there is a formal HR process for hiring interns.

We started to attend more career fairs in the area. We did a big one at Howard Univ. I found out the value of doing so when an employee came by my office and said, "You don't remember me. You were over at Howard University when I was a student there and you were conducting interviews. I met you and I was very impressed by what you guys were doing. After graduation I came to NIH and now, I work for you." He's from Sierra Leone and this was a real opportunity for him.

Over the years there were many big career fairs downtown at the Convention Center and other places where we would have an opportunity to represent NIH. One thing I did learn by going to the University of Maryland job fairs was that NIH was represented by different institutes there. I got NIAID to allow me to work out of their booth with a sign for engineers since ORF did not have a booth. When I came back to NIH, I said we do a poor job of recruiting employees at job fairs. We pay a lot of money to the contractors representing us. I'm at the job fair all day long and the IC hires these contractors to give the students bottles of water and boxes of Kleenex. When the contractor responded to real question about NIH and what we do such as, 'Do you have any jobs for librarians?' the contactors would respond 'No, we don't do anything like that.'" I noted to the student that of course we do. We have the National Library of Medicine and the ORS Library and we'd love to have somebody talk to you. I also noted that our display behind the booth only had the letters NIAID. What the heck is an NIAID, I am sure the students would say? Is it like TRW or IBM? Also, the banner doesn't say NIH anywhere. There is no recognition of a corporate NIH. It's nothing but a bunch of letters everywhere. NIH recently started a corporate recruiting office and now we have a big banner and all the institutes are under that and I am sure it helps NIH recruitments in general.

Lem Canady, our chief engineer, picked up on this outreach when he came to work for me several years ago. He went to the historically black colleges and universities up and down the east coast including Florida, Morgan State, Baltimore, and out in Arizona. He also invited classes here to NIH to develop student interest in a career at NIH. We have a bold intern program right now and I'm very happy with it. I think it's bringing in a lot of women and minorities. Whether they work here at NIH or go somewhere else, we give them opportunities. As you can see on the display case just outside the ORF Directors' office suite, NIH has agreed to restart the NIH Apprenticeship Program. I was a very strong supporter of apprenticeship.

Apprenticeship is good for the young folks. All you need is one year of experience at NIH doing anything. We will take you on as an apprentice and you will work for us in the trades such as a carpenter, electrician, painter, elevator operator, etc. We'll send you to Montgomery College for four years where you can get your Associate Degree, get your journeyman license from the State of Maryland and you'll do that on government time and funds. The program has had an eighty percent participation of women and minorities and for many of the apprentices, particularly minorities, they are the first in the family to walk off the stage at a college. It feels good sitting next to a mom and dad at

graduation and for them to see their son or daughter walk off the stage as an electrician, carpenter, etc. with an Associate Degree from the College—all on the NIH dime.

When we did our A-76, corporate said cut out this apprentice program. It costs too much overhead. Now Dan Wheeland wants to bring it back and we're working with the State of Maryland and Montgomery County on the details.

SV: You mentioned taking folks to the Children's Inn. A lot of dignitaries come to NIH. Talk about some of the noteworthy, memorable dignitaries that you interacted with during your time here. Anyone who springs to mind?

TC: That's been a unique opportunity to meet people who you read about in the paper. For example, we had a new laboratory building over in Bayview Baltimore called BRC, the Biomedical Research Center. Here's a picture of me with Senator [Barbara] Mikulski and Dr. [Elias] Zerhouni our director during an early visit to the BRC. It was decided that Senator Mikulski, who actually got us the money for this building in part because her father had Alzheimer's, was going to come to Bayview and tour the building and have a press conference with Senator [Ben] Cardin. I was involved in getting ready for the event. Anything related to a congressional visit is a big-time operation. I was on the committee that helped set this up. We planned where the tour and I would be in the background for this event. I would have no direct contact with the VIPs.

We all went over to Baltimore to be with the dignitaries. About five minutes before we start, John Burklow, who is Head of Communications for Dr. Zerhouni, came up and grabbed me by the shoulder. He said Dr. Zerhouni has a thing if he doesn't have somebody right next to him who knows what's going on. You need to go up and tell Dr. Zerhouni that you're in charge of the tour and he can follow you, and you'll show the people around. Everybody said I did a marvelous job of working with the Senator. The pictures are kind of cute because Senator [Barbara] Mikulski is short and I'm tall. Also, we had produced a gift of a picture of the BRC that I took and had it framed by Medical Arts in ORS with a small plaque of NIH appreciation for Senator [Barbara] Mikulski. Since Senator [Ben] Cardin attended unscheduled and we did not have a gift for him, I was told to just keep the gift and return it to Bethesda. Knowing the effort that went into making the gift, I showed it to Dr. Zerhouni. He advised me to give it to Senator [Barbara] Mikulski's assistant to give it to the Senator back in Washington.

Another VIP I met along my 50 years was Congressman Louis Stokes. Congress funded NIH Bldg 50 in his honor calling it the Stokes Building. Congressman Stokes was a very impressive person with a great back story on how he got to Congress. My staff had worked with him while we were building 'his' building. He would come out to Bethesda on weekends and take a tour of the ongoing construction and meet actual trade contractors on site. During the formal dedication of Bldg 50, he wrote a wonderful note to me saying "Thanks for working on my building, I appreciate it." He died a few years ago. Dr. Collins had an event here to meet with the family. Congressman Louis Stokes had written a book called, "The Gentleman from Ohio." I attended this celebration of life and met his wife and family members who attended the event. My copy of his book was signed by his children who were very capable people. I was very impressed by Congressman Stokes and how much he had accomplished in his life.

There were other dignitaries I met from time to time who visited NIH. One I remember was HHS Secretary Tommy Thompson. He held a major staff meeting for the heads of HHS agencies such as CDC, FDA, Social Security and NIH in the new Building 50 conference facility. One of my jobs that day was to greet him at the front door of Bldg 50. All these VIPs were in the lobby waiting for the conference to start when the Secretary arrived at the front door with his security detail. As he walks into Bldg 50 I said, "Good morning, Mr. Secretary. The conference room is back there to the right." He looks at me and said, "Good morning and where is the nearest bathroom?" I told the Secretary he could go straight back in the building to a private restroom facility without running into all the folks in the main lobby where the public restrooms were located. He and the security detail went back into the depth of the building.

The reason I am telling this story is because the engineering staff had set up a big display about the innovative energy design features of Bldg 50 at the rear of the building but was told the Secretary's schedule was too tight for us to present to him. When he and they security detail came back from the restroom, we had about 30 seconds of the Secretary's time all because he had to go to the bathroom. My boss and my engineering staff were very pleased to have facetime to talk to him uninterrupted.

NIH is a great place and I was very lucky to meet people both from the Department and Congress. Not only did I had opportunities to meet VIPs, but my staff also met folks who made their day. For example, when President Bush visited NIH, our Chief Electrician had to ride the elevator with the President as the SS [Secret Service] always require an elevator mechanic to be on the elevator.

SV: I'm sorry, was this George W. Bush or George H.W. Bush?

TC: The first Bush. He had to ride the elevator to go to visit labs on the upper levels. Alex is on the elevator with the Secret Service, the Director of NIH, and a few others. That's just what we do. About a month later, my secretary comes into my office and tells me we got a letter from the White House to Alex. I asked Monica Jones to call him to my office so I can give him the letter. It was a letter from George Bush saying, "Thank you for making my tour at NIH so successful. Appreciate your contribution." The White House had gotten the names of everybody from the Secret Service who helped the President with his tour. It was the talk of the shop that one our mechanics met and was thanked with a personal note from the President. It helped them understand that all of us are important to the mission.

SV: Perfect.

TC: Shortly after the Ebola patient came to the NIH Clinical Center and all the reporting was taking place on national news with Dr. Fauci and others, I did a presentation at the National Society of American Military Engineers meeting downtown. I used this event to put in context who NIH was and the importance of our mission. I explained that our facility folks had built a special high containment clinical unit in the hospital for such events. Working at NIH and supporting its facilities put you right in the center of the action. A great job for an engineer.

One thing that has changed over my 50 years is the complexity of the buildings and the cutting edge of science now conducted by NIH. The facilities we had 50 years ago were not directly instrumental in doing the research. They were basically in a box like this room, you could set it up in a kitchen. Today the buildings need to have air quality, temperature control, vibration control, power control, all that and security systems, depending on the containment. Today the facility is as important to do the research as the research doctors. Hope this helps.

SV: Absolutely. So, we're close to time. Do you have any final thoughts you want to get on the record?

TC: No, this has been fun. I'm sorry I rambled so much. As I said before, it's been a heck of a ride for an engineer, who never really thought... I guess it goes back to the original job announcement in the paper that I accepted that said, "Excellent Opportunity."

SV: And it certainly was.

TC: Fifty years is a long time to be in one organization and I was lucky to be there. My dad saw the job as an opportunity for public service. Both my boys work for NIH, one works for NCI, one works in ORF as an engineer. I tell my boys it's my career, not yours. You should follow your heart and do whatever you want to do. It's different today than when I was the Director years ago. The government works entirely different today. It's more prescriptive today. The generation of kids that comes in today, young people who come in, they don't see a career for 50 years. They look at me like a dinosaur. Some people like change. For me this was a perfect job, full of interest and meaning. Could not have asked for more.

SV: Awesome. Tony, thank you so much.

TC: Thank you for doing this. I appreciate it.