Oral History Center
The Bancroft Library

University of California
Berkeley, California

Howard R. Friesen:

Howard R. Friesen: Engineer, Entrepreneur, and Philanthropist of UC Berkeley

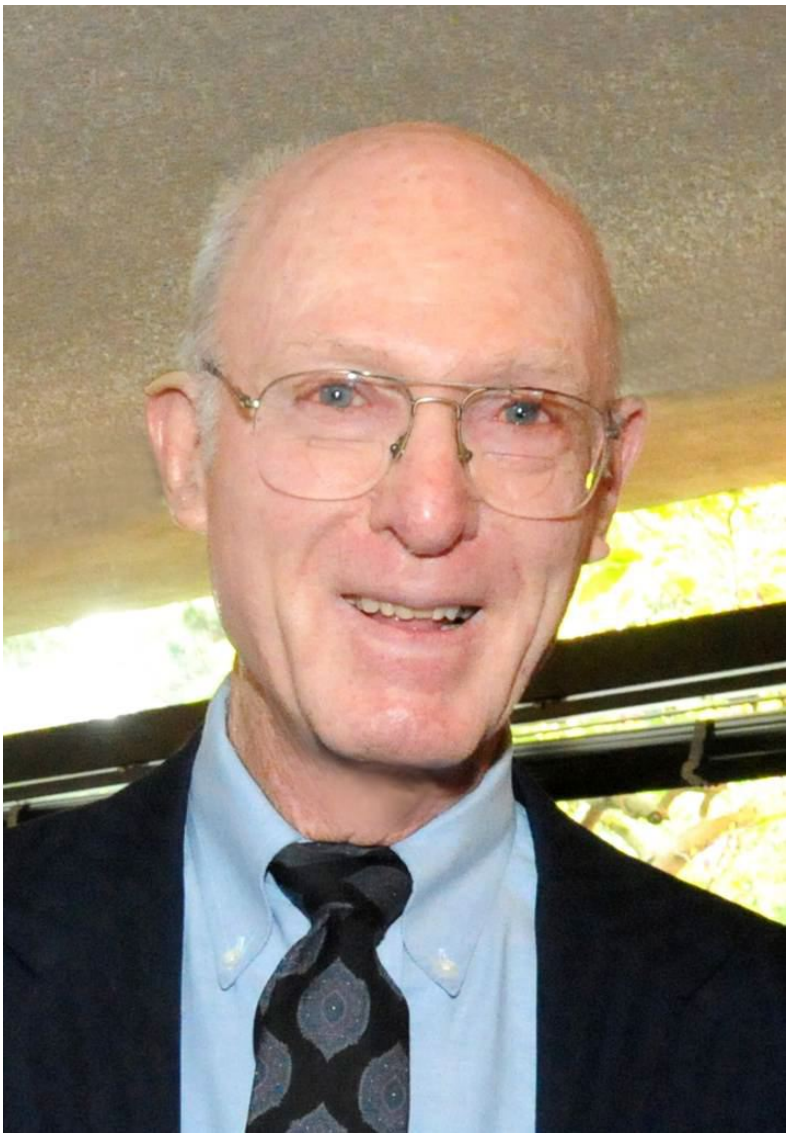
Interviews conducted by
Roger Eardley-Pryor, Ph.D.
in 2018

Since 1954 the Oral History Center of the Bancroft Library, formerly the Regional Oral History Office, has been interviewing leading participants in or well-placed witnesses to major events in the development of Northern California, the West, and the nation. Oral History is a method of collecting historical information through tape-recorded interviews between a narrator with firsthand knowledge of historically significant events and a well-informed interviewer, with the goal of preserving substantive additions to the historical record. The tape recording is transcribed, lightly edited for continuity and clarity, and reviewed by the interviewee. The corrected manuscript is bound with photographs and illustrative materials and placed in The Bancroft Library at the University of California, Berkeley, and in other research collections for scholarly use. Because it is primary material, oral history is not intended to present the final, verified, or complete narrative of events. It is a spoken account, offered by the interviewee in response to questioning, and as such it is reflective, partisan, deeply involved, and irreplaceable.

****

It is recommended that this oral history be cited as follows:

Howard R. Friesen, "Howard R. Friesen: Engineer, Entrepreneur, and Philanthropist of UC Berkeley" conducted by Roger Eardley-Pryor in 2018, Oral History Center, The Bancroft Library, University of California, Berkeley, 2018.



Howard R. Friesen

Photo courtesy of Howard R. Friesen, shared in September 2018

Howard R. Friesen—an alumnus and philanthropist of the University of California Berkeley—is a retired engineer and former owner of G. J. Yamas Company, Inc., which became one of the largest independent businesses in California and Nevada that specialized in building automation, controls systems, and related equipment for commercial and industrial buildings. Howard was born on October 18, 1927 in Reedley, California; earned an engineering degree from UC Berkeley in 1950; and helped expand and later owned G. J. Yamas Company before his retirement in 1986. In this interview, Howard describes working on his family's central California farm during the Great Depression and, in the early 1940s, leasing a farm from an interned Japanese family. Howard discusses his radar training and travel around the Naval Station Great Lakes near Chicago and in Jim Crow-era Mississippi before earning his engineering degree at UC Berkeley, where he met his wife, Candy Penther. Most of this interview recounts Howard's career with G. J. Yamas Company, which he helped expand to five locations across California and Nevada. Howard's career in the building industries from 1950 through the mid-1980s witnessed growth and change across California, from constructing new schools amid the Baby Boom to evolving relations with organized labor, and from high-tech manufacturing in Silicon Valley to expansion of California's prison system. Howard discusses his retirement and travels abroad with Candy, often flying their own plane, before Candy's death from Parkinson's disease in 2015. Howard also addresses his and Candy's generous philanthropy to UC Berkeley for student scholarships, endowment of research chairs, and large contributions to The Bancroft Library and the Berkeley Art Museum and Pacific Film Archive (BAM/PFA).

Table of Contents — Howard R. Friesen

Interview 1: May 7, 2018

01-00:00:00
Eardley-Pryor: Today is our first interview with Howard Friesen. Today is May 7, 2018. We're at Howard's home here in Kentfield, California. Howard, would you mind telling us your full name?

01-00:00:15
Friesen: Howard Ray Friesen.

01-00:00:16
Eardley-Pryor: And Howard, when were you born?

01-00:00:19
Friesen: October 18, 1927.

01-00:00:22
Eardley-Pryor: Where were you born?

01-00:00:24
Friesen: In Reedley, California.

01-00:00:25
Eardley-Pryor: Tell me a little about Reedley.

01-00:00:27
Friesen: Well, Reedley is a farming town of about 10,000 people, and it's the center of a large farming area. They tout themselves as "the fruit bowl of the world." They have all kinds of fruit and a lot of vines.

01-00:00:51
Eardley-Pryor: Okay. Tell me about your parents, the family that you were born into. What are their names?

01-00:00:56
Friesen: Well, my father was Henry Friesen, and my mother's name was Hortense Buckner.

01-00:01:03
Eardley-Pryor: Her first name was Hortense?

01-00:01:04
Friesen: Hortense.

01-00:01:05
Eardley-Pryor: Where is she from to have a name like Hortense? That's unique.

01-00:01:08
Friesen: Hortense is, I think, a flower, and she was in a family of four or five sisters and they all had names like Opal, Ruby, so forth.

01-00:01:27
Eardley-Pryor: Where did your parents come from? Are they originally Californians?

01-00:01:30
Friesen: No, my mother was born in Decatur, Arkansas, and my father was born in Dallas, Oregon.

01-00:01:38
Eardley-Pryor: What brought them together?

01-00:01:40
Friesen: Well, both of them migrated to Reedley, and met there and married.

01-00:01:49
Eardley-Pryor: Did they come with their families or did they come as adults?

01-00:01:51
Friesen: Oh, they were young. They came with their families.

01-00:01:54
Eardley-Pryor: I understand you have a brother, as well?

01-00:01:56
Friesen: I do.

01-00:01:57
Eardley-Pryor: Older or younger?

01-00:01:58
Friesen: He was younger. He died in 2001.

01-00:02:02
Eardley-Pryor: Okay. But he was born how shortly after you were born?

01-00:02:06
Friesen: He was about three years younger.

01-00:02:07
Eardley-Pryor: Okay, so around 1930. Tell me a little bit about your family connections. Were you close to aunts and uncles, grandparents, as you were growing up?

01-00:02:19
Friesen: Well, on my father's side, one of his brothers lived not too far from us, and they had a family of four children. So we were fairly close to them and got together with them quite a bit. On my mother's side, there was one in particular that we saw. One lived in Los Angeles, and so we didn't see much of them, but we did see the one.

01-00:02:52
Eardley-Pryor: One of the sisters, one of your aunts?

01-00:02:53
Friesen: Yeah.

01-00:02:55
Eardley-Pryor: And they also lived near you?

01-00:02:57
Friesen: Well, they lived about ten miles away.

01-00:03:00
Eardley-Pryor: At the time, do you remember traveling much outside Reedley? I mean, you were right on the edge there of the Sierra Nevada mountain range and what's now Sequoia and Kings Canyon National Parks.

01-00:03:11
Friesen: No, we never traveled too much. Well for one thing, during the Depression, we were too poor to travel. And during the war, gasoline was restricted.

01-00:03:28
Eardley-Pryor: Tell me some of your childhood memories.

01-00:03:47
Friesen: My earliest memory is of my parents working in a fruit-packing house, and we were living in a rented house. Of course they were working long hours, and they had a girl that came out to take care of us. I remember that place, and that's where I lived when I started grammar school.

And when I started grammar school, I had to walk about a mile in order to catch a bus to go to the school. I had to walk along a creek and across a railroad bridge. And there was an old, abandoned house there that hoboes used to stay in. I remember during the wintertime, they would invite me over. There would be three or four of them out with a fire, cooking coffee or breakfast, and I would go over and warm my hands. And I remember that one of them gave me a wire puzzle, once. It was a puzzle that was made out of three pieces of interlocking wire, and you had to be able to disconnect one from the other two. I made several of them over the years, and it was sort of fun trying to figure out how to disconnect the pieces.

01-00:05:24
Eardley-Pryor: Tell me a little bit more about these men that were there during the Depression. Were they sort of traveling through, or staying in this place that you walked past to go to school?

01-00:05:32
Friesen: Well, there was a railroad track there, and during that period, there were a lot of hoboes riding the rails. And they would mark on the rails where they could get food, who would be good to them, who would not be good to them. They had all sorts of signs and signals that they would mark on the rails to tell them. And they would be, I guess, just traveling around.

01-00:06:03
Eardley-Pryor: Did they teach you some of these marks?

01-00:06:05
Friesen: No.

01-00:06:07
Eardley-Pryor: Were they friendly enough to you though?

01-00:06:08
Friesen: Well, yeah. I used to just stop in, and I don't remember ever being afraid of them.

01-00:06:15
Eardley-Pryor: What were mornings like, as a child growing up, getting ready for school? Or even before then, how would the day begin for you?

01-00:06:22
Friesen: Well, I guess we'd wake up in the morning and have breakfast, and lunch would be packed for me, which I would carry, and then take off. And usually, I had to take a bus to go to this particular school.

01-00:06:41
Eardley-Pryor: This was the Smith Mountain Grammar?

01-00:06:42
Friesen: No, this was before that. This was the Windsor School.

01-00:06:48
Eardley-Pryor: What was the Windsor School like? Was this for elementary?

01-00:06:51
Friesen: Yeah. I went there through the third grade, when my folks bought the farm, which was raw land at that time. There was a lot of raw land around, and the land was owned by the Bank of America, who had apparently foreclosed on the previous owner. And they had it leased out to someone who was growing wheat on it. So one of the first things my father did was—he was due twenty-five percent of the proceeds of the farm—so he immediately disced five acres of the twenty under, and planted fruit trees in it. We were living about a mile from Smith Mountain School, so I was soon to have a bicycle and was able to get to school.

01-00:07:48
Eardley-Pryor: So these trips where you're commuting the long walk to then catch a bus, that was to this earlier Windsor School?

01-00:07:53
Friesen: Yeah.

01-00:07:53
Eardley-Pryor: Were you all living in Reedley at the time then, before your father bought this farm?

01-00:07:59
Friesen: No, this place where we were staying was the rented house, was a farmhouse, quite a ways out of Reedley.

01-00:08:10
Eardley-Pryor: Had your parents been involved in the fruit farming business for most of their professional lives, when you were born?

01-00:08:17
Friesen: Well, yeah. They were laborers and doing the laboring work when it wasn't fruit season. But during fruit season, my father had a job at a packing house making boxes. These are the boxes that the fruit was to be packed in. And he was sort of an independent contractor because he was in charge of all of the aspects of making the boxes. From about a month before the fruit season started, they would get the raw wooden material from the mills. It would be delivered and all cut up in pieces and wired into packets. And he would start making boxes about a month before, making boxes like crazy. And by the time they started packing, they would have the back end of the packing house just full of boxes, which would soon all disappear.

01-00:09:26
Eardley-Pryor: How did he get started doing the box making?

01-00:09:28
Friesen: Well, I'm not exactly sure. But his older brother was making boxes at one of the packing houses in downtown Reedley. So there must have been some connection there.

01-00:09:43
Eardley-Pryor: So your father worked essentially as an independent contractor, as an entrepreneur of his own. That's great. Once the boxes were created and the fruit-harvesting season began, how did his work transition then?

01-00:09:58
Friesen: Well, he continued making boxes. He had to work long hours to keep ahead of the packers. There would be a line of packers, maybe twenty packers. The farmers would bring the fruit in from the fields. They would arrive like ten in the morning. They would start the packing, and the fruit would keep coming in. And they would work until the fruit was all packed, which was often ten, eleven, even midnight.

01-00:10:30
Eardley-Pryor: What were you and your brother doing while your father and your mother were involved in this?

01-00:10:34
Friesen: Many times we'd be at home. I'd be home alone. But when I got old enough, I was put to work as a shooker. The shook was what the wooden material was called, and these had to be placed in the stands next to the machine that they made the boxes on. I had to replenish the stacks. So I would have to get the shook and pile it up. And then I would have maybe fifteen minutes free time. I often had a book that I would read, or there were other jobs around that could be done that I would do.

01-00:11:17
Eardley-Pryor: When you said old enough to work in these manufacturing sites, how old?

01-00:11:22
Friesen: Well, ten, maybe earlier.

01-00:11:24
Eardley-Pryor: That seems pretty young to be involved in manufacturing.

01-00:11:29
Friesen: Well, there used to be a state inspector who came to the plant about once a week. And when he drove in the parking lot, the cry would go out, "The state inspector just showed up!" Then I would run under the packing house, which was built up so that they could get level with the boxcars. I would run under the packing house and hide until they left.

01-00:12:02
Eardley-Pryor: Were there other children there with you?

01-00:12:04
Friesen: No.

01-00:12:04
Eardley-Pryor: So you were by yourself under there. What are some of the other memories you have of this manufacturing site? Was it a dangerous site, was it friendly—if you're the only child around?

01-00:12:16
Friesen: No, not so dangerous. The first couple of years, the boxes were made by hand. Part of the job was to put cleats on the ends of the boxes, and I would do the cleating. This was done before the box was put together. And my mother did the labeling. They put these fancy labels on the end of the boxes. So she would come in early, and work on the labeling. She put labels on for a couple of hours, and then she would join the packing line when they started packing.

01-00:13:03
Eardley-Pryor: Do you remember what the labeling process was like, what her work was like?

01-00:13:05
Friesen: Oh, I used to do a lot of it, yeah.

01-00:13:07
Eardley-Pryor: Tell me a little bit about that.

01-00:13:09
Friesen: Well, they had a sort of a tray assembly, where you would take a stack of twenty-five box ends, and splay them out onto this rack. Then there was a tub of paste, which was like library paste. And with a big brush, you'd dip it in and brush all twenty-five that are all splayed out, and then go along and put the labels down. Now when the labels came, first thing in the morning they had to be taken out of their container. You'd have to splay them to sort of

keep them from sticking, and they had to be put in water. So you'd take them out of the water, a handful of them, and you could just go down and lay them down along all twenty-five. Then pull it up, and put them in the process to be made into the boxes.

01-00:14:08
Eardley-Pryor: Did you enjoy doing this work? Did you like being there?

01-00:14:11
Friesen: Well, yeah, I guess I enjoyed it. I enjoyed the working part of it and being involved, yeah.

01-00:14:20
Eardley-Pryor: Where was your brother during this time, your younger brother?

01-00:14:22
Friesen: Well, he would be at home. I don't really remember much about whether he had someone taking care of him, but I think he did.

01-00:14:35
Eardley-Pryor: Do you remember discussion about the Great Depression going on? Was that something you were conscious of as a child?

01-00:14:41
Friesen: Oh, we were very poor, and getting a nickel or a penny was a big deal. [laughs] I knew that much.

01-00:14:49
Eardley-Pryor: You also mentioned you had books that you would read during down times. What sort of books were you into then?

01-00:14:56
Friesen: Well, there was an author who made a series of books on flying during World War I. I forget the names of the books at the moment, but I was always interested in that. So I read a lot of those and that type of book.

01-00:15:16
Eardley-Pryor: Where had you seen airplanes before?

01-00:15:19
Friesen: Well, at that time, a few would fly over. But later, during the war [World War II], there was an Air Force base at Visalia, a training base, and they had a practice area above our farm. So many times, there would be a half-dozen or more airplanes flying around above the farm.

01-00:15:54
Eardley-Pryor: Was herbicide spraying happening with planes at that point around Reedley and where you were living?

01-00:16:02
Friesen: No. There was spraying being done, but it was all being done with trucks or going through the fields. And they would use, I think, a cyanide spray, and you were warned never to go even close to one of those. You could see the fog of the stuff that was settling on the vines.

01-00:16:26
Eardley-Pryor: Was that a concern among the workers, people like your parents who were processing this?

01-00:16:31
Friesen: Oh yeah, everybody stayed out of it, yeah.

01-00:16:35
Eardley-Pryor: You mentioned that your parents saved up enough money to buy this farm that had been foreclosed. Around when did that happen?

01-00:16:45
Friesen: That was when I was in the third grade, so that would have been about 1936.

01-00:16:50
Eardley-Pryor: How did they manage to save their money doing this work during the Depression?

01-00:16:55
Friesen: Well, they were working and being paid. Fruit packing was fairly good pay.

01-00:17:10
Eardley-Pryor: You had mentioned that your father had plowed part of the farm. Were you involved in some of this early work in getting the farm that they purchased ready?

01-00:17:21
Friesen: Well, yeah. And over the next three or four years, he planted the entire twenty acres, which meant that he had initially put in five acres of peaches, and then he put in about ten acres of grapes. Then there was about five acres that, as I remember, various things were put in. Once he had alfalfa. At one time he had cotton in it, and then they had things like beans. And when the rows of the fruit trees and the vines were small, before they started to bear fruit, he would plant things between the rows.

01-00:18:16
Eardley-Pryor: What did he do with the surplus?

01-00:18:18
Friesen: Well, he would sell it. I remember once they had beans. The beans were going to the market in San Francisco, and someone took it. One time, I recall that they had watermelons, and he got a truck and was driving the truck to San Francisco. I remember one of the incidents was that he was driving along Highway 99, and several people drove alongside him, jumped on the truck,

and were throwing watermelons out into a truck driving right alongside him. So it was a few problems like that.

01-00:19:15
Eardley-Pryor: Those were wild times. I'm interested in some of your other memories around this time on the farm. What were some of your experiences on the farm? If they're raising the farm and they're also working in the fruit processing plant at the same time, were they relying on you and your brother's labor as well?

01-00:19:33
Friesen: Well, yeah. Every night, when I got home from school, we had chores to do. And I can remember, when we had cotton, we had a quota of cotton we had to pick every night when we got home from school. And of course, we had a cow, and we always had a calf that we would raise to butcher. And the first few years, he had two mules that he used until he had enough money to buy a tractor. And we had a couple of pigs. We had everything to try to supply as much food as we could, on our own land.

01-00:20:21
Eardley-Pryor: Were you pretty successful in that? Did you mostly eat the food that you grew?

01-00:20:25
Friesen: Oh yeah, we always ate well.

01-00:20:28
Eardley-Pryor: I'm interested if you remember where some of the water was coming from for irrigation for your farm.

01-00:20:34
Friesen: Well, there's an irrigation district, and there was a canal alongside. The irrigation district still exists. They have a tender, and he has to allot water among the different farms. So you would apply for your allotment of water, and they would come out and open up the valves to give you the water. And irrigation was usually, we just flooded. We'd start out with furrows alongside the vines, but if the area wasn't exactly level, he would flood the area. It was very sandy soil, so the water disappeared very quickly.

01-00:21:25
Eardley-Pryor: With some of this farming equipment that's coming around, and working as a young boy in these manufacturing plants, what was your relationship with machining, since you eventually became an engineer?

01-00:21:39
Friesen: Well, in the packing house, after a couple of years, they put in nailing machines, both for doing the cleating, and for making the boxes. And I was not allowed to use any of that equipment. So all I did then was, I was just a shooker.

01-00:22:01
Eardley-Pryor: Do you remember being frustrated with that, when that automation came in?

01-00:22:03
Friesen: No. Well, I always say that I was automated out of a job when I was ten years old. [laughter]

01-00:22:13
Eardley-Pryor: I remember you mentioning the process of raisin-making being challenging. What was that process like?

01-00:22:19
Friesen: Well, each year, there were three decisions that had to be made with respect to what you did with the grape crop. The first was that you could sell it as table grapes. So there was always the question as to how much the packing houses were offering for table grapes. And if it looked like they were not offering enough, then they were held over to making the raisins, that was the last alternative. And in order to make raisins, they used trays down the middle of the rows of vines. Some trays were made of wood, but we always used a paper tray, which was about two feet by three feet.

So you'd pick the grapes, and you spread them out on this tray. You'd have a solid row of trays down the row of grapes. And then, when the topside dried out, after a couple of weeks, you had to flip the grapes on the tray. So you'd take an empty tray and two people, one on each side, would put that tray over the other tray and flip it. Then they'd go to the next one, flip it, and—

01-00:23:58
Eardley-Pryor: All the way down the rows.

01-00:24:00
Friesen: And when you got down to the end, you would hope you could stand up, [laughs] because it was very, very hard work. Then after the second side dried, then you had to roll them. They rolled them like a cigarette. And then after that process was finished, they were picked up and put into sweatboxes. These were large boxes, and the purpose was to equalize the water content of all the raisins. After this, they were left to sweat for a few weeks. Then someone came, you sold them, and someone came and took them away.

01-00:24:50
Eardley-Pryor: What were the things that you took from this experience of growing up on a farm and all of this work? What were the things that helped form who you became, who you were becoming?

01-00:25:02
Friesen: Well, I wanted to get out as soon as I could! [laughs] The day after my high school graduation ceremony, I was out really, and never went back to live.

01-00:25:15
Eardley-Pryor: Before we move forward to that, I'm interested in some of this family that was around. It seems like your parents were working hard, but really seemed to be thriving during this time. It was challenging in this area. Did that create any kind of issues with family members, or neighbors that maybe were having harder times?

01-00:25:34
Friesen: No, the neighbors were not that close. We did get to know the close ones, but there were friendly relations.

01-00:25:45
Eardley-Pryor: I remember hearing a story of your father's side, perhaps, having some sort of religious background. Was religion part of your up-bringing?

01-00:25:56
Friesen: No. My ancestors on my father's side were German Mennonites, and their history was that they were persecuted in Germany. When Queen Catherine ruled Russia, she invited the Mennonites to go to Russia to build up the eastern part of Russia and the Ukraine. So many, many of them went to Russia, including my ancestors. For instance, my great-grandfather was born in the Ukraine. And fortunately, they got out about 1870.

I think that they were not well liked by the Russians because they were hard working and soon became wealthier than the Russians. And they also spoke German; they retained the German. And later, after the World War I, Germany had invaded the Ukraine, and of course they were sort of welcomed by the Mennonites. This didn't go over well with the Russians. When Stalin took over, he tried to get all the Ukrainians to go into collective farms. Essentially, he starved millions of them, including the Mennonites. So they all had a very, very rough time.

But my ancestors got out early, fortunately. There were places around the world that they went to. There were some places in Canada they went to; Belize, some of them went to; Mexico; and most of them came to the United States. There were several places that they went to: Hutchinson, Kansas; Dallas, Oregon; a place in Nebraska; and Reedley, California. So they all sort of migrated to these places.

On my mother's side, her ancestors—she was a Scots Irish. So, I was never exposed to Mennonite. Her ancestors came from Ireland—the Scots part of Ireland—into South Carolina and Georgia, and then worked their way across the country. My grandfather was born in Decatur, Arkansas, and then they finally migrated to Idaho. That didn't work out very well, so they heard about Reedley and headed down there. That's how my mother and father got together.

01-00:29:01
Eardley-Pryor: Do you remember the story of how they met?

01-00:29:08
Friesen: No.

01-00:29:11
Eardley-Pryor: Can you tell me a little bit about more of these memories of childhood? I'm thinking, in particular, the classic California narrative of *The Grapes of Wrath*, and the Okies fleeing the Dust Bowl. Do you have any memories of seeing Okies, or these people moving through this area?

01-00:29:27
Friesen: Oh yeah, there were many of them around. They would work in the fields, and many of the kids I went to school with were Okies.

01-00:29:40
Eardley-Pryor: How was their experience? Were they treated differently, were they ostracized, were they welcomed? What do you remember?

01-00:29:47
Friesen: I don't remember too much. But they were somewhat ostracized, because they were coming in, and as any immigrants coming in, they were taking jobs away from the locals. So that didn't make them very popular.

01-00:30:06
Eardley-Pryor: I remember hearing something about the Spanish influenza hitting some side of your family—

01-00:30:11
Friesen: The what?

01-00:30:12
Eardley-Pryor: The Spanish influenza, the great flu that came through around 1918 to 1920.

01-00:30:18
Friesen: Well, my mother had one brother. He went into the war, and he got the influenza. My father was the youngest of nine, and the middle three died before the age of two or three. I don't remember if they had influenza or whether they were just normal diseases they got, but that was around the same time.

01-00:30:49
Eardley-Pryor: Sports seemed to be an important thing for you growing up, as well. In addition to this work that you were doing with your parents and on the farm, what were some of the sports that you gravitated towards?

01-00:31:00
Friesen: At Smith Mountain Grammar School, which was a two-room schoolhouse, four grades in each room, it turned out that two families sort of dominated the school scene. One was the Powells, who had three sons. One of them was one year older than I and was in school. His next oldest brother was around thirty, but he was always close to the school and when we played baseball, he would always umpire. And the oldest son was Larry, and he was pitching for the San

Francisco Seals. He later was traded to the Red Sox, and was the first Major League Baseball player to be drafted [for World War II], so that ended his career.

The other family was a family of kids whose folks had died. Their parents had died, so they were raising each other. There were six or seven in the family, and they were all good athletes. So we had a very, very good baseball team, and I really got interested in baseball. And when I went into high school, I played basketball—I particularly enjoyed playing basketball—and I also played baseball. I was left-handed and being left handed always helps in sports, because you can always twist the ball in the wrong direction for right-handers.

My father had played adult night softball in Reedley, and he taught me how to pitch and throw a curve. So in high school, I became a pitcher. There were two of us who were pitchers, and the coach would start me out first. I could throw a few odd pitches at them. And then when they started hitting me, he would put the other pitcher in who was a stocky guy. He threw only fastballs, but he would try to whiz ‘em past them.

01-00:33:48
Eardley-Pryor: What were some of the things you took away from your sports experiences?

01-00:33:51
Friesen: Well, I enjoyed sports. And I continued after I became an adult.

01-00:34:01
Eardley-Pryor: In what way?

01-00:34:02
Friesen: We took up tennis. I played tennis for fifty or sixty years and enjoyed it.

01-00:34:15
Eardley-Pryor: Well, we’ll definitely revisit that. What high school did you attend?

01-00:34:21
Friesen: Reedley High School.

01-00:34:22
Eardley-Pryor: And when was it that you started there?

01-00:34:25
Friesen: Nineteen forty-one, which was a couple of months before World War II started.

01-00:34:32
Eardley-Pryor: Was the war on your radar at all, even as it was ramping up into the late thirties?

01-00:34:39
Friesen: No. No, we were—I think everyone was—very surprised when the Japanese hit Pearl Harbor.

01-00:34:49
Eardley-Pryor: How do you remember hearing about that?

01-00:34:51
Friesen: Well, it was a Sunday morning, and we had planned to go into watch a baseball game in Reedley. I remember we got there and everyone was sort of buzzing about they'd heard about the strike. There were a lot of talk about it.

01-00:35:12
Eardley-Pryor: What was the talk?

01-00:35:13
Friesen: Well, I really don't remember, but everyone was very surprised. And nobody knew what was going to happen. There were a lot of Japanese living around Reedley, and in my high school class. The class ended up with about a hundred students total. About twenty had been drafted because they were draft age. About twenty or more of them were Japanese and they had been relocated.

01-00:35:50
Eardley-Pryor: Do you remember having much contact with any of these Japanese students in such a small school?

01-00:35:54
Friesen: Yeah, I knew a number of them. In fact, my father leased a farm of a Japanese family that was evacuated. It was forty acres and it was about ten miles from our place. So I spent a lot of time working on that during the war.

01-00:36:17
Eardley-Pryor: Do you remember how that process happened? With the evacuation, was it just suddenly your friends in class were no longer there?

01-00:36:26
Friesen: Yeah. They had a couple of months' warning, and they were all told to pack certain things. They had to take a train out of Fresno, which came up to San Francisco, and I think one of the horseracing tracks down the Peninsula was used as a staging for them. All the Japanese went down there and then were assigned to different camps inland that they went to.

01-00:36:57
Eardley-Pryor: Do you remember what the thoughts and discussion was in the community, among you and your friends when this was happening?

01-00:37:04
Friesen: No, except that I know that the Japanese were—I shouldn't say they were not well liked, because there were a lot of them who were friendly. But they kept pretty much to themselves and their farms, and did not, had never mixed

much. A lot of them—some of them who had emigrated from Japan—only spoke Japanese. But the kids were, of course, in school, who I knew. But they really were not well assimilated. In fact, I remember one of the sons of the family that we leased the farm from. He went into the Army, and as such, he was allowed into the restricted area. He came back to visit the farm to see how things were going. And I remember my father took a lot of heat from the fact that we had been friendly with them, and a lot of that whole scene was not too well liked by a lot of people.

01-00:38:22
Eardley-Pryor: Do you remember there being concern about saboteurs, or any of that kind of business?

01-00:38:27
Friesen: A little bit, but I don't remember too much about that.

01-00:38:32
Eardley-Pryor: How did your father and you and your brothers manage to take care of these additional forty acres during high school?

01-00:38:44
Friesen: Well, we had to hire help. One of the things that happened was, they had one acre of strawberries. And since they had four or five months warning about having to leave, they just let this acre of strawberries go to hell. So when we took over, the Johnson grass, which was a very hardy grass, was up a couple of feet high over the entire acre. And my father—and this was not a part of the deal of sharing of crops that was arranged between the families—my father told my brother and I that “this is your deal. You take care of it, and you get whatever comes off of it.”

So we started at one corner of the acre cutting out, with the little cutting tools, cutting out Johnson grass. And by the time that we got to the end of the acre, it was already grown up at the end. Strawberries are a very intensive crop. During the picking season, we would water one day, and pick the next, water, and then just alternate days for a couple of weeks. And this required maybe twenty to thirty workers. We kept trying to get workers out, and were always having trouble getting people to come out and do the work. So after the first year, we just plowed it all under.

01-00:40:27
Eardley-Pryor: Thinking about your father’s work on these farms and having these contract deals, and later, you eventually having your own business, were you involved in any of the management aspects of the farming, finding buyers or finding workers?

01-00:40:40
Friesen: No.

01-00:40:40
Eardley-Pryor: Just something you saw growing up.

01-00:40:42
Friesen: Yeah.

01-00:40:44
Eardley-Pryor: You'd mentioned flying being something that you were really interested in as a young child, and then the flying that was happening over your farm during World War II for training. Did that lead to for any kind of organizational connections you had in high school, or thoughts?

01-00:41:00
Friesen: Well, there was a California Civil Air Patrol. There is a civil air patrol in California that still exists that does a lot of good things, flyers flying people around and so forth, and they had a Corps. And so I joined that in high school, and we met and talked about airplanes and marched around and so forth. In fact, we made a trip to Visalia to the Air Force base. And we were taken up in a trainer, and were allowed to fly their Link Trainers, which was a model of the inside of an airplane, which was enclosed so you could actually fly it. And that sort of thing is still used by pilots for training purposes.

01-00:42:00
Eardley-Pryor: Sounds like that had a powerful impression on you.

01-00:42:04
Friesen: When I got back from the Navy, the fellow who was running the CAPC called me and said that there was some money left over, and he was using that to give the students a flight. So he offered to take me up on a flight, in a Stearman. He had since learned to fly, and so he took me up and did a lot of stunts: hammerheads, and loops, and all that sort of thing. So that was an interesting thing to do. So I took up flying later when I had the money to take lessons.

01-00:42:50
Eardley-Pryor: You eventually became valedictorian of your school, of your high school. What were the classes that you were really drawn to?

01-00:42:59
Friesen: Well, I always enjoyed math. And I took Spanish, which I enjoyed, and civics and drawing. I enjoyed more of the mechanical aspects of the classes.

01-00:43:19
Eardley-Pryor: How did you find time to be studying, in the midst of school, while working on the farm?

01-00:43:27
Friesen: Well, I don't think we did much studying at home. There was a study period at school. We didn't do much homework at home.

01-00:43:38
Eardley-Pryor: And those things came naturally to you.

01-00:43:40
Friesen: Yeah.

01-00:43:42
Eardley-Pryor: As you're moving through high school, and moving closer to graduation, closer to draft time, what were the discussions that you and your friends were having at the time?

01-00:43:53
Friesen: Well, everyone was concerned about going into the service. So the discussions were whether you waited till you were eighteen to get drafted, or whether you volunteered to go into the Navy, or the Marines, or the Air Force. So all the fellows were concerned about what decision to make there. The Navy gave a test they call the Eddy Test. It was a mainly a math test. So I went to Fresno, took the test and passed, in about January of '45. The Navy accepted me and sent me back to finish high school. And then, in April, the war was over in Europe. Everyone was expecting the war to last years, so that didn't change things much.

Then, the day after I graduated, the Navy requested my presence in San Francisco. So I came up and had a physical, and passed. Normally, they would send people home for about three weeks just to get your affairs straight. But for some reason, they put me on a train the next day for Chicago. I went through the Naval Training Station, between Chicago and Milwaukee, and that's where I had my boot camp.

01-00:45:53
Eardley-Pryor: At the Naval Station Great Lakes site?

01-00:45:55
Friesen: Yeah.

01-00:45:55
Eardley-Pryor: What were your feelings going through all of this? You're suddenly giving your valedictorian speech, and then—

01-00:46:02
Friesen: Well I was pretty excited. [laughs]

01-00:46:04
Eardley-Pryor: Why?

01-00:46:05
Friesen: Why? Well, I was going to get the hell out of Reedley, [laughs] and see the world.

01-00:46:14
Eardley-Pryor: So, when you got to Chicago, what was your experience?

01-00:46:17
Friesen: Well, we immediately got on another train—there's a train system that goes between Chicago and Milwaukee—and took that up to the station. And then went into the boot camp training.

01-00:46:32
Eardley-Pryor: What was boot camp like?

01-00:46:34
Friesen: Well, it was mainly they were just trying to get people organized and into the Navy. We did a lot of marching, and so forth, and had classes in certain things. I remember that there were two sets of guns that we had to learn how to use: twenty-millimeter guns and forty millimeters. The forty-millimeter is a pretty good sized gun. And then, I caught scarlet fever and was put into the hospital. I was in the hospital when the [atomic] bomb was dropped. I remember standing in a window watching my unit heading out to Chicago to be in a big march down through The Loop to celebrate the end of the war.

01-00:47:46
Eardley-Pryor: This happened while you were in school, while you're in the hospital?

01-00:47:49
Friesen: In the hospital, yeah. I missed the march.

01-00:47:52
Eardley-Pryor: How do you remember hearing about the atomic bomb?

01-00:47:55
Friesen: Well, I really don't remember it. I was in the hospital at the time, and I'm certain that the word got around.

01-00:48:06
Eardley-Pryor: You had mentioned you took a test for the radar school and passed that, and then were in this training, sort of an elite training for the Navy. What were the classes that you were training in?

01-00:48:21
Friesen: Well, the first thing that happened is the Navy tried to get us to switch over to regular Navy. There was probably, oh, maybe six, seven hundred of us in this program, and nobody would join the regular Navy. So they finally decided to keep the school open. And during this period, there was about a two-month period where they were trying to get us to do things, and they were trying to decide what to do with us. I could type, so I was given a plush job of typing discharge papers for a lot of the Navy fellows coming through that were being discharged. And I worked on that for probably two months. And during that period of time, I was given sort of free time to go wherever I wanted. I had all the nights free, and all the weekends free, just like a regular job. So I spent a lot of time going into Chicago and in Milwaukee. Milwaukee was particularly popular because, well, a lot of free beer. [laughs]

01-00:49:48
Eardley-Pryor: Tell me about your memories of Milwaukee in 1945. You would take the train up?

01-00:49:55
Friesen: Yeah, they had a train, and I would hop on. All transportation and everything was free for servicemen during that period. So all you had to do was just jump onto a streetcar or a train and go. So I would go up to Milwaukee. There was one place, a suburb called Wawatosa, and every Saturday night they had a dance. So I would usually try to get up there. There were USOs that you could use to get a bed to sleep at. One night I remember I couldn't get a bed, so I slept on a pool table! I can remember going back to the base and it was always standing room only and I'd be going to sleep, and start to fall over. [laughs] We were having a great time traveling around.

01-00:51:04
Eardley-Pryor: What about Chicago? You were coming from a small farm town, and then moving out to this metropolis. What were your experiences and thoughts of seeing Chicago?

01-00:51:12
Friesen: Well, the three things that I remember particularly going to a lot is the science museum [Museum of Science and Industry, Chicago], which I enjoyed. And also there were two ballrooms, the Trianon and the Aragon Ballroom. They also had dances that there were always lots of girls at, so I enjoyed those.

01-00:51:35
Eardley-Pryor: Did you go with buddies that were a part of the training school?

01-00:51:38
Friesen: Yeah.

01-00:51:39
Eardley-Pryor: Tell me about the science museum, because you had such a science-oriented career and eventually schooling. What was at the science museum that drew you?

01-00:51:46
Friesen: Well, they had a lot of things that they showed, experiments that were going on. It was sort of an Exploratorium-type place where they had things happening that [phone rings]—holy smokes, more of that?

01-00:52:05
Eardley-Pryor: Okay. How closely were you following the progress of the war? The war had ended in Europe while you were in [high] school. Were you all kind of getting updates as to what was happening, the end of the Battle of Bulge, or fire bombings beginning over Japan?

01-00:52:20
Friesen: Oh yeah, we followed it very closely, yeah.

01-00:52:22
Eardley-Pryor: How were those things delivered to you?

01-00:52:24
Friesen: By radio and by newspaper.

01-00:52:28
Eardley-Pryor: Was there a lot of anxiety about what was happening?

01-00:52:33
Friesen: Well initially, no one knew whether we were going to win or not, so there was anxiety there. Plus there was some anxiety about, in all of California, about being invaded. People here really thought that we were going to be invaded by Japan. So, there was anxiety there. This was the first year. After that we started winning the war, so there was not that much anxiety.

01-00:53:03
Eardley-Pryor: The bomb is dropped in August; Victory in Japan Day happens; your friends go off to march, celebratory, in Chicago. What eventually happens to you, after you get out of the hospital?

01-00:53:14
Friesen: Well, that's when I went into the typing pool. And then, the Navy decided that they had to keep the school open for the regular Navy coming behind us. So the first school was a high school in Chicago that the Navy had taken over. So the training there was—I remember, they gave us a box of parts and I built a radio, a superheterodyne radio. You had a plan, so you had to take this thing and put this thing together. Plus studying the various aspects of electricity, and so forth and so on.

The Navy intended to whittle the class down to about half, so almost every day some guy would come and test. You dropped everything, and they passed out a test. You took it, and then a half dozen of the men would be, that night, packing up their stuff and leaving because they had flunked the test. But I managed to pass it, and went on to the secondary school. There were three secondary schools: one was at Navy Pier in Chicago; Gulfport, Mississippi; and Monterey, California. I signed up for Monterey but got Gulfport.

01-00:54:58
Eardley-Pryor: So you went down to Mississippi, to Gulfport, Mississippi. And this is around 1945, 1946? What happened in Mississippi? What are your memories from that experience?

01-00:55:07
Friesen: Well, I don't have too much memories of the school. One memory was that all of the men working in the chow halls and cleaning the barracks and so forth, were German and Italian POWs. And the other [memory] was that I did get away a fair amount to get into New Orleans, and I took one trip around the South. New Orleans was fairly close. Now that was during the Jim Crow time in the South. I remember trying to go—my m.o. [modus operandi, method of

operation] at high school when I was on the bus was to go to the back of the bus. And I very quickly found out that you did not do that in the South, because in the south it was reserved for black people. And of course, they had things like the water faucets. There were always two water faucets: one was labeled "Colored" and one was not labeled. And of course there were a lot of black people around New Orleans. So it was—

01-00:56:28
Eardley-Pryor: Had you had much experience with African Americans before that, in Reedley or elsewhere?

01-00:56:33
Friesen: There were none in Reedley.

01-00:56:35
Eardley-Pryor: What was the experience then in Mississippi?

01-00:56:38
Friesen: Well, there were a lot of them around, and I really didn't have much to do with them except just as an observer. But it was, as a farm boy from California, it was an eye opener to see how people were treated.

01-00:56:58
Eardley-Pryor: Were there any black units down there? This was before Truman desegregates the military.

01-00:57:04
Friesen: There were no blacks in our units. In fact, the unit I was in, in Gulfport, was about half New Yorkers and half Southerners. All the Southerners picked Gulfport because it was home. Why the New Yorkers were there, I don't know. But the Civil War was re-fought every night.

01-00:57:27
Eardley-Pryor: How so?

01-00:57:28
Friesen: Well, there was probably thirty on each side, and they would start arguing with each other. I had a friend from Washington state, and also a friend who was from Albany, Georgia, and the three of us would not get involved in any of this. We would be off to the sideline at the other end of the barracks. They were practically coming to blows.

01-00:57:57
Eardley-Pryor: You mentioned visiting New Orleans. What was New Orleans like immediately in the postwar era? What was the experience like there?

01-00:58:04
Friesen: Well, I can't really remember too much about it, though the experience wouldn't be different from any other. It was just another town.

01-00:58:20
Eardley-Pryor: You said you also traveled through the South.

01-00:58:22
Friesen: Yeah. My buddy from Albany, Georgia, invited me to go with him to spend Christmas with his folks. And the final decision was that half of the people could take four days at Christmas, and half four days at New Year's. Turned out that he was in the New Year's operation, and I was in the Christmas operation. So I went by myself, and I remember the train. When it pulled up, there was probably four or five hundred of us outside trying to get on the train. I really had to fight to get onto the train, and I just barely made it. I only went a hundred miles or so and got off, took another train down through Florida and ended up in Jacksonville. Then I worked my way up to Albany to spend with my buddy's family.

01-00:59:29
Eardley-Pryor: What were your memories from that experience?

01-00:59:31
Friesen: Well, I was interested in traveling and seeing the different places. First, it was all very different from California.

01-00:59:44
Eardley-Pryor: How so?

01-00:59:45
Friesen: Well, of course Florida had all these big trees and all the moss hanging down from it. And of course I had never spent much time in a big city, so that was always an interesting experience for me.

01-01:00:00
Eardley-Pryor: Interesting in what way? How so?

01-01:00:02
Friesen: Well, the fact that it was so different from my earlier life.

01-01:00:09
Eardley-Pryor: Where'd you go after Gulfport, Mississippi?

01-01:00:11
Friesen: From Gulfport, the third school was Treasure Island in San Francisco Bay.

01-01:00:18
Eardley-Pryor: Back to California. Were you excited about that? Were you anxious about coming home? What were your thoughts?

01-01:00:26
Friesen: Yeah, I was glad to be coming back to California. I had met a girl in Chicago, and she had gotten pretty serious. She wanted me to go to the secondary school in Chicago. Then she got more serious than I certainly was, so I finally cut that off. So I was happy to get back to California.

01-01:01:01
Eardley-Pryor: What was the work that you were doing out in Treasure Island?

01-01:01:04
Friesen: Well, it was all school. We were learning, working on radar equipment and sonar equipment. Learning how to operate it, how to take it apart, and how it all worked, and so forth.

01-01:01:20
Eardley-Pryor: Before this training in the Navy, had you had any kind of other electrical engineering?

01-01:01:24
Friesen: No, none.

01-01:01:26
Eardley-Pryor: This is really where you got your beginning in that.

01-01:01:28
Friesen: Yeah.

01-01:01:30
Eardley-Pryor: How did that lay a path for you?

01-01:01:35
Friesen: Well, it did because, when I signed up to go to Berkeley, I just naturally gravitated into engineering.

01-01:01:45
Eardley-Pryor: How did you make the transition from Treasure Island to Berkeley then?

01-01:01:48
Friesen: Well, we were discharged before the school was finished. All of a sudden the Navy decided to get rid of us. But people in my unit were talking about their future and where they were going to go to school, et cetera, et cetera. And everybody was talking about going to college. A few of them were signing up to go to Berkeley. It was an easy thing to do, so I did too, and was accepted.

01-01:02:26
Eardley-Pryor: This might be a nice point to take a break for us, before we move into the Berkeley years.

01-01:02:30
Friesen: Okay.

[Break.]

01-01:02:34
Eardley-Pryor: All right, Howard, so you'd mentioned that after you'd been discharged from the Navy, in 1946 at this point, a number of your colleagues from the school were talking about what their futures would be, and were going to Cal. So

that's how it came on your radar to go apply there. Did you have any time before you applied to Cal where you went back home?

01-01:02:56
Friesen: Well, yeah, I had liberty occasionally. So I got home probably four or five times while I was going to Treasure Island.

01-01:03:09
Eardley-Pryor: How did your parents manage while you were away?

01-01:03:13
Friesen: Probably very well. [laughter]

01-01:03:16
Eardley-Pryor: What was your brother's experience while you were gone?

01-01:03:18
Friesen: Well, he had failed a grade, so he was really four years behind me. I really was not in the same class at Smith Mountain with him, nor was I in high school with him. So, we were never really that close.

01-01:03:42
Eardley-Pryor: When you began at Berkeley, what was your experience there?

01-01:03:47
Friesen: Well, first was to try to find housing. The university had taken over a lot of the Richmond housing project and made it into rooms for housing students. That was the only thing that was available for me, so I started out there. They had a bus system going into Berkeley, and one of the problems was that the last bus was at a fairly early hour in the evening. So every once in a while, you'd be caught in Berkeley going to some affair or something and miss the last bus. Then it was quite a problem trying to get out to Richmond. So a friend and I broke our lease and found a room in Berkeley on Grant Street, which was fairly far from the campus. We were there for a while, and then we found another place in what is now People's Park. Then we moved over eventually to Cloyne Court, which is the co-op over on the north side.

01-01:05:11
Eardley-Pryor: That's an old, traditional co-op housing there, which kind of anchors the co-op experience in Berkeley. How did you hear about the co-oping opportunity?

01-01:05:20
Friesen: Well, I don't know. We were looking for a place to stay, and it was one of the ones available, so we took advantage of it.

01-01:05:28
Eardley-Pryor: What was the process of getting into the co-op?

01-01:05:31
Friesen: I don't remember.

01-01:05:33
Eardley-Pryor: Coming from the Richmond Housing Authority, and then having to bus in every day, what was the experience on campus then? Was it a number of other students like you that were coming back from the war, or were you there with just a whole swath of people from all across the country?

01-01:05:50
Friesen: No, there were hundreds who were living in Richmond and doing the same thing. Everyone disliked it, but we were about the only ones I think who broke—we were not supposed to break our leases, but we did. And they didn't try to get back at us in any way

01-01:06:15
Eardley-Pryor: How about funding for school?

01-01:06:18
Friesen: Oh, well I was on the GI Bill, so Uncle Sam put me through school. And in the last year, my GI Bill ran out. So they had a CalVet—California had a veterans' program, so I used that for the fourth year.

01-01:06:43
Eardley-Pryor: What were some of the classes that you were taking? When you began at Berkeley, did you have a sense of what major you wanted to move into right from the start?

01-01:06:52
Friesen: Well, it was math and physics, and drawing. And well, mainly math and physics, yeah.

01-01:07:05
Eardley-Pryor: So you chose math and physics as your major?

01-01:07:08
Friesen: No, electrical engineering. But the undergraduate, the first two years, were prep type. You could also go to junior colleges throughout California, and they had the same classes. And so if someone went to JC, which several of my friends did from Reedley—Reedley had a college, and they went there for two years and then transferred up to Berkeley.

01-01:07:41
Eardley-Pryor: So did you have friends from Reedley that came and met you there, that you went to school with in Berkeley?

01-01:07:45
Friesen: Well, several of them came up that I knew quite well. I saw them occasionally, but not too much.

01-01:07:53
Eardley-Pryor: To go back into the classes, what were some of these classes like? Were they rigorous compared to your naval training?

01-01:07:59
Friesen: Well, yeah, quite rigorous, yeah.

01-01:08:02
Eardley-Pryor: How were they different?

01-01:08:07
Friesen: Well, the Navy was more oriented to handling things, specific things towards equipment that they had. Whereas Berkeley was more of a generalized look at things. Like you have a class in electric motors of different types, and a class of chemistry, or, you know.

01-01:08:43
Eardley-Pryor: So was it less hands-on at Berkeley and more of the theoretical approach?

01-01:08:47
Friesen: Oh yeah, of course.

01-01:08:49
Eardley-Pryor: How did you handle that transition?

01-01:08:51
Friesen: No problem.

01-01:08:53
Eardley-Pryor: Tell me about some of the activities that you got involved in.

01-01:08:56
Friesen: Well, I got initially involved with orientations.

01-01:09:01
Eardley-Pryor: Why that?

01-01:09:03
Friesen: I don't know. It was just one of the things that you went into, so I signed up for it and went into it.

01-01:09:09
Eardley-Pryor: What kind of work did that entail? What kind of activities?

01-01:09:11
Friesen: Well, the orientation is to try to set up programs that help incoming students. When people were enrolling, we had a booth there and people could come up and ask questions, and so forth and so on. So that was primarily it.

01-01:09:37
Eardley-Pryor: What were some of the other activities you were a part of?

01-01:09:45
Friesen: Well, after a couple of years of living in places, I joined a fraternity, and I was in the fraternity for two and a half years.

01-01:10:00
Eardley-Pryor: What was the fraternity you joined?

01-01:10:03
Friesen: Kappa Delta Rho.

01-01:10:04
Eardley-Pryor: Why did you pick Kappa Delta Rho?

01-01:10:06
Friesen: Well, they have a system of—I forget what they call it, where they interview people. You go around and you apply for different places, and you get invited to go there. And they look you over, and if they don't like you, they blackball you. And if they like you, they offer you the opportunity to pledge the fraternity.

01-01:10:31
Eardley-Pryor: So did you interview at a number of these different fraternities?

01-01:10:35
Friesen: Yeah, one of them I really remember, which I was interested—I was interested in both of them, but I was not offered an opportunity there. So I chose Kappa Delta Rho.

01-01:10:48
Eardley-Pryor: What was the experience like for pledging?

01-01:10:51
Friesen: Well, you go around and interview. You're on stage, and they ask the questions, trying to figure out whether you can fit in with their way of life.

01-01:11:04
Eardley-Pryor: So they put you up on a stage, and then—

01-01:11:06
Friesen: No, no, no. They'd invite you to lunch, or an afternoon to sit around and talk.

01-01:11:13
Eardley-Pryor: And once they decide they want to let you in, what was the process from that point?

01-01:11:17
Friesen: Well, I think they offer, and then you accept. I think part of it is controlled by the university as to the processes, the monitor, and so forth.

01-01:11:33
Eardley-Pryor: The motto of the Kappa Delta Rho translates to "honor above all things." Tell me, how did that motto fit your experience both as a fraternity brother, or afterwards?

01-01:11:48
Friesen: I don't think it had [laughs] much of an effect on it.

01-01:11:52
Eardley-Pryor: What was fraternity life like then? So you move from Cloyne Court into the fraternity house?

01-01:11:55
Friesen: Yeah.

01-01:11:56
Eardley-Pryor: To live there? And then what was it like living there?

01-01:12:00
Friesen: Well, I enjoyed the fraternity life. We slept on the sleeping porch, which I didn't like, which was sort of outside. But each of us had a room that we shared with several other people for studying, and then there was a dining hall. And they had social activities, which certainly you never had in rooming houses or at Cloyne Court.

01-01:12:35
Eardley-Pryor: What were some of the social activities?

01-01:12:36
Friesen: Well, they would have dances. They had, primarily, dances.

01-01:12:42
Eardley-Pryor: Were these similar or different from your dances that you would attend either in Milwaukee or Chicago as a part of the Navy?

01-01:12:49
Friesen: Well, different because you had to get your own date. [laughter]

01-01:12:54
Eardley-Pryor: So tell me about that. What were the strategies?

01-01:12:57
Friesen: Well, I had met a few girls, and so I would ask them. And if something came up, I'd get on the phone and start calling them till I finally got someone who would accept it.

01-01:13:09
Eardley-Pryor: That's fun. I also have a note that you were a member of Tower and Flame Honor Society. What was that?

01-01:13:23
Friesen: I'm not sure I remember that.

01-01:13:26
Eardley-Pryor: It mentions that it's an undergraduate honor society as a part of Berkeley.

01-01:13:33
Friesen: Yeah, but I don't remember much about it.

01-01:13:37
Eardley-Pryor: And then also a note that you were perhaps involved in men's counseling?

01-01:13:43
Friesen: Well, that was part of the orientation.

01-01:13:45
Eardley-Pryor: That was part of orientation? So it was kind of helping students get adjusted?

01-01:13:49
Friesen: Well, yeah.

01-01:13:52
Eardley-Pryor: I understand that it was through an orientation gathering that you met your wife?

01-01:13:59
Friesen: Yeah, they had a party, a large party at one of the sororities, and I went to the party. Towards the end of the program, a fellow that I knew, slightly, came up to me. He said that he was trying to interest a girl in going out to get hotdogs at Oscar's with him. And she said that she couldn't go because she had a friend with her, and she couldn't leave her. So he asked me if I would fill in as a fourth, which I said okay and so we did. And that turned out that it was Candy.

01-01:14:48
Eardley-Pryor: What's Candy's full name?

01-01:14:49
Friesen: Carmel Penther.

01-01:14:51
Eardley-Pryor: How do you remember your first impressions of Candy, going on this blind double date?

01-01:14:57
Friesen: Well, I was interested. But I was interested in another girl, so it took me awhile before I really got that serious with her.

01-01:15:09
Eardley-Pryor: Did you have any other interactions afterwards?

01-01:15:13
Friesen: After that date? Yeah, I think that I didn't call her up for a couple of months. And finally I needed a date, so I called her up and she accepted.

01-01:15:26
Eardley-Pryor: Did you all have any classes together?

01-01:15:30
Friesen: No, she was on one end of the campus and I was on the other end.

01-01:15:35
Eardley-Pryor: Tell me about how this process, eventually coming together, unfolded?

01-01:15:40
Friesen: Well, I started asking her out, and so we became closer. I started asking her to every event that we had, and eventually—there's a certain pre-engagement situation in the fraternity life called "pinning." There's a fraternity pin that you wear, and so you ask a girl to become pinned. She wears your fraternity pin, and there's a sort of a ceremony. Everyone in the house goes over to the sorority house, and they sing outside. Then they're invited in to have coffee or cake or something, and you're pinned from there on.

01-01:16:37
Eardley-Pryor: So you have a memory of going through this pinning ceremony with Candy?

01-01:16:40
Friesen: Oh yeah.

01-01:16:41
Eardley-Pryor: Was she surprised? Was she taken aback?

01-01:16:43
Friesen: I don't know. No, it was by agreement.

01-01:16:48
Eardley-Pryor: Tell me a little bit about Candy. Where did she grow up?

01-01:16:52
Friesen: Well, she grew up in Oakland. Her father had gone to Berkeley, Class of '27, and he had joined the ROTC. He was too old to be drafted [during World War II]. However, if you were in the ROTC and had stayed on in the reserve, they took you. So he went into the Army, and he was sent first to Detroit. He was involved with the purchasing, the Signal Corps purchasing. He dealt with a lot of the automobile manufacturers. They were switching over from building automobiles to building airplanes.

01-01:17:47
Eardley-Pryor: So this is during the forties, in the beginning of the war.

01-01:17:49
Friesen: Yeah, the first year of the war. And so, she went to high school her first year there. And then he was transferred to Monmouth, New Jersey—she went to three years of high school in Monmouth.

01-01:18:11
Eardley-Pryor: So, from New Jersey to Berkeley, how did she get to meet you?

01-01:18:15
Friesen: Well, they returned home and she applied to Berkeley and, like I, was accepted.

01-01:18:25
Eardley-Pryor: What did she study at Berkeley?

01-01:18:27
Friesen: She studied general curriculum, and she took some architectural courses, and sociology, and that sort of thing.

01-01:18:43
Eardley-Pryor: I'm noticing that her father was an electrical engineer, and you were studying electrical engineering. Was there any kind of connection you had with her family while you were in school?

01-01:18:51
Friesen: Yeah, I would be invited over for dinner, which I did a number of times. And we got to know each other, and finally got engaged.

01-01:19:01
Eardley-Pryor: Did you get engaged during this pinning ceremony? That was essentially a formal engagement?

01-01:19:05
Friesen: No, no, that's the first step. Second step is engagement, and that took place, well, probably a year after that.

01-01:19:17
Eardley-Pryor: A year after the pinning?

01-01:19:17
Friesen: I think the engagement was after, when we were out of school.

01-01:19:24
Eardley-Pryor: Was Candy the same grade as you, same age?

01-01:19:28
Friesen: No, she was a year younger. But she was in the same grade, because I had lost a year in the Navy.

01-01:19:41
Eardley-Pryor: Oh, I see. So you were in the same class, but one year older than her. Did Candy live on campus as well?

01-01:19:48
Friesen: No, she lived at home and commuted in to classes.

01-01:19:54
Eardley-Pryor: How did that affect her experience of being at Berkeley?

01-01:19:58
Friesen: Well, she didn't like it. She would have liked to have lived on campus, but her folks didn't have enough money to pay for her to do that.

01-01:20:09
Eardley-Pryor: So she was able to commute in. Was Candy part of any other organizations? Sounds like you met at a student orientation gathering. Was she also involved in any other organizations on campus?

01-01:20:24
Friesen: I doubt it. She was in a sorority, but other than that…

01-01:20:30
Eardley-Pryor: So, upon graduation—you graduated in what year?

01-01:20:34
Friesen: Nineteen fifty.

01-01:20:35
Eardley-Pryor: And you and Candy both graduated that same year. What were your visions of the next steps after your experiences at Berkeley?

01-01:20:44
Friesen: Get a job! Jobs were a little hard to come by that year, so I was looking for a job. In fact, I even went down to Los Angeles and spent a couple of days going around to the airframe manufacturers. But I didn't want to—well, Candy was not interested in going to Los Angeles, so that squelched that deal. I finally, I got a job with General Motors. They had two assembly plants in Oakland: one on Seventy-Third Street, and one on Ninety-Eighth Avenue. The job was as an Engineer-in-Training. But I didn't like the job at all, so I was continually looking for another job. I remember, after work a number of times, going into San Francisco to be interviewed at different places to see if I could get a different job.

Then I spotted one that was with Austin Company. They're an eastern company similar to Bechtel but smaller. And they had an office—they had a national contract with Dow Chemical. So I commuted out to the Dow plant in Antioch where they had an office. And this was doing real engineering, you know, drawing-board engineering. And I worked there for oh, I don't know, maybe six months or so.

And by then, we were married. Candy worked in San Francisco, and I decided that I also wanted to work in San Francisco. So I started looking for a job. And Donald Delaney, who eventually I became a partner with, he worked for George Yamas, and he was calling on the mechanical engineers at Austin. Don Delaney was a big, strapping, red-headed Irishman, and each time that he would come in, he would sort of hold court. And there would be six or eight of the mechanical engineers gathered around him, and I thought, "that guy's got a pretty good job."

So I found out where he worked and called George Yamas. I went in and was interviewed by George, who told me that he was not ready to hire another person—there was just the two of them then—but, suggested I come in on

Saturdays to learn the business. So I started doing that. Austin had a cutback, so I got a job at Keller and Gannon in San Francisco, who are mechanical engineers. So I worked there for four or five months. And finally George said he was ready to hire me, so I went over.

01-01:24:26
Eardley-Pryor: That's a quick move into your work with Yamas. I'd love to step back and explore some of the intermediate steps there. So after college, after your time at Berkeley, where were you living? You were in the fraternity house, but then after graduation?

01-01:24:42
Friesen: One of my buddies, a fraternity brother, and I rented an apartment.

01-01:24:51
Eardley-Pryor: In San Francisco? In Oakland? Near Berkeley?

01-01:24:54
Friesen: In Berkeley. Berkeley.

01-01:24:54
Eardley-Pryor: In Berkeley. And how close was Candy's house to Berkeley when she's commuting?

01-01:25:01
Friesen: Well, in Montclair, which is really close to Berkeley.

01-01:25:05
Eardley-Pryor: Okay, so you could at least see each other regularly. How would you even get around?

01-01:25:09
Friesen: I had a car.

01-01:25:10
Eardley-Pryor: What kind of car was that?

01-01:25:11
Friesen: A Ford.

01-01:25:13
Eardley-Pryor: What do you remember of that car?

01-01:25:14
Friesen: Well, it was a Ford, had a lot of miles on it. And I got it—my father helped me buy it. I had a car most of the time I was in the fraternity, so that was a big help.

01-01:25:29
Eardley-Pryor: Did other fraternity brothers have cars?

01-01:25:31
Friesen: Not many.

01-01:25:32
Eardley-Pryor: How did that play out for your fraternity experience?

01-01:25:37
Friesen: Well, it meant that I could get around easily, more easily than most of them.

01-01:25:44
Eardley-Pryor: Were you often called upon to be the ride-giver?

01-01:25:48
Friesen: No.

01-01:25:48
Eardley-Pryor: Oh, that's good. So, moving into this place in Berkeley, you found this job at General Motors. Engineer-in-Training is the job you said that you didn't really like. What did that entail?

01-01:26:01
Friesen: Well, really they were trying to get people in to learn their business. I worked for a while in their administration employment office for a few months, and then I worked out in the maintenance department for a while. Then they sent me to the plant out on Ninety-Eighth, and I worked out there in the maintenance department.

01-01:26:35
Eardley-Pryor: What kind of maintenance did this entail?

01-01:26:37
Friesen: Well, it was mainly installing things or fixing things. One interesting thing about the—they had an assembly line, and every morning, every Monday morning, they would start up the line. The line would chug along for a few feet and stop, and they would reshuffle people back and forth. They ran the line with groups of people, like four or five at an assembly point. And one or two of them would know the job in the next position, and then the previous one. They had something like 20 percent absenteeism on Monday morning. so it was always a problem getting that line going. They'd start it up and run it for a few feet, and then they would reshuffle people back and forth, until finally they could get the right mix of people on the different positions. And then they would run the line.

01-01:27:43
Eardley-Pryor: What was it about this job that you didn't like?

01-01:27:47
Friesen: Well, it wasn't engineering.

01-01:27:50
Eardley-Pryor: What was it that you wanted to be doing? Did you see it happening there?

01-01:27:53
Friesen: Well, I didn't want to go up in the upward echelons of General Motors. That did not appeal to me.

01-01:28:08
Eardley-Pryor: So, when the job opened up at the Austin Company, what was that work? How was that different from the work you were doing in training at GM?

01-01:28:16
Friesen: Well, I was on the drawing board and doing design work. Two projects that I remember working on: one was the—there was an office building that we were working on for Dow, and I did the lighting design for the building.

And then, Dow had purchased a device called an ignitron, which is about the size of a locomotive. They bought it used in Los Angeles and shipped it up in pieces. So we had to design where it was to be installed, and how it was to be put back together.

01-01:29:02
Eardley-Pryor: What was the ignitron?

01-01:29:04
Friesen: Well, it was basically a device that took alternating current and converted it to DC current, in big, big quantities. The wiring coming out of it was copper pieces that were like three-quarters of an inch wide by four inches high, four stacked together. So you can imagine how much the amperage was on something that size.

01-01:29:36
Eardley-Pryor: That sounds like it could be dangerous work.

01-01:29:39
Friesen: Not drawing. [I was] just using a pencil.

01-01:29:43
Eardley-Pryor: So you were involved in figuring out how to reassemble this piece, and others would manufacture it?

01-01:29:47
Friesen: And where it was to go. We had to draw up the plans on where it was to go in the plant, and then the construction people were going to actually install it.

01-01:30:00
Eardley-Pryor: Interesting. Some ignitrons have a mercury pool base to help the charge jump. Was this one similar construction?

01-01:30:06
Friesen: I don't remember.

01-01:30:08
Eardley-Pryor: With the lighting design, with this work on the ignitron, it seems like you were thrown into some pretty neat, deep-end work. How was that similar or different from your training at Berkeley?

01-01:30:22
Friesen: Well, you use a little of the same engineering principles and so forth, of putting things together. And when I went over to Keller and Gannon, I was doing—they were doing—I did a lot of work on Guam.

01-01:30:41
Eardley-Pryor: On—what was that?

01-01:30:41
Friesen: Guam. The Army was building a lot of barracks and buildings to build up the military on Guam. This was during the Korean War. Incidentally, when the Korean War started, jobs opened up. So that there were plenty of jobs. And fortunately, I was in the Navy one year and fifteen days, and those fifteen days saved me from going into the Korean War. So that was one happy part of my life. Also I did the lighting on a school at Oakland—it was a Catholic high school in East Oakland. And I did four or five buildings on Guam, and some other work. And by then, Yamas was ready for me and I left.

01-01:31:54
Eardley-Pryor: The work that you were doing—designing the office building when you were at the Austin Company, working on these buildings in Guam—did any of this involve the work that you eventually did with Yamas that involved some of the automated controlling?

01-01:32:08
Friesen: No, it was mainly lighting. But of course, lighting is one of the things you have to consider in air conditioning. So from that aspect—actually, the drawing experience that I got was invaluable later working for Yamas. Because I was calling on mechanical engineers and getting them to specify controls, our controls. And they had to put drawings on their drawings of the control system.

So, like some of my competitors, what they would do, the salesmen would come in and the engineer would ask for a layout. And they would just sketch something out. And I can remember many times, I would be coming in, and the draftsman for the engineer would call me over. He says, “Hey, I got this thing from Honeywell and I don’t understand what they’re doing here.” And then I would have to explain to him.

So what I did is, I would always make a drawing exactly like he would put on his drawing. And they could slip it right under their drawing and just trace it. And I would figure out—I would measure. I would ask, “Where is this going on your drawing?” And he said, “Well, this space up here,” and I would

measure it to make sure that what I drew fit that space. That sort of thing was appreciated by the engineers, so that helped me get a lot of work.

01-01:34:02
Eardley-Pryor: And you had had that experience because of your experience working with Austin and with Keller and Gannon?

01-01:34:06
Friesen: Yeah, and I knew how to put a drawing together, so that they could just copy it, what I gave them.

01-01:34:22
Eardley-Pryor: As you're going through this, these transitions looking for these different work opportunities, where is Candy?

01-01:34:28
Friesen: She was working for BBD and O [Batten, Barton, Durstine & Osborn], an advertising agency in San Francisco.

01-01:34:34
Eardley-Pryor: So you were living in the East Bay, while she had moved to this job into San Francisco?

01-01:34:37
Friesen: Yeah, she took the—it wasn't BART then, but it was the Key System. She took the Key System to work.

01-01:34:47
Eardley-Pryor: And at that point, had you all gotten married?

01-01:34:49
Friesen: Yeah, we were married then.

01-01:34:50
Eardley-Pryor: Okay. Tell me a little bit about the marriage.

01-01:34:52
Friesen: Well, we were married in Piedmont and then had the reception at the Claremont Hotel. It was all paid for by her folks, so I was, [laughs] I was just happy to go along.

01-01:35:15
Eardley-Pryor: What was the process of planning the wedding like?

01-01:35:19
Friesen: Well, I was not too involved with the planning, except I had to get the rings and get the fellows who were going to be in my part of the wedding party.

01-01:35:32
Eardley-Pryor: Who did you invite?

01-01:35:33
Friesen: Well, I had three fraternity brothers, one of whom was my best man, and two of them who were ushers. And the whole thing—there were a lot of people at the wedding, and everyone enjoyed it.

01-01:35:50
Eardley-Pryor: About the three fraternity brothers, what were some of the things that solidified that friendship for you, that you chose them?

01-01:35:57
Friesen: Because they had been close friends of mine at the fraternity.

01-01:36:02
Eardley-Pryor: Did you share housing with them? Did they sleep out on that porch with you?

01-01:36:05
Friesen: Well, I shared housing after I left the fraternity with one. But we were all living together at the fraternity.

01-01:36:12
Eardley-Pryor: What about extended family that came?

01-01:36:16
Friesen: Well, my folks and my brother and his wife came. That was the extent of it with my family.

01-01:36:26
Eardley-Pryor: Your brother had married at that point. Did he also go to college?

01-01:36:30
Friesen: No, he never went to college.

01-01:36:32
Eardley-Pryor: He stayed home. What was he doing for work then?

01-01:36:35
Friesen: Well, he was a driver for Frito and drove a truck, selling merchandise to grocery stores and so forth.

01-01:36:51
Eardley-Pryor: And your parents? Were they still working the farms then?

01-01:36:55
Friesen: They were still working on the farm then, yeah. I think by that time, they had stopped working in the packing houses. But they were still working on the farm.

01-01:37:10
Eardley-Pryor: So, the wedding celebration happens at the Claremont Hotel. Did you have a honeymoon afterwards?

01-01:37:15
Friesen: Well, fortunately, my parents gave us some cash. We weren't able to afford a honeymoon, but we went the first night to the Mark Hopkins [hotel]. And then we went down to Catalina Island for our honeymoon.

01-01:37:38
Eardley-Pryor: Afterwards, came back to work. I'm thinking about the Korean War—you narrowly escaped, from your previous service, having to go back into it. Also, this sort of ramping time moving into the Cold War era, which of course has a great deal of science and technology involved in it. Was that something that was on your mind, or in the news? Something that was discussed?

01-01:37:59
Friesen: No.

01-01:38:00
Eardley-Pryor: No? The growing nuclear testing program, was that something that was discussed?

01-01:38:06
Friesen: Well, you thought about it and maybe worried a little bit about it. But I was not involved with anything about it.

01-01:38:13
Eardley-Pryor: So your experience with the Korean War seemed to be a good one.

01-01:38:20
Friesen: It was. I missed it. [laughter]

01-01:38:22
Eardley-Pryor: You missed it, and jobs opened up for you with these opportunities in the Bay Area. So, as you're beginning the work in the Austin Company and Donald Delaney is coming in, how did you introduce yourself to him?

01-01:38:39
Friesen: Well, I don't remember whether I met him then, or whether I met him after I started going and working on Saturdays. I think that's when I met him.

01-01:38:53
Eardley-Pryor: What were those Saturday trainings like? What did George have you doing?

01-01:38:56
Friesen: Well, looking at catalogs. Usually their Saturdays were not working too much. They were more, sort of—you used the time to sort of throw back, and talk, and rehash, and figure out things, and decide what you were going to be doing. So, I remember they were giving me catalogs. And I was studying the catalogs to try to study the equipment that I would be selling, to understand how it operated and so forth.

01-01:39:27
Eardley-Pryor: In this transition from working on the drafting boards and doing the drawings that you had trained for, why move into sales? What was your draw to make this transition?

01-01:39:37
Friesen: I didn't like drawing. I was not cut out to be a draftsman. I had the feeling that—well, I guess I was a compulsive type that I would really get involved with a drawing, and you're bent over drawing, and drawing, and drawing, and drawing. You just sort of got so involved in it, and I didn't like that aspect of it. I wanted to get out and do things. So I was very anxious to get out of doing the actual engineering.

01-01:40:22
Eardley-Pryor: Maybe we can use this as a point to pause before we move into our next session later this week, and we'll talk about this beginning your work with the Yamas Corporation.

01-01:40:32
Friesen: Okay.

01-01:40:32
Eardley-Pryor: Thank you, Howard.

Interview 2: May 11, 2018

02-00:00:00
Eardley-Pryor: Howard, I wanted to say again, thank you for letting us do this interview with you. I think it's going to be really exciting. I'm excited to hear from you how your business life evolved over time, the projects that you worked on, the people you worked with. I'm really fascinated with this story about the union, the antitrust work. And integrating with that, to hear about particular projects: the Marin County building, for example, but Moffitt Library, and other building projects that kind of stand out in your mind as "hey, I remember this is a story, or this is a point in my career that was a big part for our business." Those are the things I'm interested to hear. And I think other researchers looking back to try to understand how an engineer and his career evolved would be really excited to learn about as well.

All right. My name is Roger Eardley-Pryor. Today is May 11, 2018. This is our second session with Howard Friesen, in his oral history. Today we'll be speaking a lot about, Howard, your career. In the last interview that we had, the last session, you had mentioned how, while working at the Austin Company shortly after graduating from Berkeley, there was a man named Don Delaney, who would come and call on the mechanical engineers at Austin. And you thought, "hmm, this seems like he has a pretty neat job." You mentioned that you had then called his boss, which was George J. Yamas, and asked if there was an opportunity to work in that field, especially because they were working out of San Francisco, and you wanted to be in San Francisco. You said that George wasn't quite ready to hire yet, and so you began some sort of relationship with him, but wasn't quite yet working for him. Can you talk a little bit about that?

02-00:02:21
Friesen: Well, there's not much to say. He suggested I come in on Saturdays, and he and Don would show up. And it was mainly a chatting-type morning, but they gave me catalogs to start studying the equipment and asking questions, and so forth.

02-00:02:40
Eardley-Pryor: Had you had any kind of experience, before that, with building management systems and automated systems?

02-00:02:45
Friesen: None. Yeah, none.

02-00:02:46
Eardley-Pryor: So this was, in a way, a kind of an apprenticeship. You mentioned catalogs. What kind of training was the process like?

02-00:02:55
Friesen: Well, working for them was swim or sink. [laughs] You had to learn everything on your own. I took the catalogs home and studied them as much as I could.

02-00:03:12
Eardley-Pryor: In your mind, or in their minds, what were you training to do for them? What was the goal you wanted to move into?

02-00:03:19
Friesen: Well, I was to become an estimator and salesman. I would be calling on mechanical engineers, and also I started out mainly bidding jobs. There was a builders exchange that had plans for buildings that were out for bid. I would go there and check out the plans, and then search the plans for equipment that we had, were specified on or could bid on. And then we prepared bids and bid on them.

02-00:03:58
Eardley-Pryor: So, before you went out into the field, before George came to you and offered this kind of training, and after you had taken a job with Keller and Gannon in San Francisco, while you're still in the midst of this training program and meeting on Saturdays and just kind of chatting about what the business was like—was that essentially the work that Don Delaney did?

02-00:04:17
Friesen: Yeah, same thing.

02-00:04:18
Eardley-Pryor: What was it that George Yamas was doing as part of the business?

02-00:04:20
Friesen: Same thing.

02-00:04:21
Eardley-Pryor: They were both going out into the field?

02-00:04:24
Friesen: What we eventually did is, there was a list of maybe fifty to sixty customers. And George selected about ten or fifteen of the customers. Then Don selected about fifteen or twenty of them. And I was told that the rest were mine, to go out and start developing relationships and to get specified, and to handle work that they were doing.

02-00:05:02
Eardley-Pryor: Can you tell me a little bit of what that experience was like? So once you did get this job offer, and George and Don said, "Come and join the team," and you were, I think, the third person to join the business, right?

02-00:05:11
Friesen: Correct.

02-00:05:11
Eardley-Pryor: It was just the three of you. First off, where was that office located?

02-00:05:16
Friesen: It was on Seventh Street in San Francisco.

02-00:05:20
Eardley-Pryor: What was it like there?

02-00:05:21
Friesen: Well, actually it was for a company called R. A. Parker Company. And R. A. Parker, his connection with Barber-Colman was that he was interested in a product they made which was called OVERdoor. They were primarily these large doors that were controlled by electronic door operators, mainly for fire stations. And he also had toilet partitions and things like that. And so, they started a business, of which George was half owner, called R. A. Parker and Company. And that's who I worked for, for the first couple of years, although George was the boss.

Finally, Barber-Colman was interested in expansion, and they saw George Yamas as a gem that they had to cultivate. So they were pressuring Parker to expand the business, or at least sell it to George. Their dancing back and forth went on for a couple of years, and finally, George got to the point where he gave him an ultimatum: "You either sell the business to me, or we're walking." So in 1953, the three of us—and we had half a dozen other employees by that time—we walked. We went down the street on Howard Street between Second and Third, rented a building, called Barber-Colman and said, "We're here, ready for business." And they immediately transferred the line to us. So we were then in business under the name of Yamas.

02-00:07:27
Eardley-Pryor: What was it about George Yamas that he was such a gem, that Barber-Colman realized?

02-00:07:31
Friesen: Well, he was very personable. He was of Greek extraction, had a good engineering background, and he was a good businessman.

02-00:07:42
Eardley-Pryor: What is his background? Where did he come from?

02-00:07:45
Friesen: His family lived in Philadelphia. His mother had a restaurant there, and his brother was in an allied business. He was a sales manager for a fan manufacturer.

02-00:08:04
Eardley-Pryor: And how did he get himself out to San Francisco as an engineer?

02-00:08:07
Friesen: Well, I think he was—he went to college back, I think in Pennsylvania, and during the war [World War II] ended up in Honolulu. That's where he met his wife. She was a nurse, and they met and married there. She was from the Bay Area, so they moved back to California after the war.

02-00:08:33
Eardley-Pryor: Back to her home. That's great. So, take me a little bit of a step back and tell me about Barber-Colman. What is it that they do, for someone that's not familiar with building management systems?

02-00:08:44
Friesen: Well, Barber-Colman was originally a machine-tool manufacturer, and they were a very large supplier to the textile industry.

02-00:08:56
Eardley-Pryor: When did they begin business?

02-00:08:58
Friesen: Oh, it was back around 1900, I think. Colman was an inventor, and his main claim to fame was the invention of an automatic knot tyer. One of the problems in the textile industry was, they had these big machines with hundreds of threads going into them, and when a thread broke, they had to stop the machine, physically get the threads that broke, tie it back together. And he invented an automatic knot tier. And this led into the manufacturing of machinery and so forth for the textiles. They had about 5,000 employees in Rockford at the time when I started working.

02-00:09:49
Eardley-Pryor: Rockford?

02-00:09:51
Friesen: Illinois. In the textile industry, he'd gotten involved with other things. He started out making a humidity controller for them, which was one of their big problems. And then he started getting into temperature controls. After the war [World War II], the textile industry was starting to disappear, so they were changing their product lines into controls. And there was an inventor in Rockford who had invented a new type of sidewall grill for air distribution. So they purchased that, and then they took that—it was superior to other products that were on the market at the time—and they built an engineering lab and started to test it, and developed a catalog of how to apply the product. They actually had guarantees that the product would work if selected under their circumstances.

So this was something that we pushed very heavily when we started. So, Barber-Colman then, they started developing the air distribution, and they built this lab, and started making other products. They developed a round ceiling diffuser. Anemostat was another manufacturer at the time, which was the top of the line, so they made this to compete with them. And it was

different than a lot of the other manufacturers in that, instead of stamping the cones, they actually spun them.

02-00:11:49
Eardley-Pryor: Take me a step back and explain the products. So I followed the journey of Barber-Colman to doing heating and humidity control, and then creating this sort of side grill. So I'm imagining a wall with heating elements, and then some sort of air pressure to move past that heated air, through an air duct system. Is that correct?

02-00:12:10
Friesen: Right, a duct system attached to the grill, supplying air into a room. And then this ceiling diffuser was, instead of being stamped, it was made with a spinning process, so that they could get better curves on the products so it would have lower pressure drop, and also create less noise.

02-00:12:35
Eardley-Pryor: So, what is it that a ceiling diffuser does?

02-00:12:38
Friesen: Well, a ceiling diffuser, it's in the ceiling, and they can be either square or circular. And the air flows through, from the fans through the duct system, to the diffuser. And the diffuser disperses it into the room.

02-00:12:54
Eardley-Pryor: Is it essentially a fan that pushes the air through?

02-00:12:58
Friesen: No, it's just a circular form with vanes that the air comes down, into the diffuser, and is dispersed along the ceiling. The air is mixed. The air is coming out at a low temperature, say fifty-five degrees, and it's mixed with room air above the occupied area. So that by the time it gets down in the occupied area, it does not create drafts or dead spots.

02-00:13:32
Eardley-Pryor: So that air then sinks because it's cooler than the occupied air?

02-00:13:35
Friesen: Doesn't sink; it's dispersed along the ceiling at a high rate of speed. It entrains air from the room up to the diffuser, and so you get a circular motion in the room.

02-00:13:49
Eardley-Pryor: So the diffuser is what allows for air flow to happen in that space, essentially.

02-00:13:52
Friesen: Correct.

02-00:13:53
Eardley-Pryor: Oh that's great. So that seems like it involves a good deal of thermodynamics, and understanding the pressure differences, and how these different pressures are relating to each other to make this air move.

02-00:14:06
Friesen: Yeah. And then, as the engineers started to increase velocities in their ducts in order to conserve space above the ceiling, the systems started to create noise. Then they developed air valves instead of dampers, in order to keep noise down, and boxes to convert the higher pressures and higher velocities up in the systems into the lower pressures into the room.

02-00:14:40
Eardley-Pryor: What is the difference in one of these systems between the valve and a damper?

02-00:14:45
Friesen: Well, a damper is just a blade of metal. And as the damper opens and closes, air going through it, coming off the sharp edges of the damper, create noise. And the air valves would be where—well, the one that Barber-Colman made was a diamond-shape. Vanes that went this way, open and closed, and were flocked with material so that there were no raw edges on the thing, so that they were much quieter.

02-00:15:21
Eardley-Pryor: So these were all progressions that happened as Barber-Colman's developing these systems?

02-00:15:27
Friesen: That's correct. And then they went into boxes. The first air-conditioning systems that were used after the war were called reheat systems, whereby a fan blew cold air throughout the building, and then they would have, at the local rooms, they would have a heating coil, which was then primarily hot water. So the cold air would then be heated up, depending upon whether the room needed less cooling or more cooling. Those systems used a lot of energy, because you cool all the air down and then reheated it.

So then the systems gradually changed over the years to—first were double-duct systems where they ran hot ducts of air around, and cold ducts of air around, and then had a local mixing box to mix the two as required. And then, the industry developed sensing devices that could control velocities of air. So that's what enabled them to go into variable air-volume systems, which are primarily in use today, variable air-volume and variable air-volume induction systems.

02-00:16:51
Eardley-Pryor: When did that development happen, where you could have these sensors testing, being able to register the variable air?

02-00:16:56
Friesen: Well, this was probably in the 1960s that Barber-Colman had developed a sensor. And the other manufacturers also had them.

02-00:17:07
Eardley-Pryor: Take me back to when you're getting into the business. This is around 1952, '53. You've since pored over these catalogs to get a better sense of how things work. How is it that the systems themselves were being built then, were able to speak to one another? How were they controlled?

02-00:17:28
Friesen: Well, the first instance we had, we would have a time clock, which would control the operation of the system and the fans—would turn them on at say, 7:00 in the morning and off at 5:00 p.m. at night. And we would supply the time clocks, and whatever, a panel perhaps to have pilot lights on them, which would show the operation on the fans and so forth, and then the thermostats and the dampers and valves that were involved. There was usually a central fan. The incoming air would be the returned air from the space, plus outside air. This mixture would be controlled, entered in first the cooling coil, and then there would be a thermostat balanced into the fan to control the temperature of the air there, say of fifty-five degrees. And then this air would then be dispersed throughout the building.

02-00:18:33
Eardley-Pryor: So this temperature gauge, it's kind of in the middle of the system that's taking in both outside air and re-circulated internal air. That thermostat, how is that then speaking back to the centralized system? How is that thermostat, that's in this middle of the system, talking back to the central unit?

02-00:18:50
Friesen: At that time, they didn't.

02-00:18:52
Eardley-Pryor: So it was really just timing? It was just seven o'clock on, five o'clock off, and hopefully the settings are right?

02-00:18:58
Friesen: Well, there would be the mixed air temperature of outside and returned air, would be a thermostat say, set at sixty-five degrees. And then the air would enter the cooling coil, which would go down to fifty-five degrees, and which would then be dispersed throughout the building, and reheated by the local controls as required.

02-00:19:23
Eardley-Pryor: My very rudimentary understanding from our discussions is that pneumatics, which was compressed air being pushed through piping, was initially how some of these systems were in conversation with one another. Is that correct?

02-00:19:41
Friesen: Yes. The pneumatic operators were simply a diaphragm, and a bellows that operated the diaphragm, that moved against a spring to open and close either a damper actuator or a valve actuator. And a fairly simple device. The pneumatic thermostat was a little more complicated. But the two of them were much less expensive than the electric thermostats that we had, primarily because the actuators for the electric systems had a gear system. There would be five or six gears that would gear down the electric motor rpm [rate per minute] down to a very slow motion. And these were expensive to produce.

Barber-Colman finally, after the semiconductor industry started to develop microprocessors, they developed an electronic thermostat and a very inexpensive actuator that didn't have all these gear trains. They used a little oil pump within the actuator, and the cost of the product to us was less than half it had been before. So that's what really put us into very competitive business against pneumatic.

02-00:21:20
Eardley-Pryor: When was it that the silicon revolution happened that enabled these actuators to become smaller and more affordable? Around what time?

02-00:21:30
Friesen: Well, this would have been in the early sixties.

02-00:21:33
Eardley-Pryor: Okay. So it seems like there's a real revolution both in what Barber-Colman can offer, and then what Yamas's company was able to offer around that time period.

02-00:21:41
Friesen: Yeah, and there was also a revolution going on in the industry. The first few years that we were in business were very challenging—also exciting, but very challenging. And over the years, things developed that were very much in our favor, as we just described. For instance, there were just a handful of engineers in San Francisco, and they had had all this experience with the pneumatic control manufacturers. We had a hard time breaking in with them. Suddenly, a lot of their employees start to go out and form businesses of their own, and with that group, we were on an equal footing within the others.

Also the types of systems were changing. Air conditioning had been primarily a piping operation. It developed more into an air operation, so that the sheet metal contractors started to get more power against the piping contractors. And as this happened, it also opened things more up for us.

02-00:23:17
Eardley-Pryor: Take me back to those early days. You said they were exciting, they were challenging. You had mentioned just a bit ago that it was just the three of you initially, you, George, Don. But within a few short years, it sounded like you had half a dozen engineers, once George had kind of decided to go on his

own. Tell me about that process of growth, because you eventually took this company from the three of you, having in one office in San Francisco, to having offices spread across California, a couple offices in Nevada, and some 250 employees over the next few decades. From those three initial people, with you, George, and Don at the beginning in the early fifties, how did you make that growth happen? How did you even just get those first engineers?

02-00:24:00
Friesen: Well, the first thing we did is, we started to install our own controls. The pneumatic manufacturers installed their own pneumatic controls. Honeywell was the only other manufacturer who made electric controls, and they did not install them. So, first thing we did is we started hiring field personnel to actually install the systems that we were bidding on and getting contracts on. So we got installation managers and started hiring several field engineers to actually handle the field work, and union electricians to actually do the actual installation. So that, over the years—then we started hiring more salesmen, and the whole thing just grew.

02-00:25:03
Eardley-Pryor: Initially, it sounded like it was really a sales operation. You were essentially West Coast sales representatives, in conjunction with Barber-Colman, until you made this leap into including installation as part of the business package. Is that right?

02-00:25:15
Friesen: Yeah, and initially, air distribution was a larger part of our business than temperature controls, because the fact that Barber-Colman had superior products meant that they were more easily accepted by the engineers and used by them. So we were able to—and I've always thought of myself more as an expert in air distribution than a control salesman.

02-00:25:49
Eardley-Pryor: Once you made this shift into installation, how did your particular work, day by day, change?

02-00:25:59
Friesen: Well, as I called on engineers, I got to know them personally, and some of them started doing larger and larger jobs. So from this list of fifteen or twenty that I initially had, that came down to maybe eight or ten that I was working with closely. And some of them I got to know very, very closely, and worked with them closely on jobs. Many times, controls were usually the last thing involved in the design of a building. Many times an engineer would call me up and say, "I got to have a control layout, and I have to have it by tomorrow, or the next day." So I would have to hustle to get it.

Whereas on air distribution, they would be talking to us very early in the design of the project. For instance, many times I would get a call from an engineer at the time he was thinking of what he was going to do on the

project, and we would discuss the different types of systems that were available, what the costs and benefits of each system would be, and what sort of an air distribution system he would employ—whether it was sidewall diffusers or ceiling diffusers, how the ducts would run, and so forth. The earlier we got involved with the engineers, the closer we were to them and the more they were able to trust our judgments and use our products.

02-00:27:57
Eardley-Pryor: So, was air distribution the entry point that enabled you to then also offer the controls?

02-00:28:02
Friesen: That was the case, yeah.

02-00:28:05
Eardley-Pryor: In those early years, in the fifties—the mid-fifties by that point—who were some of those eight to ten other engineers that you worked with, that you can remember having these relationships with?

02-00:28:18
Friesen: Well, one of the major firms was Bentley, who had an engineering office and he had maybe twenty engineers working for him. And we were not—well, I can remember that I would get calls from them, primarily on air distribution. They would not use our controls. And Bentley was sort of a very strict person in terms of who was allowed to go into his drafting room. When I would get a call from an engineer, he would have to come out to the conference room to sit down with me.

I remember one time, one of the engineers was having trouble describing the problem that he was working on that he wanted to get some outside opinions on. And he said, “Well, come on in to the drafting room to look at where his drawing was, and I’ll show you.” And so we went in. And I remember Clyde Bentley came up, and he just chewed the hell out of this guy for allowing me into the drafting room. However, when this individual went off on his own to start his own business, and became successful, I was very close to him during that period.

02-00:29:49
Eardley-Pryor: Well you had gone through the fire together with Bentley yelling. [laughter] Why was it that Bentley was so protective of the drafting space?

02-00:29:56
Friesen: Well, it was very easy to have salesmen coming in to check catalogs. Now there were salesmen coming in all the time, and they would be disturbing people who were working on the drafting tables. I remember the engineers would make their drafting rooms, unavailable to most of the salesmen. I mean, once you got in with them, you were allowed to go into the drafting room because they wanted you in there.

02-00:30:33
Eardley-Pryor: Was Barber-Colman also partner with any other organizations in San Francisco around this time? Or was Yamas Controls essentially their main West Coast operation?

02-00:30:44
Friesen: We had the contract for the Northern Californian and Northern Nevada.

02-00:30:52
Eardley-Pryor: And you mentioned Honeywell. Who were some of the other competitors that were part of the building automation and control systems in this period?

02-00:30:56
Friesen: There were three competitors: Honeywell had both electric and pneumatic controls, Johnson Service had only pneumatic, and Powers had only pneumatic.

02-00:31:07
Eardley-Pryor: So Johnson and Powers, you said, were strictly just that sort of pipe-fitting operation. They didn't move into the electronics?

02-00:31:15
Friesen: Well, eventually they did, because now-a-days, everything starts electronic, even if it's transduced into pneumatic to take advantage of their cheaper operators.

02-00:31:28
Eardley-Pryor: There's still an electronic component even today with the pneumatics?

02-00:31:31
Friesen: And controls today are all microprocessor based. A microprocessor handles the whole thing, and they're called building automation systems. They control everything and they've expanded into controlling lighting, fire, intercom, and a whole array of things now.

02-00:32:01
Eardley-Pryor: Did you also follow that process as part of Yamas Controls, moving into those?

02-00:32:06
Friesen: Yeah.

02-00:32:07
Eardley-Pryor: All right. When I think of the 1950s, I'm thinking of the domestic economic expansion. The United States is the lone capitalist, industrialized power that remains standing, that wasn't devastated during the war, and it's really a boom time for American growth. How was that manifested in San Francisco with some of the contracts that you saw happening, as part of your career with Yamas Controls growing at this time?

02-00:32:37
Friesen: Yeah, well, the first few years was primarily, the buildings were, I would say, primarily grammar schools. And then over the years, after eight years, they were building high schools everywhere. The first few years, particularly in the San Jose area, there was a new school going up every couple of days, and so that was the primary thing. It was a number of years before high rises started to be developed in San Francisco. The first one was the Equitable Building, and we did part of that. We were specified on it and there was a lot of—the story of how that all developed is maybe of interest.

But then soon after that, the other buildings— Louis Lorie, who owned most of Montgomery Street, started to air condition the buildings in his area, and he worked primarily with an architectural firm. There was a sheet metal company, Delucciti Sheet Metal, who—I mean, they were all working almost simultaneously on some of these. As Lorie's space would empty between tenants, they would air condition the floor of the building. And so there were probably a hundred jobs over a few-year period that we did under those circumstances. And we would just be told to "do it!"

02-00:34:32
Eardley-Pryor: So this sounded like retrofitting. It wasn't new construction. Some of the schools were, but some of the other work that was in the city was really retrofitting and bringing air conditioning.

02-00:34:40
Friesen: A lot of it was, yeah.

02-00:34:42
Eardley-Pryor: So would it be fair to say that the work that was happening in San Jose was riding the coattails of the baby boom?

02-00:34:56
Friesen: Initially. And then of course, in the sixties, well, the semiconductor people started to get involved. The first one was Fairchild, who built a plant in San Rafael. They developed the initial electronic microprocessor controls, and then the people who were working there were the main ones who—well, Shockley was the fellow who first started it, and his employees were people who then left and started Intel. And then Intel grew up making microprocessors, and then all of a sudden, there was hundreds of different companies forming down there.

02-00:35:53
Eardley-Pryor: So after the baby-boom growth, the next opportunity was the growth of Silicon Valley itself, and its industrial spaces. Is that what I'm hearing you say?

02-00:36:03
Friesen: Yeah. Well, there were a lot of new buildings being built: Intel, AMD [Advanced Micro Devices]. There's hundreds of companies down there who

were forming and building buildings, and by that time, we had become the control system of choice. So then we did a large number of those buildings.

02-00:36:30
Eardley-Pryor: So, Yamas Controls was essentially providing the air and building control services for the growth of this Silicon Valley industrial expansion?

02-00:36:41
Friesen: Yeah. The mechanical engineers, there were four or five mechanical engineers who were doing primarily the work for these plants, and most of them were friends of ours. And I did a lot of work on Intel projects. We were close to Intel, and plus, the engineers who were doing work on Intel. For instance, Intel started to expand from San Jose. They first expanded to Livermore and built a plant which we were involved with. And then they built a plant outside of Portland. I went up three or four times to work with the mechanical engineer up there who was doing the work for them, and we furnished all of the air distribution and the controls. Then we did the balancing of the system.

And we also were involved with their plant in New Mexico; they built in Albuquerque. We didn't do the work there, but we did a lot of the initial consulting with the representative in New Mexico. I did a plant for them in Barbados, and I went to Barbados too, at one time. And I was working with the engineer on a plant in Chihuahua, [Mexico]. I had ordered equipment and was shipping equipment at the time that Mexico changed their exchange rate. And the next day the project was cancelled. We were paid for whatever work we had done, but the contract was stopped.

02-00:38:41
Eardley-Pryor: Left in the lurch in Mexico. So that seems like a beautiful inroad and an opportunity to tap into that Silicon Valley growth. When did Intel start making these sort of expansions? When did they start moving outside of just their Silicon Valley manufacturing?

02-00:38:56
Friesen: Well, this would have been in the seventies, by then, yeah.

02-00:39:02
Eardley-Pryor: Okay. You mentioned, early in the fifties, the process for getting bids. You would cultivate, through salesmanship, your relationships with some of these different engineering firms. But you had mentioned that there was a bidding process. You would go to a space where bids on buildings happened, is that correct?

02-00:39:23
Friesen: Well, we would prepare a bid to furnish air distribution equipment. We would prepare a bid to furnish and install a temperature control system. And then there would usually be a bid time established. It might be, say, on a Thursday at 2:00 p.m. That was a favorite time because it gave—there were thousands of people who were bidding products and services up the chain to the final bid

point. This was before cell phones, and the general contractor would set up a direct line to the bid room, back to his office. And they would be taking bids from maybe ten subcontractors: mechanical, electrical, plumbing, sheet metal, and the different subcontractor specialties.

So there might be seven or eight mechanicals. I don't know how many electricals that there was. There might be a hundred people bidding to the general contractors, and then there would be people like us who would be bidding to the mechanical contractors, and the different—so there was a whole chain. There would be literally thousands of people involved in bidding up to this point. And the reason they had a direct line was that bids would change very quickly in the hour or so before the bid opening. One of our problems would be that some of the contractors were very friendly to us, [contractors] that we had worked with. There were other contractors who were not so friendly. And there were others who were enemies. So we had to bid to say, eight contractors. And if I put out a bid too early, and to everyone, I knew that Honeywell would pick up my bid, and would just undercut my bid.

So we would hold back until the last possible moment to put a price out. And usually, the contractors, at about ten o'clock would start to get excited. They had to put their bids together to pass it on, and they would ask for, "give me a plug price, give me a plug price." So we'd give out a plug price. And then we would have to develop strategies of bidding in order to not have our price tipped off. One of strategies that I usually used was that, about eleven o'clock, I would start out, I would call the contractor that I least trusted, and put out a price. And sit back, and ten minutes later, I would call the second contractor, and give him a price. Ten minutes later, call, and then I would have a friendly contractor, and I would ask that, "tell me when Honeywell comes out."

So I could usually tell which of the contractors was tipping my price, and this would be information which would be of use in the future. And then I would also be working to get prices of the other contractors. And at the last—sometimes even at a quarter to 2:00—we would be changing our price to the contractors, and we'd be putting out different prices to different contractors.

02-00:43:49
Eardley-Pryor: How did you keep records of all of this? All these calls are coming in and out, and changing things on the fly.

02-00:43:54
Friesen: Well, I had a list and I was keeping a track of who I called, the time, and the price I gave him. And then I might call another contractor, give a different price, just to see two things: I could tell who was tipping my price, and at what price Honeywell came out at. Because if I tipped my price with two different prices out to contractors, and they came out under one of them but not under the other one, this helped me know which of the contractors was tipping my price.

02-00:44:34
Eardley-Pryor: And who was tipping other prices to you? Who was tipping either Honeywell's or Johnson's prices to you?

02-00:44:39
Friesen: Well, there were contractors that we developed close relationships with, and contractors that we had worked with that we knew were honest, and who paid on time, and who were easy to work with. We would favor them over some contractor who was disorganized in his work and cost us money because he was calling us up at the wrong times and so forth. So we had our friends, and established relationships with them. They were interested in getting cheaper prices from us because that helped them get their bid.

02-00:45:30
Eardley-Pryor: It sounds like a wild system, those bidding days.

02-00:45:34
Friesen: [laughs] Bid day was not for sissies. Boy! And some of these prices we were going out with—when you're bidding a project, you first develop what you think your cost will be. And then usually the cost is a range of costs depending upon circumstances. You don't know what your costs are actually going to be—depends on who the contractor is, depends on whether the job goes smoothly or badly, depends on what happens with other contractors. So there's a range, and there's a certain amount of guesswork goes into pricing. And usually, there's a price you'd like to get for the job. There's the price that you will actually accept, and then there's the price if it really gets down to it, you might drop down to. So, taking all of these things into account, you put out prices. Before the Marin County Government Center was bid Honeywell, Johnson, or Powers were nationally trading jobs.

02-00:47:00
Eardley-Pryor: Honeywell, Johnson, and Powers—these other three manufacturers of control systems and air systems?

02-00:47:06
Friesen: Yeah.

02-00:47:09
Eardley-Pryor: When you say trading jobs, what does that mean?

02-00:47:11
Friesen: Well, I hired the assistant manager of Johnson later in life, and he told me about all of the times that he would go to meetings. Before a project was bid, he would go to a meeting with Honeywell and Powers. They would decide which of the three was going to get that particular job, and they would decide what the price was going to be, that he was going to bid.

02-00:47:43
Eardley-Pryor: And when they're working conjunction, how are they able to control who would get the bid, and especially control that price?

02-00:47:50
Friesen: Well, this was the time when we were sort of unable to bid because of the electric controls. When Barber-Colman came out with this operator that dropped our price, I started bidding jobs. And I remember one particular job, I bid it at like, $80,000. The contractors were all upset because they were calling me and saying that "Honeywell is $185K, Johnson was $182K, and Powers was $181." So here I'm $100,000 low on a project. And they're concerned because they don't know whether to use my price or not. They're not sure that they can get me accepted on the job, so they're gambling to a certain extent. So they want us to be up there close to the others.

This particular job, I remember, I says, "Well, I made a mistake." And I raised the price to $130,000, still $50,000 low. And so, I called the contractor the next day, who was low, and says, "Did you use me?" He said, "Oh no." At the last minute, one of the three came and just cut in under me. So this happened many times. And the fact that the contractor was never sure that the engineer would accept electric controls in lieu of pneumatic, that meant that they were willing to go along with this.

Also, the mechanical contractors in San Francisco were also trading jobs. And, they were keeping outside contractors out of San Francisco by their relationship with Local 38 Steamfitters Union.

02-00:50:06
Eardley-Pryor: Just so I can get the players involved here correct in my head, we have at the national scale the major control manufacturers—Johnson, Powers, Honeywell—they are trying to control prices by trading jobs with each other to exclude you.

02-00:50:20
Friesen: Yes. And finally, when Bobby Kennedy was AG, he went after them and he put a couple of them in jail.

02-00:50:27
Eardley-Pryor: Under the John F. Kennedy administration, when his brother, Bobby—Robert Kennedy—is the attorney general? So in the early sixties, there is work against this national-scale antitrust work that Honeywell, Johnson, and Powers are doing?

02-00:50:40
Friesen: Yeah. The local scale is still kept on. And the way they controlled it was, they were in control of the negotiating with the Steamfitters Union. So the Steamfitters made substantially more money than any of the other unions, electrical, for instance. And in return, Joe Mazzola, the head of the Steamfitters Union, said any other contractor outside of San Francisco was on notice that if they bid a job, that they would not be able to get steamfitters. So they would have a lot of trouble on their jobs.

02-00:51:31
Eardley-Pryor: So at the local level—in addition to this national issue that's happening—at the local level, these local mechanics contractors are in cahoots with the Local 38 Steamfitters Union. Is that correct?

02-00:51:44
Friesen: That's correct.

02-00:51:44
Eardley-Pryor: You had mentioned there was some sort of duck club in Colusa? What's that story?

02-00:51:49
Friesen: Well, yeah, they were all friendly with each other, the mains piping—

02-00:51:55
Eardley-Pryor: The mechanical contractors?

02-00:51:57
Friesen: The mechanical piping contractors, yeah. And they had this duck club. And later on, George Yamas was allowed to join the Mechanical Contractors Association, and he joined the duck club. In fact, he invited me to go up there one weekend. I got to see that whole operation.

02-00:52:22
Eardley-Pryor: What was this duck club and where was it?

02-00:52:24
Friesen: It was in Colusa.

02-00:52:27
Eardley-Pryor: What is a duck club, for those that are unfamiliar?

02-00:52:32
Friesen: Well, this was essentially a farm that was raising rice and had a lot of water around. And they had a building there. We went to the building, and they had a cook who lived there. And the contractors would come in, say on Friday, and then they would have a big meal on Friday night. And on Saturday morning they would get up early. They had a bus that would drive throughout this farm area, and they had different locations where you could actually get into a hidden area. And as the ducks came over, then you just shot them.

02-00:53:21
Eardley-Pryor: Right on. So it was essentially a hunting club, this duck club. And it was during these hunting trips that the mechanics contractors would sort of control their biddings?

02-00:53:31
Friesen: No, no, there was no discussion of that at the duck club.

02-00:53:35
Eardley-Pryor: Those were just social. How was it that the mechanics contractors did elbow out the bids of others?

02-00:53:44
Friesen: Well, through the Steamfitters Union. And that was finally broken when the Federal Building was built in San Francisco. I went to the bid opening of that project, and it was a helluva a meeting. There was a couple hundred people in the room. They opened the bids, and everyone was expecting a local general contractor to get the job. But there was a group of four men who were from Washington, DC, and they were representing a firm there. I can remember that when all the bids were open, it was announced that they were the low bidder. And these four guys got up, walked out, got in a car, and went back to Washington. And nothing was heard from anyone for six months.

After about six months, I started to get calls from mechanical contractors around the country, asking for our price on various things. And then finally, a contractor—a mechanical contractor from outside the area—got the job. But there was a lot of retribution. There were stories about, like on a Friday afternoon when they were running a pressure test on the piping system, all of a sudden, somebody with a hammer would knock off one of the valves. And the contractor would then have to bring Local 38 people in on the weekend and repair. So this was a warning system for contractors to stay out of San Francisco.

02-00:55:36
Eardley-Pryor: These men from DC, what was their story? How did they come in and were able to bid low?

02-00:55:42
Friesen: I have no idea.

02-00:55:44
Eardley-Pryor: But they were the ones that somehow—

02-00:55:45
Friesen: They represented a general contractor, and they came to bid the job. But somehow, their plan was to disrupt—to take advantage of the fact that people were upping prices and so forth. And they were going break into that situation.

02-00:56:11
Eardley-Pryor: Do you think they were affiliated with the federal government somehow?

02-00:56:14
Friesen: Doubtful.

02-00:56:17
Eardley-Pryor: So, this Local 38 Union—this is just for clarity's sake—is the plumbing and pipefitters union. They're the "United Association of Journeymen and

Apprentices of the Plumbing and Pipefitting Industry," or the UA, Local 38. You'd mentioned a man named Joe Mazzola, who was the head of this pipefitting union in San Francisco, the Local 38 Union. Joe has a pretty reputable and also fuzzy reputation from different angles of what his career was. Some people really celebrate Joe Mazzola, and he's one of the first three laborers upon his death to enter the Bay Area Hall of Fame, the Labor Union Hall of Fame. And their union itself really boomed in the postwar era. They went from 60,000 labor members to some 240,000, and as you mentioned, huge, huge benefits. They had the highest prices of almost any union in the country. But there's also this other side where Joe was sort of controlling, and not able to let other businesses thrive. Can you talk a little bit about how your career intersected with Joe Mazzola?

02-00:57:33
Friesen: Well, when the Marin County Government Center, which was designed by Frank Lloyd Wright in his office in *Taliesin West*—the plans were sent to San Francisco for bidding. But prior to the bidding, they had hired a local architect and a local mechanical-electrical engineer to go over the plans and make sure that they complied with local codes, et cetera. And the mechanical engineer I had been close to—

02-00:58:17
Eardley-Pryor: Who was that?

02-00:58:18
Friesen: His name was Gus Gendler. He called me and said that the plans that they had received were in terrible shape, and that he had only two weeks to work on them. He didn't know how he was going to be able to properly prepare them for bidding. He wanted me to handle the controls, so I went over and talked to him. I said, "Well, give me a pencil and a sheet of paper, and," I says, "I'll do them." So, for the next two weeks, I commuted to Berkeley to his office. It was not kosher to have salesmen work in engineer's offices, so they set up a table in a back room, a drafting table. And so I worked there. And one of the drawings on the project, I did.

02-00:59:25
Eardley-Pryor: So this Marin County Civic Center that Frank Lloyd Wright designs, he, in the process of designing this, he dies before the plans can get completed. And they come to Marin, and they're incomplete. So this contractor calls you. Why did he only have two weeks before the bidding opened? Why was it such a short time frame that he was crunched to get these plans designed?

02-00:59:46
Friesen: Well, Wright's organization thought that they were just going to send out these completed plans, and they were going to be accepted, and so forth. And they were not competent enough to realize that the plans were not in good shape.

02-01:00:10
Eardley-Pryor: I had read that one of Frank Lloyd Wright's protégés, an architect named Aaron Green—

02-01:00:16
Friesen: Oh yeah, I knew him, yeah.

02-01:00:18
Eardley-Pryor: So was Aaron and this mechanical engineer, were they who you worked with in doing these plans?

02-01:00:23
Friesen: No, Aaron Green was the architect, and Gus Gendler was the mechanical-electrical engineer.

02-01:00:30
Eardley-Pryor: I see. So Gus's offices were in Berkeley?

02-01:00:33
Friesen: Yeah, Aaron Green was in San Francisco. And later, I got to know Aaron Green. I went to his office a number of times.

02-01:00:41
Eardley-Pryor: When you were doing this project for Gus, behind the scenes in this back room, when was the last time—at that point, this is 1960, around. When was the last time you had started drafting plans—rather than selling the controls, but actually drafting the control plans?

02-01:00:55
Friesen: Say that again.

02-01:00:57
Eardley-Pryor: I'm just picturing, you had done sales now for almost a decade at that point, at least. But here you are doing the designs instead. What was that transition like for you?

02-01:01:06
Friesen: Well, I was on many of the projects with the friendly engineers. I would actually make a drawing, on a separate piece of paper, and take it to them. And I usually made it so that they could just slip it underneath the drawing they were doing, and just trace off what I had given them. So this was pretty much the same thing, except in this case, I was putting it directly on the drawings.

02-01:01:36
Eardley-Pryor: Oh, so as part of your salesmanship, you would actually do some of your own drawings to match their own drawings to help with the sales.

02-01:01:43
Friesen: Right.

02-01:01:43
Eardley-Pryor: All right. With this really unique structure—it's such an iconic building. It's on the national historic registry now, the Marin County Civic Center. Were there different challenges that were involved in drafting controls plans for such a unique structure?

02-01:02:02
Friesen: No, not particularly. It was just, they had a system layout, and then I would apply the controls to control the system they had.

02-01:02:12
Eardley-Pryor: You had mentioned earlier that the sixties really was this revolutionary time for electronic controls. At that point, in working on this building, were you able to use Barber-Colman's electronics?

02-01:02:25
Friesen: Not on the first phase. Several years later when the Hall of Justice was added to the administration building, that all went electronic. But the first one was just electric.

And when it came out to bid, I looked over the bid list, and there were mostly San Francisco mechanical engineers bidding the project. But there was one piping contractor in Santa Rosa. So I went up to talk to him. I called him and made an appointment to go see him. And I told him, in effect, I says, "Let me tell you what's going to happen." And I offered to give him a lower price than I put out to any other contractor. In return, I extracted a promise from him that he would, under all circumstances, would stick by me.

And what I expected—what everyone expected—was that I would put out a price, and that Honeywell and Johnson would come in just under me, and that I would cut the price, and they would again try to get in under me if they could in time, if they had enough time to do so. So what I did is I put out a very high price to everybody. And I gave the contractor in Santa Rosa a $50,000 edge. He was low by $30,000, so, it was obvious that I had gotten him the job. Then the pressure started on him to—

02-01:04:26
Eardley-Pryor: Who was the Santa Rosa contractor?

02-01:04:29
Friesen: Well, I don't remember his name.

02-01:04:33
Eardley-Pryor: But this is on the project you had designed the controls. So you knew what it would cost to do, because you had created this system.

02-01:04:41
Friesen: Correct.

02-01:04:41
Eardley-Pryor: And so you high bid—am I hearing this right? You high bid, so that Johnson and Honeywell would come in just under, barely under, your high bid.

02-01:04:50
Friesen: Correct. And they expected me to cut, but I never cut. Since I didn't cut, there was no other changes made. So all of the contractors in San Francisco used Johnson's price, which was $50,000 higher than the price I had given this fellow in Santa Rosa.

02-01:05:16
Eardley-Pryor: And these San Francisco contractors, these are the ones that are sort of in bed with the UA Local 38, Mazzola's union?

02-01:05:23
Friesen: Correct. So, immediately this poor contractor got a call from Joe Mazzola. And Mazzola told him that his contract with the union meant that he had to use pneumatic controls, and that if he didn't give the contract to us [Johnson], that he could expect to go bankrupt.

02-01:05:51
Eardley-Pryor: Wait, so Mazzola goes to your buddy in Santa Rosa, and says, "Now that you've won this bid, you have to use pneumatic controls?"

02-01:06:00
Friesen: He says that, yeah, that it was imperative that he use a pneumatic control system. And of course, by that time, they had all agreed to, or Johnson had agreed to do it for the price that I had given the fellow in Santa Rosa.

02-01:06:15
Eardley-Pryor: Oh, wow. So they're coming back with a counter bid after you've already been awarded the contract?

02-01:06:19
Friesen: Well, yeah. But at this point, we didn't have an official contract. And the poor guy in Santa Rosa is really sweating, because his livelihood is being threatened. So we went to the electrical union. By that time we had maybe a dozen electrical union employees, and they called the national union in Washington, DC. The national union told Mazzola to back off.

02-01:06:56
Eardley-Pryor: So the electrical union was squaring off against this Local 38 Pipefitters Union?

02-01:07:05
Friesen: Yeah. I don't know how much they squared off, but I know that they transmitted all the information back to the national who told Mazzola to back off. The next thing we know, we get a call from the head of the building trades in San Francisco, and he said that "Mazzola wants to meet with you." So a meeting was arranged, and Mazzola came to our office.

It was sort of exciting because we were all watching through the window as he parked his car in a red zone, got out with his driver, and his driver had a musical instrument case with him, which he never opened, but there was no question in our mind as to what it contained. And the two of them came into the office, and they walked upstairs to our coffee room. The guy stood outside with his case, the driver, and Mazzola went in and talked and then spent about a half hour talking to George Yamas. When they come out, George announces that we had joined the steamfitters' union and that six of our field engineers were going to become steamfitters.

02-01:08:44
Eardley-Pryor: So that was the deal?

02-01:08:46
Friesen: That was the deal. After that, Mazzola did not bother us at all.

02-01:08:52
Eardley-Pryor: Because you became part of his union, at least some of your engineers had.

02-01:08:57
Friesen: Yeah.

02-01:08:59
Eardley-Pryor: Wow. What was the vibe in the office? You're seeing this guy come in with what you think is a gun.

02-01:09:05
Friesen: Well, it was pretty exciting. [laughter]

02-01:09:10
Eardley-Pryor: What did George have to say about that experience, being in that back room?

02-01:09:15
Friesen: Well, he was quite pleased with the way the whole thing had gone, because he said he offered—he says, "First of all," he says, "you know we have six women. You don't want those. I've got a half-dozen salesmen. You don't want those." And he said, "I've got electrical people. You can't have those." He said, "The only one left is our field engineers." And Mazzola says, "they got to join."

02-01:09:46
Eardley-Pryor: So even though these field engineers weren't necessarily pneumatic pipefitters, they became part of the union as part of this deal?

02-01:09:52
Friesen: That's correct. Well, they were all basically electrical people.

02-01:09:55
Eardley-Pryor: So the deal was, in order to build the Marin County Civic Center building, there had to be some of these field engineers that became part of the [UA Local] 38?

02-01:10:05
Friesen: Correct.

02-01:10:05
Eardley-Pryor: And, how did that change the way that you could do business in San Francisco from that point on?

02-01:10:11
Friesen: Well, things, other things started to change. As air conditioning became more used, the sheet metal contractors—who were subbing to the piping contractors to do the mechanical work—their part of the work became larger, and larger, larger. In some cases, they even became the prime contractors, and the piping people would sub to them on jobs. And the sheet metal contractors were always much more friendly to us—mainly through the air distribution that we had been selling them for years—than the piping contractor. So that whole thing changed to our advantage.

02-01:10:58
Eardley-Pryor: Wow. So this clash between the pipefitters union and the electrical union happened at this inflection point around your experience with the Marin County Center?

02-01:11:08
Friesen: Right.

02-01:11:09
Eardley-Pryor: Wow, that's great. It seems like it would be a nice point for us to take a little bit of break before we move forward.

02-01:11:14
Friesen: Okay.

[Pause in interviewing. Eardley-Pryor departs room, Friesen converses with Martin Meeker.]

02-01:11:45
Meeker: Interesting stories. [laughs] So you think Joe Mazzola's a big labor hero just because he was sort of protecting his own? He was like a bulldog?

02-01:11:56
Friesen: Yeah.

02-01:11:58
Meeker: What was he like in person? Was he personable? Was he fun to be around, or was he—

02-01:12:05
Friesen: Mazzola? Well, I never knew too much of him. Of course he was a very strong individual, and he developed Konocti, up on—

02-01:12:20
Meeker: Clear Lake.

02-01:12:21
Friesen: —the lake, and that was to be developed as a retirement home for steamfitters. And they had a big restaurant there, and I don't know if they had a hotel.

02-01:12:40
Meeker: Yeah, there's a hotel.

02-01:12:42
Friesen: Is there?

02-01:12:42
Meeker: Yeah, I think they built a hotel up there.

02-01:12:46
Friesen: A friend of mine from my tennis days lived up near there, and I know that he used to get invited over to play tennis with somebody. So they had a tennis court, too.

02-01:13:00
Meeker: I went up to Clear Lake as a kid, and I remember swimming in a big pool. I was very small. But it was probably there. My family, they weren't labor union, that's for sure. [laughs]

02-01:13:17
Friesen: And then, years later, after Don and I became partners, Don was talking to me once. He starts laughing, and he says, "I just sent a check for $1,000 to Joe Mazzola. I'm going to go to some dinner that he's being feted at," and he laughs and laughs and laughs. He thought that was very funny. [laughter]

02-01:13:52
Meeker: Do you remember any of the elementary schools you helped build down San Jose? Do you remember any of their names? No? Did you do any in Cupertino?

02-01:14:06
Friesen: Oh, I'm sure we did a couple of hundred of them down there, and even in Marin County, we probably did ten.

02-01:14:19
Meeker: Well you probably helped build the elementary school I went to, because I went to an elementary school in Cupertino called Hoover, I think. Yeah.

02-01:14:31
Eardley-Pryor: What was the district?

02-01:14:33
Meeker: It was probably Cupertino Unified School District, I would guess. But it was probably built in that era, the early sixties, early to mid-sixties, and I went

there in the seventies. And then it closed. It was only around for maybe twenty years.

02-01:14:53
Eardley-Pryor: The school?

02-01:14:53
Meeker: They closed it down, yeah, the elementary school, they closed it down and bulldozed it and built houses there.

02-01:15:01
Friesen: Then I think of the same thing happened here. I know Isabel Cook is one that I worked on in San Rafael, or in San Anselmo actually. And it is now apartments.

02-01:15:16
Meeker: Interesting.

02-01:15:18
Eardley-Pryor: Yeah, there's less of those baby boomers to fill up the space in those schools, right?

02-01:15:25
Meeker: Or even the baby boomers' kids.

02-01:15:27
Eardley-Pryor: Yeah, yeah. That's great.

02-01:15:30
Friesen: And that evolved. Then things changed into high schools, and a lot of high schools were built, and then changed into colleges.

02-01:15:38
Meeker: Yeah. Just following that generation forward, huh?

02-01:15:44
Eardley-Pryor: Shall we continue?

02-01:15:45
Friesen: Okay.

02-01:15:54
Eardley-Pryor: Great.

02-01:16:13
Friesen: Oh, one other thing about the steamfitters union. I used to get calls. I used to get calls from this fellow at the steamfitters union, and he would say, "Hello, Howard, how are things in Kentfield?" Then he would launch into, "Oh, we're starting a special project. How would you like to donate a thousand dollars to do so and so?" And then we would negotiate back and forth and finally we would get down to a hundred bucks, and I'd send him a hundred bucks.

02-01:16:49
Eardley-Pryor: So, was this just kind of twisting your arm?

02-01:16:53
Friesen: Well, I thought of this being a threat. You know where I live? [laughs]

02-01:17:03
Eardley-Pryor: Yeah, especially with a guy who's shown up with a suitcase, or a musical instrument case, doing business.

02-01:17:10
Friesen: But this went on years later, and by that time, we were hiring fitters, because we also got into the pneumatic business and started hiring fitters. And so this fellow was, he had me on his list to work on—

02-01:17:31
Eardley-Pryor: To check in, eh?

02-01:17:33
Meeker: Did you ever hear any examples of these guys following through on their threats?

02-01:17:38
Friesen: No.

02-01:17:42
Meeker: But it was still intimidating.

02-01:17:43
Friesen: Oh yeah.

02-01:17:44
Meeker: Interesting.

02-01:17:47
Eardley-Pryor: In this time period in the sixties, now that you've made this transition into more and more electronics, it sounds to me like you were really dominating the field in the Bay Area, providing those things. Is that correct?

02-01:18:04
Friesen: Well, I think so, yeah.

02-01:18:05
Eardley-Pryor: But also then, also opening into the pneumatics?

02-01:18:10
Friesen: Well, yeah, because the volume was still, in around the country, was still in pneumatics. San Francisco was a special case, primarily, I think, because of the semiconductor people. For a number of years after Barber-Colman developed pneumatic controls, we didn't install any. It wasn't until the PG&E Building was built that we—that was our first pneumatic job. And we hired a fellow who had been a field engineer for some of the other companies to

actually—we got the contract on PG&E Building, and we hired this fellow to run this job and to show us how to put a pneumatic system in. He had a brother who was also doing the same work that he was, and I recall that when we were negotiating with them, he took us over to a building on Market Street that his brother was working on. He took us around the building to show us how they were putting the system in and so forth. And this fellow's name was Dry Ginn, believe it or not, and his brother was called Sloe Ginn. [laughter]

So Dry worked for us for a couple of years, and one interesting thing is, one day I was walking out with him down to get in the car. And he says, "You want to see what the next biggest thing in controls is?" And I said, "Sure." So he opened up the trunk of his car, and he brought out this plastic pneumatic valve. And so he was actually the, I believe, the one who developed the first plastic pneumatic valves, and he was having them made in Japan. He soon after that left us, and I didn't really follow his career. But I know that he was involved with another company then, and they were—the switch to plastic in pneumatic valves actually quickly happened after that.

02-01:20:43
Eardley-Pryor: Wow. When was it that you remember seeing this plastic valve?

02-01:20:46
Friesen: Well, this would have been around 1970.

02-01:20:56
Eardley-Pryor: Okay. So wow, plastic's sort of making it into the market by the late sixties, early seventies. Take me back through this moment in the sixties. You mentioned that the semiconductor industry really opened some doors for you—not just in being able to have those products that the semiconductor industry was making be a part of your sales products, through Barber-Colman; but also then implementing those products in the expansion of their own industrial manufacturing. I'm curious as to how these companies came to you. How is it that the semiconductor industry—would they approach you, or would you go knocking on their doors?

02-01:21:41
Friesen: Well, in the case of Intel, there was a connection. One of our employees was close to one of the engineers at Intel, and so we got involved there. When Honeywell first came out with a computer system for controls, Johnson went to someone in Europe to get one. And Barber-Colman had developed one, or was starting to develop one. And I recall that Honeywell put the system into the first Intel building in Santa Clara. And it had two sensors on it. So when they decided they wanted to add some sensors, Honeywell wanted an extortionist price to add to them.

So that's when we very quickly became very friendly with them, and we started selling controls to them. I recall that Barber-Colman was interested in what this Delta computer was like, and they sent one of their engineers out.

And with Intel's permission, they spent one night tearing the Delta computer, apart, piece by piece, photographing each one so that they knew how to put it back together. The only trouble was, when they put it back together, they screwed up one thing, and it didn't work the next morning. So they had to call Honeywell in. So Honeywell found out that their system had been tampered with.

02-01:23:38
Eardley-Pryor: Was there any fallout from any of that?

02-01:23:42
Friesen: Well, there probably was, but I don't recall what it was.

02-01:23:46
Eardley-Pryor: As these new products are coming out, I'm wondering, what was your process in training, learning about this? It seems like it's a pretty big jump to suddenly go into these computerized systems. How did you keep up with those shifts in the field?

02-01:24:00
Friesen: Well, in my case, we just had to study and learn. And it was a slow-enough process so that it didn't hit you all at once. In the case of people we're hiring, we would send them back for a week or two, back to Barber-Colman. They had classes. In some cases, they came out to San Francisco and had classes. They might have one in Los Angeles, and people from all around the West would go to the L.A. office, and then they would talk about products. Or they would also come in Rockford. I went back to Rockford a few times, too, where they introduced products and explained them.

02-01:24:46
Eardley-Pryor: How long did those training sessions last? Was it just a couple of days that they would have you there?

02-01:24:49
Friesen: Yeah.

02-01:24:53
Eardley-Pryor: At this time, too, Yamas Company is expanding beyond just the San Francisco office. When was the first secondary office opened up?

02-01:25:01
Friesen: Well, when we first started, Delaney called on Sacramento engineers, and I went down to Fresno and called. And then eventually, we decided there was enough business there to open up our office. We opened up one in Sacramento, and then took a couple years before we opened up one in Fresno. And we sent Jim Appel, who was one of our field engineers in San Francisco, he went to Sacramento to run that operation. And another fellow, Robert, Bob Crozier, we sent to Fresno to open an operation.

02-01:25:47
Eardley-Pryor: When did that happen? For example, when did the Sacramento—when did you send Jim out there?

02-01:25:51
Friesen: Well, this would have been in the early sixties, Sacramento we started. And in fact, Appel was not the first one. George Yamas was involved in hiring a fellow to run the office. I recall that the fellow had an alcohol problem, and so that I remember George went and had to fire the fellow.

02-01:26:23
Eardley-Pryor: And then sent Jim out?

02-01:26:24
Friesen: And then we sent Jim there.

02-01:26:26
Eardley-Pryor: What did Jim think about moving out to Sacramento?

02-01:26:29
Friesen: Far as I know, he was happy to do it.

02-01:26:32
Eardley-Pryor: What was the process like of having that office grow? So, are they checking in with the main office. Are you sort of hands-on?

02-01:26:40
Friesen: Yeah, Delaney still covered the Sacramento office. He would go up there once a month and confer with Jim Appel. And I would go down to Fresno to confer with Bob Crozier and go over his business. And then, after Don died, I went to Sacramento and listened to their sad song for a while. Jim was not well cut out to be a manager.

02-01:27:16
Eardley-Pryor: In what way?

02-01:27:18
Friesen: Well, he didn't really control the operation. He was successful in calling on a couple of the engineers there and getting jobs. But in terms of administrating the office, he had deficiencies.

02-01:27:45
Eardley-Pryor: How did you have to cope with that?

02-01:27:48
Friesen: Well, Don was related to Jim Appel, so there was no conflict that he ever had with him. When I started going up there, he would tell me about how busy he was, and how he doing this and doing that. Then I would start to ask about how is he doing with running the installation department or the other salesmen, and there was no—they were just going on their own.

02-01:28:23
Eardley-Pryor: As Yamas Controls is expanding offices, is it also internally growing in different departments?

02-01:28:30
Friesen: Oh yes. We established one department that called on building owners. The salesmen in that office were out calling on owners, and they would do audits of buildings. An audit consisted of finding out what their electric bill was, their PG&E bill, and then finding out where all the equipment was that was using this energy. And they would come up with strategies to save energy, and we would then give the people a price to save energy. And of course, the other companies were doing the same thing. So we were, in effect, competing with them. We might put out a price to do certain things, and it might not be the same things or the same prices as other people. So it was a little bit of a different business.

02-01:29:37
Eardley-Pryor: So, tell me a little bit more about that. There is the traditional business where you're going with new construction, and doing bids on existing buildings. But now, there's this other component where you're doing almost retrofitting existing buildings with owners?

02-01:29:51
Friesen: Yeah, retrofitting.

02-01:29:53
Eardley-Pryor: How did you move into that? What was the impetus to begin that?

02-01:29:56
Friesen: Well, a lot of our bidding was on additions to projects, and/or retrofitting projects. And we would just get involved with requests to—we'd had a few requests to come in and help them save energy. So we developed a business out of it. We had, in fact, three salesmen in that department.

02-01:30:34
Eardley-Pryor: Hmm. And that initially was the owners coming to you, as a part of existing jobs?

02-01:30:39
Friesen: Yeah.

02-01:30:41
Eardley-Pryor: What was your role at this point, as the business is beginning to expand? You said you had focused mostly on Fresno. What was your role back in the home office?

02-01:30:50
Friesen: Well, Fresno was a very small part of it. My role in the office was as a salesman first. And then as we started to get more organized, I became the sales manager as we started to hire other salesmen. I would try to centrally

control the bidding of different salesmen and so forth. An "operations manager" was the term that was used. So, anything to do with the operations of the organization side, I would be involved with.

02-01:31:40
Eardley-Pryor: So, managing both of these two different sales divisions, in addition to doing the operations management?

02-01:31:47
Friesen: Yeah, well, we were all sort of—the three of us—were running the business. And we were all talking to each other, a lot, about problems. And then one of us would get assigned to handle this part of it, or work on something.

02-01:32:08
Eardley-Pryor: Paint a picture for me of what it's like going into the office. So when you're there, what does the office look like? What is your workspace like? Who are you working with in an intimate way?

02-01:32:18
Friesen: Well, you walk into the office and you run into the receptionist. Then there would be the bookkeeping department. And we early on got a computer to computerize our cow tracts and orders. And then there would be sales offices. Yamas had one office, Delaney had an office, I had an office. And then we had three or four salesmen who had offices. And in my office, I had a desk, with a telephone, and I had a drafting table. And I spent a lot of time at both of them. I would try to get plans on jobs that we were bidding, rather than having to go out and look at them. And I would take them off, and bid them.

02-01:33:22
Eardley-Pryor: There are some photographs you took, it looks to me like from the 1960s, of the office itself, and some Polaroid photographs you took of folks. In the background I'm seeing, there's a poster of Spain on there. Is that your office?

02-01:33:39
Friesen: That's my office. When Polaroid came out with this camera, I bought one and I went around and took pictures of a lot of the engineers that I was calling on. And this happened to be—we had a Christmas party, and people came in, and so I sat them down in my office and took a picture of them.

02-01:34:04
Eardley-Pryor: Who are some of those, the engineers that you invited to this office party?

02-01:34:09
Friesen: Well, this is Chuck Gorwood. I forget. This is Leo Dwyer. This is Gus Gendler. These two fellows worked at Keller and Gannon; I don't remember their names.

02-01:34:24
Eardley-Pryor: Do you remember some of the projects that you worked on with those, some of the buildings that you worked on together, at this time?

02-01:34:31
Friesen: Yeah, one of the first buildings I worked on was the Zellerbach [Hall] building at Berkeley.

02-01:34:38
Eardley-Pryor: Tell me about that.

02-01:34:40
Friesen: Well, Keller and Gannon was the mechanical engineer. And by that time, they had gotten over the fact that I left them, and I was calling on them. The question was how to distribute air into that auditorium without creating drafts or dead spaces. This was in the early days of circular diffusers, and they were very concerned about sound generation in the auditorium. So this is in the early days of Barber-Colman. In their laboratory, they were just starting to run sound power-level analysis of all of their equipment.

I remember that I had to get that information from Barber-Colman before it was in catalog form, and talk to Bolt, Beranek and Newman, the acoustical engineers on the job. They had to approve that product, and we discussed how to place equipment in order to do this. I recall that under the seats, they have cast-iron mushroom ventilators. The air comes out of the diffusers way up high, down over the people, and then out of these cast-iron mushroom ventilators. I recall that—and we did this a lot over the years. One of the engineers had a catalog, so I wrote down the name of the manufacturer and his address, wrote him a letter and says, "We want to be your representative in San Francisco."

So, I then later sold those things on the project. Made a few thousand bucks. Never sold many jobs, but we grabbed many products like that. Duct sound traps were coming in, and we represented one of the first sound trap manufacturers until they became commodities. Electric duct heaters, at the time when energy conservation first started picking up, they were using a lot of electric duct heaters. We were then in computer-room air conditioners.

Down in Fresno, the fellow was called out to a warehouse where they were storing cotton, and they needed to humidify them. They allowed a certain amount of water in the bales. It was worthwhile to humidify them, so you could sell water instead of cotton. And so we found a manufacturer in Lancaster, Pennsylvania, who was making a humidifier that were supposedly dripless. And so we sold them to our [phone rings]—I won't answer that.

We also got into exhaust fans, and a lot of different products that—some of them we only represented for a few years, until competitors came in and the product became a commodity.

02-01:38:42
Eardley-Pryor: Can you tell me a little of what you mean by that? I don't quite follow when you're representing something, but then you say it became a commodity.

02-01:38:49
Friesen: Well, sound traps, for instance. When they started increasing the velocities on air conditioning systems, they started generating a lot of noise. The fans were running faster in order to generate these velocities. So they put these sound traps in and—basically, they were a large thing that had a lot of baffles, with rock wool in them, and these would be placed in the duct systems. And the first few years, there was only one other competitor. They sort of did their jobs and we did our jobs, so that we were able to sell them at fairly high mark ups. Finally, other manufacturers started making sound traps, and the price then came down. The type of trap that was being made became modularized, and so that when the price came down to the point where it wasn't worth our while to get involved, we would just drop the line.

02-01:40:11
Eardley-Pryor: So, something becomes a commodity when other people can manufacture the same product, and then the price drops.

02-01:40:19
Friesen: Right.

02-01:40:20
Eardley-Pryor: I follow, I follow. You mentioned, in the early sixties—while describing your office—you purchased a computer, to help process some of your orders and the bookkeeping. What did that computer look like then?

02-01:40:34
Friesen: Well, it looked like a refrigerator, made by Burroughs. I remember we discussed and talked—Burroughs was about the only one that had a computer at that time—and we discussed for a long time as to whether to buy it or whether it would be worthwhile. And I can remember, my question always was to the accountant, "How many people are you going to be able to lay off when you get this thing?" And, of course, there was never any answer.

So we finally bought it, cost $75,000, and it sat in a room for about a year before we used it. We kept calling Burroughs, "We need help. What do we do?" And they would not answer. Finally, one day, they, for some reason, shipped a second computer to us of the same type. So we then chuckled, "We got them now." So we waited until they found out that they had mis-shipped it and wanted it back. And we says, "Well, we'll send it back, but you've got to help us put this thing together." So they got us in touch with a woman who was an independent contractor setting up computer systems, and she came in and put us in business.

02-01:42:13
Eardley-Pryor: The woman came in, in the sixties, to get your computer running?

02-01:42:17
Friesen: Yeah.

02-01:42:18
Eardley-Pryor: That's fabulous. So did it have its own room? Was it just kind of sitting off on the side?

02-01:42:23
Friesen: Well, we put it in a room with a—we didn't have a single operator, but different people in the accounting department would go in and use it.

02-01:42:35
Eardley-Pryor: Once the woman came in to get it running, what was it able to do for you then?

02-01:42:40
Friesen: Well, it listed all of our contracts, and it listed the price and the costs. And it kept, as we inputted current data, current cost data—it would keep that. It would record that data in different categories—material, installation, labor, and shop material, and so forth—so that we were able to then track how a job was going along.

02-01:43:15
Eardley-Pryor: Tell me about the inputs and the extraction. What was the process like to enter that information into it?

02-01:43:20
Friesen: Beats me. [laughs]

02-01:43:21
Eardley-Pryor: Who was in charge of that then?

02-01:43:22
Friesen: Well, the accounting department.

02-01:43:24
Eardley-Pryor: And then, summoning the memory from it, similar, it was the accounting department that did that work?

02-01:43:30
Friesen: Yeah. Then there was a printer. They would push buttons, and it would print out.

02-01:43:36
Eardley-Pryor: I love hearing about those big early computers. The first job you mentioned at Berkeley, at the UC Berkeley campus—was that the first contract you had with UC Berkeley?

02-01:43:50
Friesen: Probably, because it happened very early after I got involved. Over the years, we've done maybe four or five jobs at Berkeley. We did an addition on the Life Science Building, did Moffitt Library. We did some work up at Cowell Hospital. Is Cowell Hospital still there?

02-01:44:16
Eardley-Pryor: I'm not sure. I have a drawing from the Moffitt Library. The building was constructed in the late 1960s. Since you were involved in that construction process for putting in—what sort of products? I know the Moffitt Library was built in the late sixties. What was your role in helping that project move along?

02-01:44:41
Friesen: Well, Gus was interested in—this was at a time when energy saving systems were first started being implemented. And Barber-Colman had developed this box, which was a variable air volume induction box. They were touting it as a heat-of-light system, and trying to sell it as a system to be used by engineers. Gus was familiar with the concept and decided to use it on Moffitt Library.

02-01:45:27
Eardley-Pryor: And Gus was your mechanical contractor who was involved in the Moffitt project?

02-01:45:31
Friesen: No, he's a mechanical engineer. And so, he designed the system around using these boxes and these outlets. And Barber-Colman had a computer program that they analyzed a building. So I got all the information on the building, so far as the orientation of the building, the amount of glass on the outside, the amount of non-glass, what the lighting was going to be, because air conditioning was, at that time, primarily for lighting. And they put out a twenty-page printout, which I then took back to Gus. We pored over and it had all the information as to how much air could go into different systems, how much it would vary from area to area. And during the daytime, the air conditioning on a VAV system would start out so that the east part of the building would have a heavy air supply, and that requirement would then move around the building.

02-01:47:01
Eardley-Pryor: As the sun also moved?

02-01:47:01
Friesen: As the sun moved, so that the total air that you required was not the sum total of all of the spaces, because of the fact that you would, as it moved, you would cut back on other spaces. So, he used this information to assist him in designing the air conditioning system. Then it came out to bid, and I bid it to the various contractors. There were no other bids, so I was awarded a contract to furnish the boxes, the diffusers, the control system. We installed it and then we balanced the system after it was installed.

02-01:47:56
Eardley-Pryor: This heat-of-light system you mentioned as part of your bid, how did that work?

02-01:48:02
Friesen: Well, fluorescent light fixtures were widely used, and the lighting levels at that time was going through a transition, so that the lighting level went up by maybe ten times. When I was doing the lighting, I designed a drafting room at Dow at, I think, fifty-foot candles. Ten years later, by the time these projects were going on—the PG&E Building and so forth—the lighting manufacturers had convinced engineers that they should kick that up. PG&E, I think was something like 300-foot candles. So, the amount of heat generated by these lights increased substantially.

One of the ways they devised to save energy was, they could pot slots in the bottom of the light fixture and in the top of the light fixture. If the plenum was then controlled at a negative pressure, the air would flow up through the light fixture and take off the heat generated by the fixture into the ceiling plenum. So the ceiling plenum would heat up, and these boxes would have their backs open up when they required heat. They would draw air in to the box from the ceiling space, to add heat to the cold air that was coming from the primary system.

02-01:49:59
Eardley-Pryor: So the heat-of-the-light system, these new powered lights, is essentially helping heat the building itself?

02-01:50:06
Friesen: Correct.

02-01:50:06
Eardley-Pryor: You sort of described zones for the structure, heating over the day. So was all of that in communication as well? Were these systems in contact with each other?

02-01:50:19
Friesen: Well, at that time, they were not in contact with each other. But there was a thermostat in each zone, which would be controlling the box in that zone. Now the zone might be an interior area, a large interior area. Or it might be a single office, which would have its own thermostat and its own box.

02-01:50:44
Eardley-Pryor: These projects sound so unique to a building. I'm thinking of Moffitt Library with these really broad windows, these massive windows, and really big spaces. It's a library space. Everything can't always work perfectly. Were there ever some circumstances where you can remember on particular projects that needed a lot of more hands-on work to get those systems to really work properly in these unique spaces?

02-01:51:12
Friesen: Well, I can remember on projects in general, there were always lots of problems. Some engineers were sloppier than others, and you could almost be guaranteed that there would be problems. And usually on a project, if it didn't

work too well, there would usually be more than one thing that went wrong. There might be a half-dozen things that went together to cause a problem, for a job not to work. And I, over the years, I sort of became the go-to guy for our balancing guys, because they would be the ones tuning up the systems at the end who would run into problems. I would get a call from the balancing guy that he's run into this problem, and I would go out to the project. And we would spend some time there to figure out what the problem was and try to solve it.

And I can recall, I've been to a number of projects where the people, the owners, were complaining about problems. The architect would be called, and he would call a meeting of maybe twenty people. There would be electricals, the subs, the general, and everybody would be hot to solve this problem. And usually, they would meet, and everyone would have a say as to what they thought the problem was, and what their involvement was not. And the architect would specify, "Everybody do this and this, this, and this, this," and everybody would disappear. I can remember really feeling that this was no way to approach a job.

And so on a number of jobs, I would go out with a balancing guy. We would spend a day on the project, run it through its paces, and do this and do that and really figure out what the problems were. Some of them were solvable. Some of them were not solvable. Some of them involved us. Some of them didn't involve us. And lots of strange things happened. They would use a product that was more of an experimental-type product.

For instance, an engineer in San Francisco designed an air conditioning system and he didn't use ducts to the outlets. He used a ceiling that just had little holes in it, and these holes had little slots so that you could adjust the amount of air that came out of them. Didn't work. And there was a lawsuit over that, and the insurance company paid up. The fallout from that, later, was that on the Kaiser Building in Oakland, that insurance company was on the other side and got revenge [laughs] for what they had been through earlier.

The problem with Kaiser was twofold. For one thing, they picked up—in addition to the sun input—they picked up reflection off of Lake Merritt, and this added heat input into the side of the building. Plus they used a ceiling that was a metal pan ceiling with pipes running back and forth with chilled water, so that the ceiling itself, the whole ceiling, became a cold system. And it did not perform according to the catalog data. There was a very heavy lawsuit over that project.

02-01:55:19

Eardley-Pryor: When I'm thinking about the sixties, in particular, there seems to be almost a zeitgeist in systems thinking—thinking about interconnection, relationships to one another, feedback, controls. And you had been working in that world now for a good couple of decades. Where did you develop your systems thinking

training? Was that something that came out of your Navy experience? Was that something even earlier, being a part of a farm and seeing these kind of networks? Was this something you learned on the job? How did you develop your own systems thinking?

02-01:55:48
Friesen: Well, on-the-job training, yeah. And I spent a fair amount of time out on jobs. Anytime an engineer went to visit a job, I would always volunteer to go with him. And I would usually try to get one of our field engineers to go with us. Then as a project developed, I would absent myself and just have my field engineer go with the engineer, because the engineer would be going to assess how well the project was going along. And of course, you go out and you look, you can't really see too much. You have to be able to turn things on and off. And our field engineers were the ones who knew where the buttons were to do all this, and could run the things through the paces. So that solidified our association with mechanical engineers.

02-01:56:55
Eardley-Pryor: Being on the site and really getting to play with the system as it's being implemented.

02-01:56:59
Friesen: Yeah. And they came to trust us more and more, and then use our systems more and more.

02-01:57:06
Eardley-Pryor: Another thing that I think about, particularly in the late sixties around the time that the Moffitt building is being done, with relation to this heat-of-light system, is energy conservation. You had made mention of this. So the environmental movement. How did the environmental movement, and these broader energy concerns that evolved from the sixties into the seventies, influence work at Yamas Company?

02-01:57:31
Friesen: Well, two ways. The equipment that we were selling were—like these boxes, and the VAV boxes. The VAV box was a box that changed the volume of cold air going through it. Instead of adding heat, as a re-heat system did, it would provide less cooling. They many times had, around the exterior of the building, they would have heating coils in them, because you actually had to heat the exterior of the building.

And then, in the control systems, there were strategies that you could use to use less energy. For instance, the mixed air control that I mentioned earlier, they were controlling the sixty-five degrees. Well, that would switch over to full recirc when the outside temperature got up to say, sixty-five degrees. You would fully recirculate rather than bring in hot outside air. Some of the systems then, we would control with an outside controller, also affecting this thing. Also we could feedback from the room thermostats, so that if all of the

room thermostats were calling for lesser cooling, they could go back and this thermostat that was controlling the cooling, the fifty-five degrees, it could move that up to maybe sixty-five degrees, and thus save energy.

02-01:59:22
Eardley-Pryor: In your experience, what's the relationship between these sort of cultural shifts—being concerned about energy—and the technologies that you're describing? I'm thinking of a chicken and egg situation. Which is driving which? Is the culture seeking to have these energy controls? Or is the technology available to then create a culture that desires it?

02-01:59:44
Friesen: I think it's both. The owners, of course, were looking at their PG&E bill and trying to lower it. And of course, the manufacturers were coming up with products that would save energy. So there was a lot of trying to sell your product that was better than your competitor's products.

02-02:00:13
Eardley-Pryor: You mentioned that, around the 1970s, there seems to be this real explosion in the Silicon Valley industry—with your relationship with microprocessors and electronic controls being part of your sales installation work. But also, 1971 is when George Yamas dies. Tell me a little bit about how that shaped the direction of the company.

02-02:00:36
Friesen: Well, it didn't shape it too much, except that Don and I, and the installation manager, we bought out Yamas's shares in the corporation from his heirs, and continued on.

02-02:00:59
Eardley-Pryor: How is it that George died so young? He was only in his fifties, is that right?

02-02:01:04
Friesen: Well, he had had heart problems. I can remember we'd be walking on the street—uh oh! Just missed a beat. And he went back to the Cleveland Clinic, which is world famous for being a heart clinic. He had this procedure done where they go up into your heart and actually check out to find out which of the arteries are plugged and so forth. And it was one of the first ones. This was in the early days. He was very concerned about going back, and I think he quoted something like a fifty-fifty chance of dying during this procedure.

So, I recall that he announced once that "the buy-sell agreement's going to be changed." He wrote up a new buy-sell agreement, and it was unfavorable to all of his partners. And I recall Don Delaney. Yamas announced it, and he shoves it out, "Sign this." And Don signs it, and signs his wife's name, hands it back to him. I'm sitting there reading it, and I says, "I can't sign this thing." "You sign this or you're fired!" [laughter] So, I signed it. But he then went back to Cleveland Clinic, had the procedure, and he did have blockages.

And shortly thereafter, we had been—our office was on Howard Street, just off Fourth Street, in the middle of the redevelopment area. So, the City of San Francisco was going to redevelop that area, and of course, that's right next to where the convention center is. So, they assessed all the buildings. And our building was a Class A building, was going to stay, but we had been using a back alley for getting the trucks in and out, for our servicing trucks to load equipment and so forth. And that was being blocked. So redevelopment was going to pay us to move.

So we bought an old bowling alley in South San Francisco and were converting it into office space. This was very hard on George at the time. He was getting to be a nervous wreck. A friend of his owned Valley Sheet Metal. We had just moved, and this friend said, "You don't want to build this," and so forth. He says, "What you do is," he says, "I got a contractor and he'll put his men on your payroll, so that you can expense the job rather than use after-tax dollars to build it." So, that's what he did. And after a couple of months of construction renovating this building, the contractor died. His son took over, and things went to hell, and George was a nervous wreck.

And finally, when we moved, it was a couple of months later than we'd planned. I'd been on vacation and I came back from vacation, and George calls me into the office. He says, "I want to sell, and," he says, "I wonder if you guys want to buy." So he called the three of us into his office, and he said, "I've got three demands, and I want this and this and this." And I remember Don says, "Well, go to your attorney, put all this in writing, then come back so we can discuss it." So, he was going to go up to the duck club, and he went to an engineer who was negotiating with him to occupy the space we were leaving in San Francisco. He went to visit an engineer friend of his, and then he went up to this duck club. He went out the next morning, out into the blind that he was assigned, and he had a heart attack and died.

02-02:06:21
Eardley-Pryor: So what happened with the sale? Had that already gone through? Had he gone to his lawyer?

02-02:06:28
Friesen: No, no. In fact, we didn't even realize that he had negotiated this with the engineer to move in. So, all of this had to then be taken up by his family—his wife and his oldest son, who was still quite young. He had just gotten back from being in the Marine Corp, and he was working for us as a field installer. So his attorney primarily handled the whole thing as to the sale of the stock and the transfer. And of course, he became our attorney afterwards. And after Don died, he became my attorney.

02-02:07:25
Eardley-Pryor: Did the process of George passing, especially so young in the midst of all this work stress, did that have any impact on you personally, in your personal life?

02-02:07:35
Friesen: Not too much. His health was the subject of a lot of conversation, around the office, and that sort of affected things because everyone was concerned about what would possibly happen. But other than that, it didn't have much.

02-02:08:11
Eardley-Pryor: Did it change the way that you approached your work?

02-02:08:15
Friesen: No.

02-02:08:18
Eardley-Pryor: This might be a nice time for us to pause our session today. We'll pick up through the seventies and the eighties and your retirement, and also talk about your work with philanthropy, and especially some of your travel experiences, in our next session. Does that sound good? Great. Thank you, Howard.

Interview 3: May 14, 2018

03-00:00:01
Eardley-Pryor: All right. This is Roger Eardley-Pryor with our third interview session with Howard Friesen. This oral history is a part of the Bancroft Collection. Today is May 14, 2018. We are here at Howard's home in Kentfield, California.

Howard, last time you and I spoke, we were talking about your career. Then we moved up into the early to mid-1970s, shortly after George Yamas passed away. I would like to pick things up there and talk about how, in the mid-1970s, there were new abilities to design systems that removed the requirement for pneumatic controls. And some of this has to do, you mentioned, with temperature control instead of valve position. Can you talk a little bit about this technological transition that happens in the seventies, as you had taken on a new role within Yamas Company?

03-00:00:55
Friesen: Yeah. Well, the transition came. There was a lot of talk about switching to direct digital controls, and the conversation went on for a couple of years. Finally, Honeywell and Johnson Controls both came out with a device, a computerized device, to have direct digital controls. And they'd picked up the technology from industrial control companies in Europe, so it was not 100 percent adaptable to building constructions. But that's how it was started.

Barber-Colman tried to follow, but the technology changed so quickly that they really had a hard time keeping up. And there was a point where we had nothing and essentially, the period was called "the gap"—where we did not have a device to compete with them. And Barber-Colman had decided that what the technology needed was someone to start from scratch and build one up—and not to use a computer that had maybe a hundred points in it to control, that everything's sent back to the computer—but to have a distributed control system where the system, there might be many of these units that had maybe eight or sixteen points, and they all were monitored by the computer. So there was not the same amount of communication between the computer and the points. They finally developed that after I had left the company, so whatever's there has happened since I left.

03-00:03:08
Eardley-Pryor: I see. So in this transition period in the seventies to eighties, during this gap period you mentioned, did you and your associates ever think about going to Honeywell and Johnson? Or was it remaining a strict relationship with Barber-Colman?

03-00:03:23
Friesen: No, it was strictly a relationship with Barber-Colman because they had their own offices. Barber-Colman had either a branch office or a representative in every city in the United States.

03-00:03:38
Eardley-Pryor: Something else you had spoken to me about was the difference in where thermostats might be placed—whether you need to put one on a diffuser, or in a different location somewhere in the air stream.

03-00:03:51
Friesen: Well, in our trying to compete with pneumatic controls, and particularly in supplying controls for the semiconductor plants, these would largely not be office buildings with small spaces. They would be large open spaces, and so there was no place to really place a room thermostat. So Barber-Colman developed this idea of putting the thermostat hanging six inches below a supply diffuser, so that it would be in the induced air stream, and would be a good location. So we used a lot of those, and there were several other ideas associated with that that we were promoting, which were difficult for pneumatic controls to do. So we used them as much as we possibly could.

03-00:04:54
Eardley-Pryor: As a means of competition against the pneumatics?

03-00:04:56
Friesen: Right.

03-00:04:57
Eardley-Pryor: Were pneumatics still a strong enough force, especially in California, in terms of competition?

03-00:05:04
Friesen: Yes. And I think certain types of buildings, like high rise buildings in San Francisco would still use them, because they're compact buildings with lots of individual zone controls. They might have a building automation system as their base, but then they would transition from pneumatic to electronic.

03-00:05:29
Eardley-Pryor: So they were originally constructed with pneumatics, and then transitioned into the digital?

03-00:05:33
Friesen: And even the new buildings that are being under construction.

03-00:05:39
Eardley-Pryor: Can you talk a little bit about some of the projects that you were a part of, in terms of high rises in San Francisco?

03-00:05:44
Friesen: Well, we never did many high rises in San Francisco. Most of our jobs consisted of schools, of which there were many built. And also, the semiconductor plants were very adaptable to the systems we had. Being a local rep, we were quicker on our feet than some of the branches of the other control companies, and some of these buildings would be totally built, or our

portion would be built in sixty days. So we had to get in very quickly and do the work and get out. So that was very adaptable to what we were doing.

03-00:06:34
Eardley-Pryor: The growth of the semiconductor industry seems like it was a real boon for Yamas Controls to get into that market in terms of their manufacturing.

03-00:06:41
Friesen: Oh exactly, yeah.

03-00:06:42
Eardley-Pryor: But it also seems like there's some sort of parallel with what they're manufacturing and for what Barber-Colman could then create for you to represent. Can you talk about that?

03-00:06:54
Friesen: Well, the building automation systems and electronic controls, they all really came into their own when Intel in particular developed the microprocessors. So we were able to use those to do things that could not be done with electric type controls, and which were much cheaper than electric controls, and could compete with pneumatics.

03-00:07:23
Eardley-Pryor: Time-wise, when was it that Intel and the microprocessing revolution was applied to the building-automation-system trade?

03-00:07:31
Friesen: Well, it started in the late sixties, but it was primarily in the seventies where we did many, many installations in the San Jose area. And then as these grew, Intel in particular, they started to branch out. And one of their criteria was to put a plant in so far that the people could not commute back to the main plant, or to the plants of competitors, because there was a lot of people moving back and forth between companies. So their first plant was in Livermore.

03-00:08:17
Eardley-Pryor: From what you're telling me, they chose that plant to make sure that their people weren't being stolen by other manufacturing corporations?

03-00:08:25
Friesen: Exactly, yeah. And then they put a large plant into Aloha, Oregon, which is just outside of Portland. We did the controls, and the air distribution, and the balancing in that plant. And then they went into Albuquerque, and we worked with the rep in Albuquerque to get that job. And then they did Barbados, and we did the controls and air distribution on Barbados. I personally went there and did some of the work myself in order to get a quote "free" trip out of it. And they did put a plant into Penang, in—is that in Malaysia? I tried to get a free trip out of that, but was never able to swing it.

03-00:09:19
Eardley-Pryor: With that trip down to Barbados for the plant, were there—because of the warmer tropical environment—were there different issues that arose than what you were used to constructing in this Bay Area?

03-00:09:28
Friesen: No, it was the same, same problems.

03-00:09:30
Eardley-Pryor: As far as humidity, and it just was different measurements you needed to use?

03-00:09:33
Friesen: Well, there were the issues that you run into on any job.

03-00:09:40
Eardley-Pryor: The growth—there seems just such a nice synchronicity between the semiconductor development and then your personal business development. You're helping them build their plants, but the things they are constructing within their plants, you're then also using on the job. It's a real nice balance; you kind of grew in tandem there.

Outside of the Bay Area, what were some of the other offices that you had? In Sacramento, in Fresno, in Reno, eventually in Las Vegas, what were some of the projects that were happening there?

03-00:10:12
Friesen: Well Sacramento was the first office that we started because there was a lot of state work starting to happen. I know that we did the job for the Franchise Tax Board Building, and a couple of other major buildings around that I don't really remember the names of. And then we opened an office in Fresno, which was not large. They never did a lot of work. Fresno was a poor, very poor area, so it was always struggling. And then, we started to do some work in Reno, which we handled out of Sacramento at first. Then we finally got a manager to move to Reno to handle work. We also purchased a small company in Reno that did maintenance work on air conditioning systems. It was called Aircon Services. We sent one of our employees up there to run it, and eventually was driving about fifteen service trucks around Reno.

Las Vegas was an unusual situation in that an engineer-friend of mine, who worked for an architect in San Francisco, said that they had gotten a job in Las Vegas to remodel the Barbary Coast Casino. And he said that the rep in Las Vegas had installed Barber-Colman controls in the original installation, which was being revamped. He went down to Las Vegas to confer with the owner, and came back with the story that he hated Barber-Colman and that he would not have us on the job. So, he pursued it, and he insisted that I go down to Las Vegas with him, and that someone come from Barber-Colman, to look at the installation that they had in and see what might be wrong with it.

So I got an engineering tech out of Sacramento. We all met in Las Vegas, and went over the job. The whole thing had been built on the cheap. The Barbary Coast is located on the corner across from Caesars Palace, and there are huge electric lines come looping down over this property, and they end up on pylons on Caesars Palace. But this contractor figured out that he could put up a building that avoided these electric lines, and did so. But he ran out of money before it was finished. One of the things he did was to eliminate all of the heating, the boiler, and all of the heating coils and so forth. And that winter, during a very cold period, all of the cooling coils in the building froze. So this was part of the project that we were getting involved in to fix.

So anyway, we managed to convince him. Well, the engineer took the Barber-Colman man aside and said that they were getting other work in Las Vegas and the only way that he would ever be involved with Barber-Colman is if Yamas had the territory. So, we had dinner with the owner of the property one night and he agreed that we could fix the problem, which we said we would do. And Barber-Colman said that if we fixed up the job, that we would have the territory. And that's how we got it.

03-00:15:17
Eardley-Pryor: Wow, it came from this dinner.

03-00:15:20
Friesen: And subsequently, we did several other jobs there with this engineer: the Gold Coast Casino; the El Cortez Hotel had some additions. So we started up an office there, but we had trouble with trying to get management. And then it wasn't that much business there, so we finally closed that office temporarily. And then we—

03-00:15:49
Eardley-Pryor: Who was the friend of yours who went down and had these contacts in Vegas?

03-00:15:55
Friesen: Well, his name was Adolph Makaruk. He's a mechanical engineer who worked for Leo A Daly Company.

03-00:16:01
Eardley-Pryor: And what was your connection?

03-00:16:04
Friesen: Well, I'd been working with him on jobs, other jobs. I knew him very well, and friendly. He preferred to have us on jobs than our competitors, so we had a good relationship.

03-00:16:21
Eardley-Pryor: With that Barbary Coast job, what was it that you did, if they didn't have heating coils? What was it that you did to fix the situation?

03-00:16:29
Friesen: Well, they put heating coils back in. [laughs] Pulled all the cooling coils, put in new coils, and revamped the air conditioning system. So we spent a whole day above the ceiling of the casino part of the building. One thing that was interesting is that the main casino had a coffered ceiling in it, with mirrors in the ceiling. And when you get up above the ceiling, they were all one-way mirrors, because you could look right through them. And every, oh, hour or so, some employee of the casino would come up and stand over some of the tables down below, and very intently watch the action. Apparently they were suspecting people were cheating and were trying to catch them.

03-00:17:33
Eardley-Pryor: So you had to build some of the airflows through that area as well.

03-00:17:36
Friesen: Yeah.

03-00:17:36
Eardley-Pryor: Was there a challenge there with mirrors trying to fog up or any of that?

03-00:17:40
Friesen: No, they were all away from the equipment.

03-00:17:44
Eardley-Pryor: That's exciting. I'm surprised to hear that with the growth of Las Vegas in this period, and the new construction projects, that there was a difficulty getting into some of those plants. What was the challenge there?

03-00:17:59
Friesen: Well, partly trying to administer the work, and at that time, there was not that much work in Las Vegas. Later, years later, we went back into Las Vegas. One of the men from Sacramento went there and started the business. When the person who took over my business, later, he staffed Las Vegas to the point where I think they had something like fifty-five employees there, and were doing big work. Like they did the New York-New York; they did all of Steve Wynn's work at Mirage, and Bellagio, and a couple of other jobs.

03-00:18:56
Eardley-Pryor: Those are big jobs. So it was just really a matter of timing for really tapping into the growth of the Vegas market. That's great. Something you had mentioned to me were some of these tools that you would use—sometimes even just simple tools you would bring to sites. So when you're going down to Vegas or you're going to visit a site at one of these Intel plants, you would sometimes give some of these little tools out to your engineers on the site. Can you tell me a little about what some of these things were that you would bring with you?

03-00:19:26
Friesen: When I first started out, we got a sixteen-point recorder for temperature and so forth. When an engineer had a problem on a job, I'd offer to install a sixteen-

point recorder to record sixteen simultaneously things happening, to see if we can figure out what the problem was. Well the problem with that was that it was expensive to set up. So, I very quickly stopped doing that.

But I used to get involved with problems on jobs. And the main thing I carried around was a manometer, which is a U-tube filled with liquid. You would connect tubes to it and a pitot tube, and you could stick it in a duct and you can measure the pressure in the duct. You can also stick the pitot in and measure the velocity of the air, and of course, thermometers to measure temperature. Many times, I've carried these devices into a building and—I usually took a tech with me, and we would drill holes in the duct and stick these things in and try to figure out what the problems were.

03-00:20:59
Eardley-Pryor: How big were these, this U-tube with all these other tubes and devices coming out of it? How big was this thing?

03-00:21:05
Friesen: Well, the U-tube was about two feet long, a U-tube filled with a red liquid, and it had stoppers—I kept one in my trunk. And then there was a steel pitot tube.

03-00:21:29
Eardley-Pryor: And you would just drill this thing and put it into the duct just to do your own measurements?

03-00:21:33
Friesen: Yeah.

03-00:21:34
Eardley-Pryor: And that was more affordable than the sixteen-point system.

03-00:21:38
Friesen: Well, it was much less expensive to install. And I can carry it in the trunk of my car. So if I went out on a job, I just would carry it with me to quickly use it.

03-00:21:55
Eardley-Pryor: You had told me also about some sort of humidity measuring device that you would spin above your head? What was that?

03-00:22:01
Friesen: Well, it was called a sling psychrometer, and you can measure relative humidity. The main place I used that was at the Diamond Heights High School in San Francisco. The orders from the City were that it was not to be air conditioned. So in order to get by with just heating the building, the engineer used a very high air-rate per square foot. And with that amount of air in the space, the velocities were not too high but there were a lot of complaints of the air being dry. And so, a couple of times I took a sling psychrometer out there and took readings to prove to them that it was not a case of the humidity

being low. It was a case of—there was just too much air motion, which caused the drying feeling.

03-00:23:11
Eardley-Pryor: How did you operate this thing?

03-00:23:14
Friesen: Well, it was a thermometer that had a bulb on the end of it that you dipped into water, and I actually slung it around, and the bulb, being wet, would measure the wet bulb temperature of the air. And so from that, you could, knowing the dry bulb temperature, you could calculate the relative humidity in the air.

03-00:23:45
Eardley-Pryor: Where did you learn to use these kind of things?

03-00:23:48
Friesen: Well, I just picked it up. We had several different instruments for measuring air velocity. In addition to that, there was one called an anemotherm, which could measure very low air velocities below thirty-, forty-feet per minute, which you can use in a space if people were complaining about drafts. You could take this instrument in and measure the air velocity to figure out what the source of that it was.

03-00:24:22
Eardley-Pryor: Were these kind of things that Barber-Colman also offered?

03-00:24:25
Friesen: No. These were strictly a service on the side that we used to—because we had the air distribution on the job, we were always trying to guarantee that the job was going to work.

03-00:24:41
Eardley-Pryor: One of the things I remember learning about Yamas Controls is, as the sales started moving out towards different types of sales departments that you were managing, and also providing the equipment, but then maintaining the equipment—like you had mentioned that in Reno, you had purchased this air conditioning maintenance company and that really expanded. So, that seemed to become a separate part of the business that it got enfolded into Yamas Controls. When did that decision happen that you would not just install these, but maintain a long-term maintenance relationship?

03-00:25:18
Friesen: Well, almost from the very start, you had to get involved with people. And we were always getting calls to, “there’s a problem on the job; what are you going to do about it?” So we developed a maintenance department to handle that situation.

03-00:25:37
Eardley-Pryor: And these fleets of trucks, would all these be at the headquarters location?

03-00:25:44
Friesen: Would be what?

03-00:25:45
Eardley-Pryor: The fleet of trucks to go out and do the service work, to go onto the jobs. Would all that just be stored, be all at the same headquarters?

03-00:25:53
Friesen: Yeah, as I mentioned, this Reno operation had about fifteen trucks, and we had probably a dozen trucks in San Francisco that would be out going around. We would try to encourage maintenance contracts with people, or we would get just spot calls to come out and fix a problem.

03-00:26:16
Eardley-Pryor: One of the stories you mentioned last time was the transition to the new headquarters in San Francisco, the new building. What was life like in the new space once it was finally ready for you?

03-00:26:27
Friesen: Well, it was not much different than the old space. We had plenty of space and with individual offices for the salesmen, and different departments and so forth. Since it was located in South San Francisco, I didn't like it as much because it was a longer commute for me. And most of my work was in San Francisco, so I spent a lot of time on the road traveling. Whereas, when we were in San Francisco, we were close enough to engineers' offices that I could walk to most of them.

03-00:27:08
Eardley-Pryor: Throughout your career in San Francisco, you mentioned starting off as a salesman, kind of going door to door and building these relationships with some of the engineers in the city. How did that role change as the business grew and as you took on more administrative responsibilities managing these two different sales departments?

03-00:27:28
Friesen: Well, I got closer to some of the accounts, so I had fewer accounts to call on and took on additional responsibilities as the operations manager for the company. And the three of us—Don Delaney and George Yamas and I—worked very closely together on worrying about whether to expand the building, the organization, or what we had to do to try to keep things going. So as I took on more responsibility, I just had fewer clients to call on.

03-00:28:11
Eardley-Pryor: And more people to manage under your own. How did Don's role within the company change, particularly in the wake of George's passing?

03-00:28:23
Friesen: Well, we sat down, decided who was going to do what, and he, of course, wanted to be president, which was fine with me. I was happy to be vice president. Gordon Walker was the secretary and treasurer, and Gordon was

service manager. He was involved in just his own department. And Don and I grew to be fairly close together in terms of talking about what to do with the company, and whether to expand, or what to do.

03-00:29:07
Eardley-Pryor: Was Don also out in the field the same way you were, building these relationships with engineers?

03-00:29:11
Friesen: Oh yeah. He covered the San Jose territory. And actually, his accounts were probably larger than anyone else's.

03-00:29:21
Eardley-Pryor: It sounds like he might have the Intel accounts and some of the semiconductor manufacturer ones.

03-00:29:25
Friesen: Well, we didn't call in too much on Intel itself. It was mainly through the engineers who did work for Intel. And there were three or four of them who were doing Intel work.

03-00:29:42
Eardley-Pryor: One of the things that has come up in the impacts of the semiconductor industry in San Jose, in Silicon Valley itself, is some of the challenges with industrial manufacturing. There are often toxic offshoots, toxicity even in the air as a part of the manufacturing process. Did that ever factor into the work that you were doing, as far as air ducts to move air throughout a system? Were there certain spaces where you didn't want people to be breathing that air? Did that become a part of your rationale for how you constructed a site?

03-00:30:13
Friesen: Well, the decisions on that were always done by the mechanical engineer, so that we didn't get involved. I recall one incident where one of our men was at one of the semiconductor plants, and he was doing some work up a ladder above the ceiling. And he says all of a sudden, he heard some sort of a siren went off, and he didn't know what was going on. He looked down and, all of a sudden, everybody was out of the plant. Apparently when they had some sort of a toxic emergency, they would evacuate a building very quickly. And this poor guy was stuck there and he didn't have the vaguest idea of what was going on.

03-00:31:04
Eardley-Pryor: What happened to the guy?

03-00:31:06
Friesen: Well, I think it was a false alarm. Everybody came back in, and he climbs down and wants to know what's going on. [laughter]

03-00:31:15
Eardley-Pryor: That's a tough day in the office. In the early 1980s, in 1981, Don Delaney passes away. Can you talk about how that experience impacted you?

03-00:31:29
Friesen: Well, at that time, as he became sick, we reorganized and I became the president of the company. The last six months of his life, he came into the office a lot, but he almost stopped doing work or anything, until he passed away. The main thing that affected me was that the joy of working disappeared. I had a close relationship with Yamas when he was alive, and the challenges of running an organization. And then I had a close relationship with Don. When he died, I was left with the whole thing. I didn't have anyone to really talk to and there were the problems. There were some problems which were growing, in terms of outside pressures on the organization.

So I—and the fact that both of them had died in their mid-fifties, when I got to be 55—I says, "I got to start thinking about getting out of here." In fact, one of the jokes that was on me always was that we would say—when the three of us would be talking, one of the jokes was that "first one out is easy; second one out is doable but not too easy; third one will never get out." And then they would look at me and laugh. [laughs]

03-00:33:25
Eardley-Pryor: And seems like that's what happened. As Don's health started to fail in those six months, what kind of changes and discussions did you have about how to move forward?

03-00:33:37
Friesen: Well, not too much in the way of discussions. It was just the whole thing shifted from—at the same time, Gordon Walker started hitting the bottle pretty hard. So that was part of the problem leaving the whole thing to me.

03-00:33:58
Eardley-Pryor: Do you know what the impetus was for Gordon's increased drinking? Was it work related? Was it more his personal life?

03-00:34:04
Friesen: I think it may probably be some of both. He had had problems with his wife. Years before that, they had apparently some impromptu baseball game on their street. Someone was batting, and the bat flew out of his hand and hit Gordon's wife in the head, and this affected her personality from that time on. This was part of his problem.

03-00:34:45
Eardley-Pryor: Well that's a significant problem. For Don's health, what caused his failure in health at such a young age?

03-00:34:53
Friesen: He got liver cancer.

03-00:34:58
Eardley-Pryor: As you took on the realm of total control for the business, in the early 1980s and particularly after 1981, there seemed to be a transition that was also happening within the building automated systems world, where direct digital building automated systems became more available. You had mentioned in our previous discussions what you mean by systems becoming more of a commodity, that hardware became a commodity. Can you talk a little bit about what direct digital building automated systems was, what this direct digital world meant for the industry that you were a part of?

03-00:35:39
Friesen: Yeah. Well, the direct digital controls were just that. The sensing of electronic controls is what they call analog. And when microprocessors became developed, they could switch these analog signals to digital signals so that they could go into a computer. The computer then could react upon them, and then send back signals to do the controls. So that the big control systems then switched to building automation systems, which took a while before Barber-Colman was able to catch up. Also, the smaller systems depended upon software programs, and there were several manufacturers came up that had software programs. And so they were able to put these into standard IBM computers and control smaller systems. Both of these represented problems for us, although our business was still growing, because of our connections with Silicon Valley.

At the same time, Barber-Colman's air distribution started to suffer. It was a longtime, old longtime manufacturer of machine tools, and they were converting to controls and air distribution. This required hiring a lot of new sheet metal fabricators to do this. And when they got up to three or 400 in sheet metal employees, they attracted the attention of the sheet metal union. And the union kept trying to unionize them. They finally got to the point where they were able to call a strike, and there was a six-month strike at Barber-Colman. During this period, almost all the employees continued working, except this one division was partially out. So our deliveries would go out to like sixteen weeks and we were having trouble getting deliveries from them.

03-00:38:46
Eardley-Pryor: And this is mostly the sheet metal for the air distribution systems?

03-00:38:50
Friesen: Correct.

03-00:38:51
Eardley-Pryor: Coming out of Rockford, Illinois?

03-00:38:52
Friesen: Yeah. I went back at one time and actually had to go through the picket line, which is an experience that I—was something that I was not used to.

03-00:39:07
Eardley-Pryor: What happened then?

03-00:39:10
Friesen: Well, they sent a car out to my hotel for me. And as we approached the gate, there were many people out with signs, yelling, and they were banging on the car as we went through, and standing in front of the car to impede the progress. We finally managed to get through the gate.

03-00:39:36
Eardley-Pryor: What was the purpose of your meeting being out there then? Do you remember? Was it to check in on these delayed air distribution products?

03-00:39:44
Friesen: I think that I was back there on a—they were running a lab test on some equipment that I was involved with, that we were thinking about installing on a job. Then, this strike was finally broken after six months, and then there was a contract signed. And then, two and a half years later, they went through another six-month strike. So Barber-Colman decided to—they made a deal with the union that they would move the plant to Huntsville, Alabama, and they would let it unionize, to get it away from their main plant in Rockford.

And I think at that point, they also determined to let it run down. So it started having problems in the way of the delivery and quality of manufacturing and so on. And finally, they sold to another manufacturer. And this happened just as I had gone to Sacramento. I recall that one of my managers and I went back to a meeting that the new owner had called in Denver, and we quickly decided that they were not going to be a viable deal. So we resigned the account from them.

03-00:41:29
Eardley-Pryor: From Barber-Colman's air distribution?

03-00:41:30
Friesen: Well, this was the person who bought the company from Barber-Colman. We still had the controls.

03-00:41:38
Eardley-Pryor: The transition of the air distribution manufacturing down to Huntsville, Alabama—why do you think they moved down there? Do you have any sense of what their choices were for that?

03-00:41:48
Friesen: Well, I don't know. It's a right-to-work state. However, they did allow it to unionize. So I was not a party to those decisions.

03-00:41:59
Eardley-Pryor: Perhaps just keeping labor costs lower down in Alabama. So as that process is happening with Barber-Colman's decline—especially in terms of air

distribution, and the delays effecting your own business in California—what were the things you were doing to cope?

03-00:42:22
Friesen: Well, on many jobs, I would be involved with the engineer in the selection of equipment when it was still on his drawing board. So I would get plans printed as soon as the ink was dry, and I would order equipment for a project. So, there might be a three-week period before it came out to bid, and I would have the equipment on order already. My theory was that if there was some problem on it, I could then cancel because it would be plenty of time to cancel. And I did this on many jobs.

One of the problems we also started to have was secondary boycotts. The local sheet metal unions were ordered to not install Barber-Colman air distribution in jobs. The local union did not go along with this because when it came to—we had gotten into the balancing business, and we had three or four sheet metal men on our payroll. And when it came to vote in the union hall, these fellows stood up and said, "Hey, fellas, this is the company we work for you're going after, and you're endangering our jobs." So the local decision was not to boycott.

03-00:44:01
Eardley-Pryor: What was your relationship with some of these unions? You had told me the story of sort of breaking up the Local 38 Steamfitters Union control of the city, but part of that accommodation was to then unionize aspects of your own employees.

03-00:44:18
Friesen: Well, I didn't have too close a relationship with the unions, although we did a job in Honolulu balancing, and we ran into a problem where the sheet metal union said they were going to walk out on a job because of a labor problem we had. And I went to Honolulu, partially on vacation, and partially to resolve the problem with the union. I had to go out to the union headquarters and deal one on one with the sheet metal manager there to resolve the problem.

03-00:45:07
Eardley-Pryor: How did you come to an agreement?

03-00:45:11
Friesen: Well, the problem was that we had sent someone to run it—the balancing on the project. He had tried to hire union sheet metal people out of the local, and they kept sending people who had no knowledge of the work that we were trying to do. So he would hire them in the morning and fire them in the afternoon. Finally, somebody tipped him off to the fact that it might be possible to go to the University of Hawaii and get student mechanical engineers to work part-time on the job. So he went over and talked to the dean, and this was arranged. So when these students started appearing on the job, the union got very excited. And when I went to talk to them, they

acknowledged that we were a specialty case. And the final resolution was that we got all these students into the union. [laughs]

03-00:46:26
Eardley-Pryor: Was your relationship, and the fact that you had union as a part of your work in California, a door-opener for you in Hawaii?

03-00:46:36
Friesen: No.

03-00:46:37
Eardley-Pryor: It didn't make any difference?

03-00:46:37
Friesen: Had nothing to do with it.

03-00:46:40
Eardley-Pryor: I'm interested to hear your opinion on unions in the United States. It seems like you've had challenges with them, but also found ways to work with unions. What do you think?

03-00:46:49
Friesen: Well, I recognize that the union movement was very good for workers. And as an employer, provided the union was honest, it made no difference to us. It was really an advantage to us to be able to deal very quickly with and resolve a problem. It didn't make any difference to us really whether we paid thirty dollars an hour or thirty-one dollars an hour. We just wanted to get it settled and get people working.

I was also involved in a—it was not a problem with the union It was the union problem in Sacramento, one of the longest-running lawsuits that ever happened. During this period, a lot of the non-union contractors—not in the San Francisco area, which was controlled by unions, but in the Valley, particularly around Sacramento—they were eating the lunch of the union contractors. So when one of the contracts was up, the union let it be known that they were going to ask for raises, and the contractors association in Sacramento secretly went to the Teamsters union and made a deal with them that they would take over.

So when the IBEW struck, they disassociated themselves with the IBEW and told all the electrical contractors in Sacramento that "we are now dealing with the Teamsters." So everybody switches over to the Teamsters union. And, most of the small electrical contractors in the area were happy to do so. But there were three large electrical contractors, and they said, "You know, we do work all over the state, and we can't be doing this. So we refuse to sign up with the Teamsters." And we were in the same boat. We were doing work, we were sending and moving workers from Sacramento to San Francisco, back and forth, as we needed people to cover jobs. So we refused to also. And the contractors association sued the four of us.

That suit went on for at least ten years, and finally got to the point where nobody really remembered what the original suit was about. But nobody would give in. And it was finally resolved by the—they let the statute of limitations expire.

03-00:50:11
Eardley-Pryor: When you said they sued the four of you, who are you talking about?

03-00:50:14
Friesen: Well, there were three electrical contractors: two in Sacramento and one in Stockton. The only one that I really know and I think about is Collins Electric in Stockton. They're big electrical contractors and they do work in various locations. And there were two other large ones in Sacramento. We were not members of the contractors association, because we didn't do contracting work. We just hired electricians to do our own little work. And we did not work under a contract. We worked under a letter of ascent. Anytime they started to negotiate with the union, they would send out a letter, which was called a letter of assent, in which we signed and agreed that we would comply with whatever were the results of their negotiations.

In this particular case, they had not sent out this letter, and it was a point of contention at one point in the trial as to—we tried to say that they should not be suing us because we were not a party to them. And they trotted out this phony letter of assent, which was unsigned. But they claimed that they had sent it to us and that we had sent it back to them unsigned, and that this really represented acknowledgment that—so it's a legal situation that we did not control. And incidentally, my attorney's fees on that suit were over $100,000.

03-00:52:17
Eardley-Pryor: Did you have in-house attorneys or was that something you contracted out?

03-00:52:21
Friesen: It was contracted out. The four of us got together and hired an attorney in Sacramento, and because of our situation, they decided that they would only charge us the half rate. So we paid one-ninth of the attorney's fees. Every time they billed, we got billed one-ninth. So, the total attorney's fees ran around a million dollars over this period of time.

03-00:52:53
Eardley-Pryor: Wow. And eventually, the suit just sort of dissipated?

03-00:52:57
Friesen: Eventually, it just disappeared, yeah.

03-00:53:00
Eardley-Pryor: If you wait long enough and you fight it long enough—[laughs]. That's great. Howard, you had mentioned that as your work evolved, that it moved beyond California. You mentioned Barbados, work in Honolulu, even work in Southeast Asia. Can you talk about how some of that work happened? How

did you even start moving out into these international markets, and how much of that was a part of what Yamas Company did?

03-00:53:30
Friesen: Well, it was not a large amount of our work, but we basically followed customers. If someone like Intel was going to do a job in Barbados or Chihuahua, they had to have somebody do it. So we were there to do it. Then we shipped material on various projects.

One engineer in San Francisco did a project in Korea, for the Korean Institute of Electronic Technology. And it was a large plant. They were going to build semiconductors. It sort of ties in with some of the local news that you're hearing about South Korea. As soon as we started to get ready to think about sending equipment—the engineer, of course, was specifying our controls and air distribution. And they also specified Honeywell, and I knew that Honeywell was going to get the job, because they had an outlet in Hong Kong. It would be much cheaper for them to run the job out of Hong Kong than it would be for us out of San Francisco. But the air distribution of it, we were pretty sure we were going to get.

And so one day, I get a call from a Korean, who shows up in my office. He's handling the project for the KIET. And he lets it be known that when I bid the job, that I'm to bid it 10 percent higher than what I expect to receive on the job, because they're going to withhold 10 percent. And we were talking both about controls and air distribution, and I never told him that we probably were not going to do the controls. And so, when we get the order, it was arranged to be handled as a letter of credit through a Korean bank in Los Angeles, which basically means that, before the material leaves US, we get paid. However, because of the delivery problems that Barber-Colman was having at that time, they wanted the equipment weeks before they were able to ship it.

So, the final result was that they sent a plane to Huntsville, Alabama, when the material had been manufactured, and loaded it on the airplane. And the plane was out of the country before anyone could be talking about being paid. And at one point, I had sort of chided the guy about 10 percent as a lot of money for them to be making. And he explained to me all the people who were involved in getting this 10 percent—one of who was the president of the country, head of the KIET, and he went down the list. His percentage was only a small part of it.

So, then we were faced with a problem where the material was in South Korea and we had not been paid, and they refused to pay us. Immediately, I started getting calls that there were problems with the equipment. And I recall I had my attorney come down to the office once or twice while we had a conference call with an American project manager who was handling the job. But he always was very careful to say that he was not involved with the problem; he

was just the interpreter between them and us. And it finally ended up that we were clipped much more than the 10 percent, but we finally were paid.

03-00:58:21
Eardley-Pryor: What were the problems that they were having there?

03-00:58:26
Friesen: Well, they claimed that the equipment had—one of the things that I remember is the diffusers had holes in them, and they were going into clean rooms, and that they couldn't have these holes. However, we were using the same equipment in clean rooms throughout the US, and that was a fake problem that they brought up.

03-00:58:50
Eardley-Pryor: Were you able to leverage any of these problems that they were creating on their end as a means to get paid?

03-00:58:56
Friesen: Yeah.

03-00:58:57
Eardley-Pryor: Had you done any other work in Korea before then or after?

03-00:59:02
Friesen: No.

03-00:59:03
Eardley-Pryor: Another development that was happening in Asia was Japan's booming semiconductor industry, and their slow growth in trying to copy what was happening in California. Was Yamas involved in any kind of expansions in Japan?

03-00:59:17
Friesen: No.

03-00:59:18
Eardley-Pryor: What brought your work down to Southeast Asia?

03-00:59:22
Friesen: An engineer friend of mine was working for Intel, and he did several Intel plants. He did Barbados and he did Chihuahua, which is not built, and he did the work in Penang.

03-00:59:38
Eardley-Pryor: So it was through these connections that were California-based, part of an international expansion from California that you were able to ride into.

03-00:59:47
Friesen: Another problem that I ran into which was sort of interesting: The same engineer did the mechanical work for the American International School in Dhaka, in Bangladesh. And we represented a company called EDPAC that

was making computer-room air conditioning systems. Some of their equipment was adaptable to use in schoolrooms, so they had catalog data on its use in schoolrooms. So he decided to use these units on the job in Dhaka., and he was concerned that he would lose control of the quality of equipment that went into the job.

So I was admonished to write a specification for the equipment which he would put out with the plans, which would be extremely restrictive. And in fact, when the equipment was specified, he put my name and phone number in, so that when it was bid, the bidders knew that they were to call me. In order to make it secretive, we put a control box next to each of these units but did not show anything or any description of what was in these boxes, so that nobody else knew what to bid on it. So I got calls when the job went out to bid, and I put out some prices. And then EDPAC, the manufacturer, called me and said that "we're getting calls on this job and it's an international job, and you're not supposed to be bidding it; it goes through our international department, or our international representative."

So EDPAC, at that time, was having a meeting of all their reps in West Palm Beach. So my wife and I went back during this period. And of course, the international guy was there, and he had a Twin Cessna and a pilot who flew him in. They were really catering to me to try to control the job and find out what was going on. And I recall that this fellow invited Candy and me to take a night flight from West Palm Beach down to the Miami area and back. We had a very nice flight. They were really catering to us. And it finally turned out that we had to share the job with the international guy, but we finally worked it out.

03-01:03:12
Eardley-Pryor: You literally black boxed the situation there. That's nice. It sounds to me like you were able to really capitalize on some travel opportunities in conjunction with your business opportunity growth.

03-01:03:26
Friesen: Yeah, sometimes.

03-01:03:27
Eardley-Pryor: When you did those kind of trips, Candy would usually come with you, or was the West Palm sort of unique?

03-01:03:32
Friesen: I don't know. She always came with me, yeah.

03-01:03:35
Eardley-Pryor: Where were some of the places you remember going on work trips that were memorable?

03-01:03:42
Friesen: Well after George died, his son who worked for us, his oldest son, wanted to become a general contractor. He didn't really have the experience that is required to get a license, so he had to sort of fabricate it. And he asked me if I would sign off on some of it. I did help him get his license, and he did start doing work on his own. He had an office at the same location in South San Francisco.

So, he came in one day. He did a lot of work in Honolulu for the Army. And he came in one day and he had a job that he wanted to bid at Keesler Air Force Base in Mississippi. And I helped him think about what to do. It was involving changing out a couple hundred room thermostats to put in energy-saving type, plus a strap-on control. I gave him the price on some of the equipment, and he bid it, and he got the job. So, I told him, I says, "Buy me two plane tickets to New Orleans and rent me a car for a week. I'll go back and I'll prepare drawings for you to get approval, and I'll get approval for you." So that's what happened, and we had a nice trip through the South on his nickel.

03-01:05:27
Eardley-Pryor: Had you been to the South since you were there as a young man before college?

03-01:05:31
Friesen: No.

03-01:05:31
Eardley-Pryor: How had it changed?

03-01:05:34
Friesen: Well, I can't recall being involved in seeing that it had changed much.

03-01:05:44
Eardley-Pryor: So you visited New Orleans and then drove through areas in Mississippi?

03-01:05:49
Friesen: Yeah.

03-01:05:50
Eardley-Pryor: Sounds like a fun trip. What kind of things did you do on these trips? Would you camp? Would you stay in hotels?

03-01:05:55
Friesen: No, we stayed in motels.

03-01:05:56
Eardley-Pryor: What were the things that motivated where you went? Were there things that Candy wanted to see? Was it things you wanted to see?

03-01:06:02
Friesen: Oh she usually controlled where we went. On all of our trips, she would sit down either on her own later—but first of all, she had a friend who worked for a travel agency. They would sit down and they would plot out where we'd go. And usually, we would make reservations at all places, so it was just a matter of going from one place to another.

03-01:06:30
Eardley-Pryor: What were the things that she liked to see on trips?

03-01:06:33
Friesen: Well, she liked to go to France, which we did a lot.

03-01:06:37
Eardley-Pryor: Tell me about the first time you went to France together. How did that happen?

03-01:06:42
Friesen: Well, we had gone to the World's Fair in Seattle.

03-01:06:48
Eardley-Pryor: This was the 1962 World's Fair where the Space [Needle] tower was built?

03-01:06:53
Friesen: I guess, yeah. And at the French exhibit, she picked up some sort of folder describing a contest, which consisted of writing an essay about something. So she brought it home, wrote an essay, and a couple of months later, we got a call from the French ambassador in Washington saying that she had won a trip to Paris.

03-01:07:26
Eardley-Pryor: Do you know what she wrote in the essay?

03-01:07:28
Friesen: Well, of course, it was—

03-01:07:32
Eardley-Pryor: Did you even know she was doing this, with—

03-01:07:34
Friesen: Oh yeah, of course. She worked on it for quite a bit.

03-01:07:38
Eardley-Pryor: That good old Berkeley humanities degree coming in for her there. So in your early thirties, if this was the early sixties, you went on your—was that the first time you had been to Europe?

03-01:07:49
Friesen: I believe so, yeah.

03-01:07:50
Eardley-Pryor: What was it like?

03-01:07:52
Friesen: Well, one of my tennis friends was a Swiss national who, he's American now, but he worked for the Swiss National Tourist Board in San Francisco. So he laid out a trip for us around, going from Paris by train, mainly, down through Switzerland and down to the coast in France and back. So we enjoyed that trip.

03-01:08:35
Eardley-Pryor: That sounds like a magical time. How soon after did you want to get back to Europe?

03-01:08:40
Friesen: Well, of course, she wanted to get back [laughs] as soon as possible. And over the years, we probably went back to France a half-dozen times. Our usual m.o. [modus operandi, method of operation] was to spend three or four days in Paris, and then a couple of times, we rented a car there and drove. But usually we took a train down to some distant point of France. And we just sort of carved off a slice each time and went to a different part of France. We got down into where we were going and rented a car, drove around for a couple of weeks, and then back to Paris and home.

03-01:09:27
Eardley-Pryor: What were your favorite parts of Paris and France that you visited? So if Candy was in charge of some of the itineraries, what were the things that you really enjoyed in your travels?

03-01:09:38
Friesen: After the Internet came out, we discovered that we didn't need the travel agent. She was good at making train reservations, but we found out that you could do all that on your own, on the Internet. So I started handling all that phase of the planning. She would pick the places to go and the hotels to stay at, and then I would figure out how to get from *a* to *b*.

03-01:10:15
Eardley-Pryor: When you're in these places, either *at a* or *b*, were museums the things that attracted you? Was it more meeting families and trying to get to know the people on the ground?

03-01:10:27
Friesen: Well it was the museums, and a lot of outdoor things. Like throughout France, there are a lot of ancient things, small, Stonehenge-type things which nobody knows whether they were burial places, or—a lot of rocks, individual rocks sticking up in the air, and a thing they called menhirs, which was apparently burial places for people. And these were all very ancient places. We enjoyed visiting them, going to museums, the—

03-01:11:11
Eardley-Pryor: Going to these ancient places, what is it that attracted you to find these sites in Europe?

03-01:11:16
Friesen: Well, just to go look at them and trying to envision how they were built, and why they were built.

03-01:11:26
Eardley-Pryor: Back in the domestic United States, in the early 1980s, you are realizing you want to pull yourself away from the business. Don Delaney passes away in 1981, this transition is happening with Barber-Colman's air distribution business, and you are left at the helm of Yamas Company. Can you tell me a little bit about how, when you made this decision to remove yourself from the business eventually, how that process happened?

03-01:11:59
Friesen: Yeah. Well, I soon realized that I was not going to be able to find somebody outside to buy the company. So I approached some of the managers in the business as to whether they were interested, and they were. So we started a process of negotiation, and they came back at one point and said that they could not get enough money together to buy the whole company. They were only really interested in San Francisco. I first said no, had to be the whole thing or nothing. But then I realized that the only way it was going to work is if I took back all of the outlying areas. Each of them were set up with separate corporations so that the local managers could have part of the ownership. So, basically, I bought their interest in the outlying corporations and they bought my interest in San Francisco. This happened at the end of 1985.

Sacramento was the biggest of them. Each of them were having problems of one kind or another, which was one of the reasons these fellows were not interested. So I started commuting to Sacramento twice a week. I told the local manager that I was taking over the administration, and that he was to handle—he had a couple of engineering accounts and that he was to spend his time with them. And I very quickly figured out what the problems were. I rolled a couple of heads, and then I called one of the younger fellows in San Francisco, who was outside the twelve who had bought the company. And I basically said, "There's twelve guys ahead of you who want to become Billionaires before you in San Francisco. Why don't you come look at Sacramento where you could eventually be number one?"

So he finally did come up, and I showed him around. When he found out what the price of housing was in Sacramento, there was no question about it. He would come. And so then, in the ensuing couple of months, I started getting calls from people in San Francisco. "I hear you're hiring. I hear, you're hiring." And the two of us knew who all the good people were in the San Francisco, so we did. There were three or four or five that moved to Sacramento to work with him.

03-01:15:24
Eardley-Pryor: Who was the person in Sacramento that you brought in to help manage there?

03-01:15:27
Friesen: His name was Mike Coffin.

03-01:15:28
Eardley-Pryor: And Mike was a young man that you had hired as a part of Yamas in San Francisco?

03-01:15:32
Friesen: Yeah. So, bringing these fellows in from San Francisco to sleepy Sacramento was a revelation for the locals, a revolution. They started to really build up that operation. I reincorporated Sacramento, and gave them 49 percent interest between three of them. I kept 51, and I set up a deal by which they could take over my 51 percent. And I thought that it would be four or five years or more that this would go on, and there would be a good way for me to stay in touch and exit. But it didn't take long for them to figure out a way of possibly getting rid of me, which was to set up an ESOP.

03-01:16:49
Eardley-Pryor: A what now?

03-01:16:50
Friesen: ESOP, an employee stock ownership program. I had someone give me information on that in San Francisco, and that information had been basically you can sell, set up a situation where your employees own stock in the company, but you still control it. And I was not interested in that.

03-01:17:14
Eardley-Pryor: Why not?

03-01:17:15
Friesen: Well, that's not really truly—it's a way of really retaining control, and it was sort of a sham operation, I thought. So anyway, I said I agreed that they could do that, but again, I wanted to control it. So I got a company in San Francisco to actually handle the transition period. And so, they sent a fellow to Sacramento to assess the value of the company, which I thought was an interesting process. Because this fellow—we sit down, all of us sit down in a meeting. And for three or four hours, we talk about the value of the company. We all decide to go out to lunch, and all of the other fellows leave to go to their offices to catch up on things. And this fellow asked me, he says, "What do you think the company's worth?"

03-01:18:34
Eardley-Pryor: At lunch?

03-01:18:35
Friesen: No, we were sitting before lunch. He wanted to ask me my evaluation for the company—he didn't want to do it in front of them. And I said, "A million and a half." He said, "No," he says, "it's worth a lot more than that." And he says, "How do you figure?" So I explained how, the formula that we used for evaluating the corporations. And he says that he's running at like two and a

half million. So we went out to lunch, came back, and then he's sort of putting things together. And he comes up with an evaluation of a million and a half. [laughter]

03-01:19:26
Eardley-Pryor: So what'd you do?

03-01:19:29
Friesen: So, well, a contract was drawn up, by which the bank loaned the money to the employees to—so the bank loaned. My share was 51 percent, so, I got a check for that amount.

03-01:19:52
Eardley-Pryor: So, did you challenge the lower evaluation that was closer to your original, or that was okay?

03-01:19:57
Friesen: Well that's the one that I came up in the first place, so I couldn't complain about that.

03-01:20:02
Eardley-Pryor: Yeah. So you were pleased with that. You didn't need to get that extra bit?

03-01:20:05
Friesen: Yeah, I wasn't interested in trying to gouge.

03-01:20:08
Eardley-Pryor: So, once they purchased you out, does that mean that you were out of Sacramento then?

03-01:20:15
Friesen: Well, yes. But these three fellows were feeling their oats, and they were starting to do work along the fringes of the territory with San Francisco. San Francisco was starting to go downhill.

03-01:20:35
Eardley-Pryor: In what way?

03-01:20:36
Friesen: Well—

03-01:20:39
Eardley-Pryor: This is in the mid-eighties?

03-01:20:40
Friesen: Yeah, well, the twelve [in San Francisco], I shouldn't say they were incompetent. They were all competent in ways. But they didn't really understand, and there were conflicts within their organization. So, Mike [Coffin] says, "Will you help us go back and take over San Francisco?" So I, "Sure, I'll do that." So I did.

03-01:21:07
Eardley-Pryor: So Mike, who you had brought from San Francisco. And these twelve managers above him had taken over Yamas in San Francisco. Mike in Sacramento, after a few years, not only is able to purchase your share of the Sacramento office, but is then asking for your help to try to purchase back Yamas Controls in San Francisco?

03-01:21:26
Friesen: Right, yeah.

03-01:21:27
Eardley-Pryor: So when you said San Francisco is beginning to decline, you meant specifically Yamas Company underneath these twelve managers, not their region.

03-01:21:35
Friesen: So, I called the CEO. And we met at a restaurant in Hayward so that no one else would know we were meeting, and basically set out the outline of what the procedure should be. So then a meeting was set up with the twelve owners of San Francisco, and Mike and I went and made a presentation. And it was very quickly obvious that I should not be involved, because they were very suspicious of my being involved. And so I withdrew from the situation and Mike then handled it. And eventually they came up with a plan to take over San Francisco and did so.

03-01:22:30
Eardley-Pryor: Did you have any financial interests at stake in any of these?

03-01:22:34
Friesen: No.

03-01:22:35
Eardley-Pryor: So it was really just out of the goodness of your heart to help Mike happen—

03-01:22:37
Friesen: Right.

03-01:22:37
Eardley-Pryor: That's really lovely.

03-01:22:40
Friesen: So, they immediately started running into money problems.

03-01:22:44
Eardley-Pryor: Mike did, after taking over the San Francisco office?

03-01:22:45
Friesen: Yeah. So they ran into a—somehow ran into Staffan Encrantz, who was from Sweden.

03-01:23:01
Eardley-Pryor: Staffan Encrantz was from Sweden?

03-01:23:02
Friesen: Yeah. And he had been a vice president of—what's the big Swiss-Swedish company?

03-01:23:14
Eardley-Pryor: Volvo?

03-01:23:16
Friesen: No, it's like Bechtel, a big construction company. He had left them, and had purchased a plant in New Orleans that they had owned, that they wanted to get rid of. These were plants that were making coke, industrial coke, with big boilers that boil down coal to make coke. And he had three of these plants in New Orleans. So he originally was interested in just investing a little money in Yamas.

03-01:24:02
Eardley-Pryor: How did Staffan Encrantz, in New Orleans with this coke-boiler operation, come into contact with these folks in Sacramento and San Francisco doing building automated systems?

03-01:24:13
Friesen: Mike ran into him at some convention somewhere. I'm not familiar with where it was.

03-01:24:21
Eardley-Pryor: So Mike brought in Staffan to help shore up some of their financials.

03-01:24:27
Friesen: But they still ran into money problems. So it didn't take too long before Staffan had to put more money in, more money in, more money in, and eventually, he took over the whole company.

03-01:24:39
Eardley-Pryor: At this point, what was your relationship with Yamas in other locations: Reno, Vegas, Fresno, San Diego?

03-01:24:50
Friesen: Well, I sold off. I convinced the fellow in Reno, I told him point blank, "You got to buy it." And I made him an offer that he couldn't refuse, so he bought it.

03-01:25:00
Eardley-Pryor: What was this offer? Just priced right?

03-01:25:04
Friesen: Well, it was on the order of ten or $15,000 for what was then my interest in the operation. The control part of Reno and Las Vegas were a part of the

Sacramento operation. San Diego was totally separate. After the MGM fire in Las Vegas—

03-01:25:34
Eardley-Pryor: When was that?

03-01:25:35
Friesen: Oh, that was in the—around 1970—

03-01:25:43
Eardley-Pryor: Oh, that early.

03-01:25:43
Friesen: —and there were several hundred people killed in it. There was a lot of soul searching in the industry as to what to do about fires like that. One of the problems was that a lot of people were trapped above the floor that was burning, and they didn't know what to do. If they had known what to do, some of them would have lived.

So the fire marshals of some of the states got together and devised rules as to what should be done. The State of California came out with a law stating that every existing building in the state, above ten stories, had to have a California state fire-marshal approved life safety system installed. And basically, this system was a large panel, quickly accessible in the building, that the firemen could come in, and it would have an outline of the building. It would have pull stations installed. For instance, a ten-story hotel would have pull stations on each floor, say two pull stations, a couple of fire alarms in the corridors, and you might have smoke alarms. And all of these would feed back to this panel.

03-01:27:24
Eardley-Pryor: A pull station, just for my clarity, is that where you're pulling the lever to mark the fire alarm on?

03-01:27:29
Friesen: Yeah.

03-01:27:30
Eardley-Pryor: I see.

03-01:27:33
Friesen: And then it would also involve speakers installed on each floor, where people could be contacted. The firemen could come in and they could see that, say the eighth floor, all the pull stations been pulled, the smoke alarms were going. They could then talk to people on the ninth floor and say, "Do this." On different floors, or all the floors, they could give them directions as to what to do. And some of the systems also required that—this was mainly on new construction—that they would go in and take over control of the air conditioning system, such that the air flow—say if the fire was on the fifteenth floor, the exhaust fan would rev up. The dampers exhausting the fifteenth floor would open up, so that that would draw the smoke off. And at the floor

above and below, the supply dampers would open, and they would be pressurized, so they would control the airflow to contain the smoke and the fire to a single floor.

So, we ran into Pat Mulholland—who was working for an electrical contractor in San Diego—at a convention somewhere in LA. And he let it be known that he knew how to comply with this law, and that he could build the system and wanted to get involved in it. So we finally got together with him and set up a corporation. He put in $5,000, we put in $20,000, and we agreed to loan money in addition. We expected it to run up to maybe $50,000.

03-01:29:55
Eardley-Pryor: And this was for Pat to construct one of these fire life safety systems?

03-01:29:59
Friesen: That's correct. And so he went to work, designed one, built a prototype, and it had to be approved by the state fire marshal. The fire marshal had two labs that he used for approval. One was UL, and one was a small lab that the state used a lot, when they didn't want to go to UL.

03-01:30:24
Eardley-Pryor: What is UL?

03-01:30:25
Friesen: Underwriters Lab. Everything, any electrical appliances in a house is—you look at the label, it will say "UL approved." UL wanted $10,000 and six months to approve it. And this other lab wanted $5,000 and would do it in a month, so we went with the smaller lab. And so we were very quickly in business. And there were 800 buildings that met this criteria in California, and we probably did, over the ten-year period that it had to be done, we did between fifty and a hundred buildings.

03-01:31:11
Eardley-Pryor: That's a substantial portion.

03-01:31:11
Friesen: Mainly in LA and San Diego area, although we—

03-01:31:15
Eardley-Pryor: This is mostly retrofitting these existing structures with the new fire life safety systems? Where did Pat Mulholland—you said you came across him in some sort of convention. What's Pat's background?

03-01:31:29
Friesen: Well, he was the grandson of the Mulholland who did the water system to—

03-01:31:38
Eardley-Pryor: William Mulholland?

03-01:31:39
Friesen: —yeah, to Los Angeles. And he was working for an electrical contractor in San Diego when we ran into him.

03-01:31:49
Eardley-Pryor: And he had ambitions of having his own company.

03-01:31:54
Friesen: So, after ten years, existing buildings were all done. And our decision was whether to close up or whether to continue with new construction, which was what we decided to do. Pat said that his system really needed upgrading, and for new construction we really needed UL. So he would proceed to redesign a system upgrade using—the microprocessors in use then were much better than the ones that he had originally used. And so he hired software people to do a lot of the work. And he started working on it. He put it together and had trouble making it work. He was consulting with UL as to what requirements had to be. And they would have one problem over here in one of the boards, and they would tweak that and fix it, and that would cause a problem over here.

So he finally ended up with a half-dozen software guys working on it, and he was actually bidding jobs. He needed to continue work. He was bidding jobs using the new system they didn't have approval on—on the theory that it was going to be a year before he had to actually use it, and by then, he would have approval. And it turned out that on a couple of jobs, he had to buy competitor's equipment to put it in. And finally, after he'd spent a half million dollars on software engineering, he finally got it to UL and got the approval.

03-01:34:02
Eardley-Pryor: And he was able to keep that cash-flow moving, with the bids until it got developed?

03-01:34:07
Friesen: So then he—

03-01:34:08
Eardley-Pryor: So I can be clear on time frames, you'd mentioned the MGM fire happening in the early 1970s, the California response, and then Pat's and your solution to that response being this fire life safety. When did he develop the system initially? When did some of those hundred or so buildings you were a part of become a part of your San Diego operations?

03-01:34:32
Friesen: Oh, it was after George died, shortly after, that we got in contact with him.

03-01:34:45
Eardley-Pryor: But before Don had passed away.

03-01:34:46
Friesen: And—yeah, and he finally got the system put together about the time that Don died.

03-01:34:54
Eardley-Pryor: So in the early 1980s.

03-01:34:56
Friesen: And then we were—he was low on business, and he was looking for something to do to get some cash in. And—

03-01:35:07
Eardley-Pryor: This is Pat? Pat was low on business?

03-01:35:08
Friesen: Pat was. So, he was asked if he could do some work on the Otay Mesa Prison, which was a large California state prison being built down on the border. And so he did bid on the project, and he was doing things like—all the door interlocks, all the doors in the prison were controlled back on the main control panel. Plus there was CCTV, intercom, and all of the communication-type things like that. Johnson Controls furnished a computer to control everything, and he had to do all the engineering to put a lot of that together.

03-01:36:05
Eardley-Pryor: So was this something that you were also involved in? Was this all under the one, the head of the Yamas Company in San Diego?

03-01:36:11
Friesen: Well, he took care of the whole thing. So, he was awarded a contract by—the electrical contractor was out of San Francisco, but used him and gave him a contract. And he immediately realized from looking at the plans that the door interlock system—he couldn't understand it. He thought it was really screwed up.

So, as soon as they got the contract, he went looking for the supplier of this equipment, who happened to be in the same industrial park that he was. So he went over, and the guy says, "Well, that job is all screwed up." So the two of them sat down and figured out what had to be done to fix the system. He put together a plan and went to the Bureau of Architecture in Sacramento. They knew that the job was screwed up, so they were very happy to see him walk in with the solution. And he was able to increase his bid by a half-million dollars.

03-01:37:34
Eardley-Pryor: On the Otay Mesa State Prison project?

03-01:37:36
Friesen: On that project. And his increase in costs was, I don't know, thirty or $40,000. So, we had been loaning him a half million dollars because of this problem developing the product in the first place. So—

03-01:38:00
Eardley-Pryor: The way the fire life system—the half a million, you'd invested in the software on that?

03-01:38:03
Friesen: Yeah. So, with this, the extra half million he made on this job, he was able to eventually pay us off.

03-01:38:10
Eardley-Pryor: Ah, so the Otay Mesa State Prison project that Pat did on the side, is how you recouped your fire life safety costs?

03-01:38:17
Friesen: That's right.

03-01:38:18
Eardley-Pryor: Now, once those costs were recouped then, what happened to your and Pat's businesses?

03-01:38:26
Friesen: I told Pat one of three things was going to happen: he was going to buy it, somebody else was going to buy it, or we were going to close it.

03-01:38:34
Eardley-Pryor: What ended up happening?

03-01:38:36
Friesen: Well, he says he was interested in buying it, of course. "But," he says, "how much do you want?" And at that point, there was more than the half million down. And I says, "There was a half million to the company before we had lost." I said, "Well, half price. Quarter of a million dollars." And he says, "Well," he said, "I can't put together a quarter of a million dollars." I says, "How much can you put together?" He says, "Well, maybe half that, 125." I said, "Sold."

03-01:39:11
Eardley-Pryor: Why was there such a drive for you to be done with all of these?

03-01:39:18
Friesen: Well, I didn't see Gemini as being much of a moneymaker in the future. It was—

03-01:39:27
Eardley-Pryor: What was Gemini again?

03-01:39:28
Friesen: Gemini was the name of this company.

03-01:39:30
Eardley-Pryor: Gemini.

03-01:39:31
Friesen: And I was having to go down there every few weeks to consult with him about things, and I just wanted to get rid of it. Well, he thought he could get a couple of investors to come up with the money. But he came back to me, and he says, "Well," he said, "I can only come up with seventy-some thousand dollars." He said, "Will you take a note?" And I said, well, I didn't want to take a note.

It turned out on Otay Mesa that the electrical contractor that he was working for went bankrupt, right at the end of the job. And the general contractor was Hensel Phelps, a big general contractor. And it turned out that they leaned heavily on Pat to put a lot of the things together, and he developed a very good relationship with Hensel Phelps. And they said, "We want you on our next project," which they had just gotten a contract on, which was the jail in the city of Vista.

But the electrical contractor who was subbing to Hensel Phelps in San Diego was Helix Electric, and they had planned to do it themselves. Hensel Phelps told them they had to use Pat. So they reluctantly, in order to get the contract with Hensel Phelps, gave Pat a contract. And that contract was around a half million dollars. So I came back to Pat, I said, "Well, you got this contract at Vista." I says, "How about transferring that contract to my company in Sacramento? And I'll sub it back to you, and every dollar that comes in, I will immediately pay you except the last $60,000—

03-01:42:01
Eardley-Pryor: That he would owe you.

03-01:42:02
Friesen: —which would be the payoff for the company." So, he thought that was acceptable, so that's what we did. But immediately, Helix was very difficult to work for, and he was getting into a spat with the men on the job. They were not doing the work right. So, I would go to Sacramento and there would be a call from the foreman, Helix's foreman, down on the job. And I would say, "Stan, you're sitting down there in Vista. You're calling me. I have to call Pat, who's sitting in an office ten miles from you, then Pat has to call you." I said, "Why don't you call Pat?" He says, "By orders, I don't deal with Pat." [laughs] So, this went on for months.

03-01:43:04
Eardley-Pryor: So Helix and Gemini seemed to be butting heads on this project for the Vista City Jail.

03-01:43:08
Friesen: They were very much butting heads on the project. Pat got involved in a problem on the intercom system, because they had used a—the manufacturer's drawings showed that—there was something like forty intercom stations on the job—showed that there was a ground wire, had to go

to each of the stations. And Pat had said that, "we never use a ground wire. You don't have to because the thing snaps so quickly that you don't have to worry about the individual stations grounding."

So they left a ground wire off of the intercom system, even though it was not being installed by them. It didn't really save them any money. But the City of Vista decided that they wanted the intercom system controlled through the Johnson computer. So when Johnson hooked up their computer to control the system, there was a double operation, whereby the computer would pick up the one station, and then it would pick up the second station, not simultaneously, but two different operations. And the computer was so overloaded that there was something like a twenty-second time period between this. And during that time period there was a noise, a loud noise went on the communication system. So Johnson was blamed for that, and they had to put in a bigger hard drive to make the system more satisfactory.

Also, the concrete contractor on the job apparently did not satisfy the City of Vista. So it ended up that the City of Vista stopped paying everybody. The problem on the concrete was the main one, and that was going to go to court. And finally, after—the job was already finished by this time. Finally, the City of Vista made a proposal that they would pay off and withhold I think 10 percent of the project. And Hensel Phelps then went to each of the subs and said, "Everybody takes a 10 percent haircut, and we get paid." And you had to agree to take the haircut. It was all legally done.

And so I got a call from Helix, and they said that "your share of the 10 percent haircut is so much." I questioned them about their proposition, and I thought that they were wrong in their calculations. So I went back to—I kept good records on—there was something like a hundred change-orders on the job. So I went through all the change-orders and decided that it was only about a 2 percent haircut for us. I called Pat to verify it and he agreed. So we were happily accepted, and were paid off and had a very small haircut. So I paid off Pat except for the last $60,000. And this was impossible for Gemini to handle, because immediately they lost the income coming in. And he kept back his, Gemini, very strictly—and I think eventually closed it.

03-01:47:55
Eardley-Pryor: So this flub-up with the City of Vista Jail ended up solving one problem but creating another that ended Gemini?

03-01:48:05
Friesen: Yeah.

03-01:48:06
Eardley-Pryor: It's fascinating to me that your experience—the success of Yamas [Company] and the paths that you took from the sixties all the way through the eighties—helped enable the construction of Silicon Valley, enabled the ability for microprocessors to then be used in building automated systems.

03-01:48:24
Friesen: Oh, they wouldn't think of it that way, but— [laughs]

03-01:48:26
Eardley-Pryor: But your work helped create the spaces where those developments were happening, that then could then come back into the Barber-Colman products that you were selling. That created their own challenges, it sounds like, in the eighties. It sounds to me like software—once that became a requirement in terms of automated controls—that created more challenges for keeping up.

03-01:48:48
Friesen: What software engineer in this world would consider working in Rockford, Illinois? When they went into this System Eight system—which was their solution, starting from scratch, to develop a building automation system—they had to get software engineers out of India. And then I think they had something like fifteen software engineers from India working on the project.

03-01:49:21
Eardley-Pryor: Even in the eighties?

03-01:49:23
Friesen: Yeah.

03-01:49:24
Eardley-Pryor: Wow. I hadn't thought about going off shores for software development even at that point, that early. It's fascinating, too, that another development that allowed Gemini in San Diego to keep its cash-flow moving was the growth in the 1980s of what some would call the prison industrial complex—the rise of California's prison population in the 1980s.

03-01:49:49
Friesen: Well, and not only that, Sacramento, particularly, got the controls on a number of prisons, probably seven or eight prisons that were located different places throughout the Valley.

03-01:50:05
Eardley-Pryor: Huh. In your experience, in seeing these changes at a decade-style scale, where were the big booms in industry? Was it silicon and then prisons? Or were there other things adding to those?

03-01:50:19
Friesen: Well, it was mainly Silicon Valley.

03-01:50:21
Eardley-Pryor: Huh. So, in the fifties and sixties, it's the schools, the baby boom, following that demographic population. In the sixties and seventies, it's the industrial—especially silicon—manufacturing that's happening in the Bay [Area]. And then in the eighties, it sounds like the prison complexes.

03-01:50:38
Friesen: Yeah. And then, of course, after I left Yamas, the silicon boom was sort of petering out, and Yamas immediately started doing a lot of work in San Francisco. They did the new UCSF campus down, downtown.

03-01:51:02
Eardley-Pryor: Mission Bay? The Mission Bay UCSF?

03-01:51:04
Friesen: Mission Bay, yeah. They did the entire control system there. They also did a big job at Livermore. It was a project, the big laser project. The government put in ninety lasers. Each of these lasers—I saw a picture of them once—they were as big as a steam engine, and they were directing over, wiring down to a globe, and these ninety projected into it. And the idea was that the center of this was going to be hotter than the center of the sun.

03-01:51:46
Eardley-Pryor: This was a controlled fusion project?

03-01:51:48
Friesen: The original intent was to try to develop fusion. After that—that didn't work out too well, so they apparently decided it was to be used to upgrade the nukes. And I recall the Secretary of Defense came out to open the building once, and he said, "On budget and working." And it turned out that it was not on budget and not working, and there was a big hullabaloo about it at that point.

03-01:52:27
Eardley-Pryor: Do you remember who that was?

03-01:52:29
Friesen: No.

03-01:52:31
Eardley-Pryor: In thinking back on your business career—so by the time Gemini closes down, it sounds to me like your Sacramento operation was still happening. You and Mike had not yet reached your deal yet, is that correct?

03-01:52:44
Friesen: That's right.

03-01:52:47
Eardley-Pryor: So once Mike was able to buy out the folks in San Francisco, then Staffan Encrantz came in to help shore up that?

03-01:52:55
Friesen: Yeah, well, Staffan, asked me to be on the board of directors. He had five men on the board. His brother-in-law came from Sweden, worked for him, was a manufacturer of some plant. And he had the fellow who is now the mayor of the City of Tiburon, I think, or Belvedere, one of the two. He was an

accountant, and he was the last accountant who got out of—what was the one who went bankrupt?

03-01:53:43
Eardley-Pryor: Stockton?

03-01:53:44
Friesen: Of the Big Five, you know the Big Five in accountants?

03-01:53:52
Eardley-Pryor: Oh. I'm trying to place it in my head, yeah.

03-01:53:54
Friesen: One of them went bankrupt, and he's the last partner who got out with his money. And also, Jerry Mix, who was an entrepreneur who came up with the idea of using motion detectors to control lighting. For instance, you'd put a motion detector in the bathroom, so the lights would go out until somebody went in. He was very successful and had sold his company to a French company. So he was on the board. And he had the fellow who was running his coke operation in New Orleans; he finally brought him out to help run it.

And then he hired a hotshot from Honeywell, who had been up pretty high in the Honeywell organization. And their intent all along was to go public. You take it public and make a lot of money, and get out. And this hotshot was trying to build the company up. When I was on the board, they bought an operation similar to Yamas in the Carolinas, and almost the same size. He bought that, so he had about 500 employees then. And they were trying to run all these operations and trying to build them up. I always thought they took the wrong approach, because they weren't really interested in the local aspects of developing relationships with people and getting business.

Barber-Colman went through several owners, and ended up with a Swedish company who was then bought by Schneider, which is a big French company. And Schneider is one of the biggest control operations in the world now. And with his Swedish connections, he offered to sell Yamas Company to them so they could set up a branch office.

03-01:56:26
Eardley-Pryor: So, Staffan offered Yamas Controls up to this Schneider company?

03-01:56:30
Friesen: Yeah. And they looked it over, and they picked and chose certain ones. For instance, they didn't want Reno. They took Las Vegas. They didn't want Salt Lake City. In fact, Salt Lake City now retains the Yamas name. It was bought by a local guy there. They didn't want Sacramento. So parts of it Staffan sold to locals, part he sold to Schneider. I saw all the numbers all the way through, and my guess is that Staffan lost five million dollars. And I've always said, "Better him than me."

03-01:57:29
Eardley-Pryor: Wow. What was your relationship—did you have any financial relationship with the corporation while serving as board of directors?

03-01:57:35
Friesen: No.

03-01:57:36
Eardley-Pryor: So, what role did you play on the board?

03-01:57:40
Friesen: Well, first they wanted me to represent the history, and when they first took over, they actually involved a bank in New York who sent someone out to one of our meetings to assess the possibility of going public. And I think that the bank guy very quickly decided this ain't going to fly. So that whole situation dropped off.

03-01:58:15
Eardley-Pryor: You had mentioned you thought they were doing things inappropriately, or at least not following the proper business plan. What would you have done differently?

03-01:58:26
Friesen: Well, they lost control of their installation. And the cost of installation of the controls always ran higher than what they were bidding. They were losing. San Francisco always made money, and their costs would come in close to their estimates. But the rest of the areas, they had new people who didn't know how to estimate, didn't estimate correctly. And they didn't have the management over the installation that they had in San Francisco.

And the problem with installation costs: it always came at the end of the job. So they would be on percent-of-completion accounting, whereby, you take the costs as they come in and project your profits. At the end of the last month or so of the job is when all of your costs were incurred. They would be making money like crazy, up until the last month, and then all of a sudden, the job would come in as a loser.

03-02:00:13
Eardley-Pryor: And so the New York bank recognized that wasn't going to be something that they could go with.

Let's take a little bit of break here before we transition to talking about your retired life.

03-02:00:24
Friesen: Okay.

03-02:00:28
Eardley-Pryor: So Howard, by the time you had worked out the relationship where Staffan could come in and purchase the rest of the company, you were able to excise

yourself from Sacramento, finally. And the issues in San Diego had eventually resolved. Where did you turn your focus next in life? What were the things you were looking forward to be able to do fully upon retirement?

03-02:00:55
Friesen: Well, we did travel quite a bit. We worked in the yard—we both enjoyed that—and I started playing a lot of tennis. I had played tennis, belonged to the Rafael Racquet Club for fifty years, and in the last ten years, I became the captain of one of the USTA teams.

03-02:01:30
Eardley-Pryor: What does that mean?

03-02:01:31
Friesen: Well, USTA is a USA tennis association, and it has set up teams in—like there are twelve teams in our category in Marin County, of different tennis clubs. And this was the 3.5 rating seniors. There's something like well over a thousand teams in the Bay Area of various types—men, women, and various skill levels. And so I played a lot of tennis the first few years, perhaps as many as twenty-one sets a week.

03-02:02:24
Eardley-Pryor: What kind of tennis were you doing, singles? Was this doubles? Were—

03-02:02:26
Friesen: No, always doubles.

03-02:02:28
Eardley-Pryor: Was Candy playing with you?

03-02:02:29
Friesen: Some, yeah. She was a good tennis player, and we used to play against other couples, friends of ours. We had one particular set of friends who had a court at their home, and we used to play there at least once a week.

03-02:02:49
Eardley-Pryor: So it was a social, as well as a healthy endeavor?

03-02:02:52
Friesen: Yeah. Of these twelve teams in Marin, three times, we played within a year. We played some of them back and forth twice, and the winners went on to the next level, which would be Northern California; and then the next level, which would be all of California; and then the next level would be national. And so it was possible for one of our teams to be the national champion in that category. We never got that far, but we did win Marin County three times, and took the team to the Northern California playoffs in Sacramento, three times,. That was as far as we ever advanced.

But I used to particularly enjoy all of the things that went into preparation for a match. The matches were three sets of doubles, and there was a number one,

number two, and number three. It was generally accepted that you played your best team as number one against their best number one team, and likewise two and three. However, I very early realized that if your number one team is slightly less good than their number one team, and same with two and three, you'd lose all three matches. But, if you were to play your number one team against their number two team, sacrifice your number three team against their number one, you could win the same match.

So I used to really spend a lot of time analyzing, and trying to figure out who were the good players we were going to be playing against, what position they would be playing, how we should counter, whether they would play it straight or not play it straight. And when the players would show up at the club, I would go over and I would meet each one as they came up the stairs, introduce myself, and tell them where they could practice and so forth. And I would always mentally keep track of them. I would watch them to see who they warmed up with, because this was an indication of who they were going to play with—they usually warmed up with the same person—and to find out which of the six people were actually going to play.

And then at the last minute, you wrote down your team, and you exchange cards with the other captain. But many times, they would expose their cards early, and all this information, I'm sure, won us more matches than if we had just done it by chance.

03-02:06:07
Eardley-Pryor: Some serious scouting. What were some of the lessons you took from your work life, that you were able to apply in this? In my head, I'm thinking of bidding days, and I'm thinking of your discussion about relationships.

03-02:06:21
Friesen: Well, same sort of thing. When you're bidding a job, you're taking a look and you're trying to analyze all your competition, analyze all the factors that go into the job, and who you'd be working with, and what problems you might possibly run into.

03-02:06:42
Eardley-Pryor: It's fun to see how that applies. In addition to your increased involvement with tennis, you'd mentioned travel. What were some of the trips that you and Candy were able to do that you hadn't been able to do while you were working?

03-02:06:59
Friesen: Well, we did some of the same traveling; we just did more of them.

03-02:07:04
Eardley-Pryor: Tell me about some of these trips.

03-02:07:06
Friesen: Well, we went to France at least a half dozen or more times. We made contact with a birding firm in Texas. It has become quite a large travel firm now, and we went on many trips with them birding. We went to India on a birding trip. We went to Georgia. We went to the King Ranch in Texas with them. We went to Antarctica with them. We went to Panama with them. Candy was more interested in birding than I was. What I liked about them is they all got up early in the morning and went out in the countryside.

In addition, we went on our own; we took many trips. We liked to go on small ships, eighty to a hundred passengers where they had Zodiacs, so that you could go on to any beach. We went on trips to the Marquesas; Tahiti, a couple of times, around all the Tuamotus. We went to Easter Island, and Pitcairn Island.

03-02:08:36
Eardley-Pryor: What were your thoughts on visiting some of these iconic places?

03-02:08:39
Friesen: Well, it was interesting. We were always interested in going out and looking and seeing what they were like.

03-02:08:46
Eardley-Pryor: Was your m.o. [modus operandi, method of operation] to go with other couples on these?

03-02:08:52
Friesen: No, by ourselves. The only trip we ever took with another couple was, we went to the tennis matches in Paris, in 1999.

03-02:09:10
Eardley-Pryor: Who'd you travel with?

03-02:09:11
Friesen: We went with Holly and Margaret Smith, who are neighbors here, who we met playing tennis. Holly is a doctor and he worked for many years for UCSF.

03-02:09:27
Eardley-Pryor: Some of these trips took you to almost every continent, from what I've heard. Is there a continent that you have not been to?

03-02:09:37
Friesen: No, I think we hit all of them. We hit Antarctica; we've been to Australia. Oh, we've taken several trips through South America, and when we went on the Antarctic trip it started in the Falkland Islands. We flew to the Falkland Islands, from there took the ship to South Georgia Island, and then from there to Elephant Island, which is where—who [Shackleton] was the early explorer who was trapped in the Antarctic for a year in the ice?

03-02:10:11
Eardley-Pryor: I want to say Stevenson [Shackleton]? *Endurance* is the book I can remember about it.

03-02:10:16
Friesen: *Endurance* is the name of a ship, but I forget his name.

03-02:10:21
Eardley-Pryor: Some of these trips, you said, were birding expeditions, out of this operation out of—Texas?

03-02:10:27
Friesen: Mm-hmm.

03-02:10:28
Eardley-Pryor: Were you, yourself, a birder? You said Candy was really into it.

03-02:10:31
Friesen: Well, she was really interested and kept a list usually on the trips. I went along and I enjoyed looking at birds. There were some very exciting ones that we saw at times. We also took a trip early on; we went on the ship *Polaris*, and we went on that four or five times. One of its trips was through West Africa. It started in the Cameroon, and went to Benin, Togo, Ivory Coast, Senegal and Guinea, and Gabon—looking at birds primarily.

But the birding group on the ship would get off, get up before breakfast, have a quick breakfast, and then take off in a Zodiac and go to land. And they would have arranged, maybe, jeeps that would take us inland. Sometimes we would go twenty, thirty miles inland. A couple of times we met the ship at the next stop.

03-02:11:38
Eardley-Pryor: That sounds like pretty fun adventures. With all this global travel, where were your favorite places and why?

03-02:11:46
Friesen: Well, I don't know; we enjoyed every place, I think. New Guinea was one of the most interesting places.

03-02:11:52
Eardley-Pryor: Why?

03-02:11:53
Friesen: Well, it was such an aboriginal situation. We went up into the highlands where the natives were wearing bones stuck through their noses, and bones hanging as ornaments through the ears, and so forth. It was very, very primitive.

03-02:12:16
Eardley-Pryor: Thinking about change over time, and the experience of your travels from the sixties onward, how has your experience of travel changed?

03-02:12:27
Friesen: Well, we did more on our own. We had a travel agent set it up initially. But then as the Internet developed, I developed the ability to make train reservations. I even made bus reservations in Scotland, at one point.

03-02:12:51
Eardley-Pryor: Tell me a little bit about this Internet revolution. You had helped—been a part of the construction of manufacturing sites for microprocessors; and then saw its implementation in the 1980s with the microprocessors being a part of building automated systems, these digital control systems; and then the Internet becoming something that was inside your home and having access to global networks of information. When was your first experience with the Internet?

03-02:13:20
Friesen: Well, Berkeley had a class on it one day. We signed up for a class in Doe, and they had computers set up in one of the rooms. We went in, and they were explaining to us how to get on the Internet—how to do this and do that. And I recall trying to get on AltaVista, and Yahoo—I think it was available then. And that's how it started. And then I—

03-02:13:56
Eardley-Pryor: When was that, do you remember?

03-02:13:58
Friesen: About '80—it was about when I went to Sacramento, '84.

03-02:14:07
Eardley-Pryor: That early, having access to the Internet in Doe Library?

03-02:14:12
Friesen: In San Francisco, we had been using computers, starting to do drawings with computers. And when I went to Sacramento, a lot of people were buying Macs. I remember the first year in Sacramento, we were talking about bonuses that we were going to get employees for Christmas. And the fellow I was talking to says, "You know," he says, "rather than giving out cash, why don't you give out Macs?" So I think I gave out something like eight Macs to different people . And this was a terrific investment because they were using Macs at work, and so they were taking floppies home at night, doing work at home. [laughs] So it was an extremely good investment.

03-02:15:22
Eardley-Pryor: And this was in the eighties —

03-02:15:23
Friesen: And so, I got one of the Macs and brought it home, and started to learn it. And of course, I had fellows in Sacramento who were adept at using this. So I was able to learn how to use the different programs. And I particularly used Excel, because I did a lot of—and still do—a lot of spreadsheet work.

03-02:15:52
Eardley-Pryor: Once you had access to the Internet, was that something you did at your home? Was it a dial-up connection that you had, maybe through America Online? Do you remember how you got the Internet in your home first?

03-02:16:02
Friesen: Yeah, I was on America Online for a while, and EarthLink for a while, and finally got onto, now, on Comcast. And one of the things—this investment advisor that I worked with for almost thirty years, they wanted to use our account as their sample account. He put it on the Internet every night. Basically, he was saying, "Look at what we've done. We started with this guy back in 1973, and look what his account has done." He was using it as a sales tool. So this went on for a number of years.

03-02:16:47
Eardley-Pryor: Can you tell me a little bit about this investment advisor that you started working with in '73, and how that then shaped the rest of your life?

03-02:16:55
Friesen: Well, we had had a profit sharing plan, so we had money to invest in that. First, we sort of divvyed up the money to different owners, and I had a section of it that I was in charge of. And then finally, that didn't work out too well, so we gave it to an investment advisor in Pasadena.

And one day I got a call, and this fellow said, "I'm Roger Engemann," and he says, "I have taken over your account," from this older fellow who had given it to him. So he came in my office, and he had a flip chart with about twenty or thirty things. And he would go through this flip chart, about how to invest in stocks and why to invest in stock.

So after a year or two, I had built a house—I built a house down below—and I had $50,000 in cash. So I decided to give it to him to invest. And so starting from that $50,000 in 1973—he was working by himself initially, and he finally built up his organization to run sixty people in Pasadena. He invested mainly in the large-cap growth stocks. And he was one of the early investors in Walmart. He had Sam Walton at one of the meetings to talk. So he always had a meeting each year at a hotel in Pasadena, and had all of his clients down. Then he would have a party at his house afterwards.

And he built up to around 400 clients. Then, all of a sudden his client base exploded. Merrill Lynch introduced what they called a wrap account they called it. But it was basically, they had outside consultants, and they named him as one of their outside consultants. And all of a sudden, he had 2,000 clients. And that year, they had to take over the 20th Century Fox sound studio in order to have his party. So these were all pretty exciting things to get involved with.

03-02:19:35
Eardley-Pryor: That's a lot of growth that happened over that time. So with this $50,000 investment you had in the early to mid-1970s, what happened to that investment?

03-02:19:47
Friesen: Well, the money went into the trust account at Bank of California, and he had power of attorney over it, to invest it. And basically, over the thirty-year period, it doubled every four years. He had a very hot hand. Towards the end, he eventually sold his company, and some of the younger fellows in his operation started then to control what they invested in. He had never gone into tech, but they went heavy into tech. And in 2000, there was a crash in tech and it wiped out half of our investments.

03-02:20:41
Eardley-Pryor: Oh, so the Dot Com boom in '99, 2000—you took a hit on that? Who was this person in Pasadena that you worked with?

03-02:20:51
Friesen: Roger Engemann. Well, he was a young fellow when I first started out with him, then he grew his organization. And he, I think, got to be quite well known as an investment advisor. He was on Louis Rukeyser's program once. And he did quite well until at the end.

03-02:21:27
Eardley-Pryor: With this money that was continuing to grow, how did that change your lifestyle?

03-02:21:33
Friesen: As he sold and bought stocks during the year, all of the realized gains were taxable. So I never took money out of the fund to pay taxes. I paid them out of our regular salary, so that this fund was able to continue to grow. And it grew to many millions of dollars, until the final crash.

03-02:22:03
Eardley-Pryor: Before that final crash happened, you had already retired at that point. So once you had retired, let's say by— [1986]

03-02:22:11
Friesen: Yeah, I still left it in there, yeah.

03-02:22:13
Eardley-Pryor: So it continued to grow there through the nineties. Tell me a little bit about your time in the nineties. I understand at some point you bought an airplane. You had talked about, in the 1940s, you had joined the California Air Patrol Cadet organization [California Civil Air Patrol]. You'd gone up on this flight, and it really had piqued your interest. How did you then pursue the ability to fly later in life?

03-02:22:38
Friesen: Well, I was always interested and run into the fellow that we hired as a landscape architect for our yard here. He had been a pilot in the war. He bought a Cessna 182, and we flew with him for a while. So that sort of brought back our interest in flying. So when I got enough money, I took flying lessons and was able to pilot. And we [Candy and I] flew a number of trips around the country, particularly down to Mexico. So we enjoyed the flying experience.

03-02:23:22
Eardley-Pryor: What was it about flying that drew you in?

03-02:23:25
Friesen: Well, the aspects of it—you have to really be alert all the time, and be watching. I always enjoyed—and Candy in particular enjoyed, she was the navigator—she enjoyed looking at things. She always had a map in her lap. She was looking at different features and stuff, and she would point out a particular feature that intrigued her.

03-02:23:55
Eardley-Pryor: Tell me about these trips to Mexico. It seemed like something that became a tradition for you and Candy.

03-02:24:00
Friesen: Yeah, we went down with—this fellow's name was Bill Kapranos, and he talked us into going on a flight down to Baja. He had been down the year before and enjoyed it. And so we finally decided that we would do it. So the three of us took off, and we landed at four or five different places and camped on beaches and dirt strips.

And we did go to this one place, which was on the Gulf side, called Timbabiche. There were no roads into it, high mountains surrounding it, and it was a flat space, which was big enough to land on. And there was a family living there. There were eight siblings, all married, and they had something like forty-six kids, between the eight families. And they had pangas that we could go out fishing with, and we enjoyed going out, particularly after lobsters. We enjoyed going there, so we went back to this one place twenty-one years in a row.

03-02:25:29
Eardley-Pryor: Back to this Timbabiche place?

03-02:25:31
Friesen: Yeah. But we also went to others. We've been to almost every place in Baja, many of the hotels down there.

03-02:25:42
Eardley-Pryor: Did you have a particular favorite that you liked to go? Was Timbabiche your favorite, or were there others?

03-02:25:46
Friesen: No, Timbabiche was the favorite, yeah. And of course, they were always interested in—became interested in us, when we would come back. And we started taking clothes down for them. I'd have the airplane packed to the rafters with used clothing that we would collect.

03-02:26:03
Eardley-Pryor: To bring down for those families?

03-02:26:05
Friesen: Yeah.

03-02:26:07
Eardley-Pryor: The generosity that you would show to these families in Timbabiche, it seems like a sensible segue into your very, very extensive philanthropy associated with UC Berkeley. What was it about Berkeley that you decided, that's where you wanted to invest in your philanthropic work?

03-02:26:29
Friesen: Well, going to Berkeley had been a life-changing experience for me, and also Candy. And we were still somewhat connected—going back to football games and a few things like that. So we decided to set up a scholarship program. So we got together with them and did set up one, initially for four scholars, and that built up over the years. This last year, there were twenty-one scholars on the program.

03-02:27:08
Eardley-Pryor: How did you arrange for that to happen?

03-02:27:12
Friesen: We went over, were directed over to Berkeley to talk to someone in the university relations. And contracts were drawn up as to what we would do, and so forth. And then Candy got involved on the boards of a number of operations. She was on the board of Cal Performances, and the Library. We could have been on the Museum, but we decided not to; but we were very close to them. We were invited to board meetings, and then we got involved with Goldman School of Public Policy.

And, through Candy's library experience, she planned that when she set up her will, she was going to leave 10 percent of her estate to The Bancroft Library and BAMPFA. She didn't want to leave it to the Library. There were personality conflicts, shall we say? She decided to leave it to The Bancroft. And one day, when Charles Faulhaber—I think he had already left—he set up a thing for the oral history program. And he sent out a request for people to donate money to it. He set a total sum, as I recall. And when it came in, Candy was already quite sick. I'd been discussing with her some of the aspects of where her money was to go. And I says, "You know, this is a good idea. Why don't you donate to Charles's program?" We knew Charles and liked him. And she thought it was a good idea.

So I fired off an e-mail back and said that we would finance the program. I think we were talking something like half to three quarters of a million dollars that he was talking about. And I immediately get a call from Charles. He says, "What?" He's confused as to what we're doing, and I quickly realized that we were stomping on his program—that what he really wanted was to bring a lot of people in and have this program. So we decided, well, why don't we have our own program? That sounded like a good idea, so that's what we did. And I increased the sum to a million dollars and told Bancroft that, when she died, they were eligible for a million dollars.

03-02:30:35
Eardley-Pryor: Why the oral history program, in particular?

03-02:30:38
Friesen: Well, I didn't particularly like the thought of general contributions for use, because you don't know what the use is going to be. You don't know whether they're going to use it for salaries, or vacations. It's better to have a specific use. And this was a specific use that sounded like it would be a very good use.

03-02:31:10
Eardley-Pryor: Had you had any experience or interactions with oral history in the past?

03-02:31:14
Friesen: No.

03-02:31:15
Eardley-Pryor: What was it that brought Candy into her relationship with the Library, as a form of philanthropy?

03-02:31:22
Friesen: Well, she was on the board of directors.

03-02:31:24
Eardley-Pryor: But why there, as opposed to other aspects of campus?

03-02:31:28
Friesen: Well, we didn't know it. We set up a chair in [the College of] Engineering, initially, as well as increasing the scholarship program. And then we, when the Hewlett program came out—you know, Hewlett had a matching program—

03-02:31:55
Eardley-Pryor: Hewlett-Packard?

03-02:31:56
Friesen: Yeah. Well, the Hewl—

03-02:31:57
Eardley-Pryor: Or the Hewlett Foundation?

03-02:31:57
Friesen: The Hewlett Foundation. You put up a million dollars, and they would match it. So we decided to join and we did one. Candy was in the process of setting up one with College of Environmental Design. And so we set up a Hewlett with them, and then we set up a Hewlett at [the College of] Engineering under her father's name.

03-02:32:32
Eardley-Pryor: Who was also an engineer from Berkeley.

03-02:32:33
Friesen: Who was also an engineer. And then, at the end—not legally, according to my attorney, but we set up one with Goldman School of Public Policy and we'd started being invited to Goldman School events. We could've been on their board, but we declined that. But they kept inviting us to their dinners after their board meetings, and they would usually have speakers. And they were a pretty with-it crowd of people. So we decided to do our thing, and we set up a chair there, which is currently held by Robert Reich.

03-02:33:19
Eardley-Pryor: Ah. So, Robert Reich's chair was essentially a process of you going to these meetings, really enjoying the group that was there and enjoying the presentations. That's why you funded the chair in public policy?

03-02:33:31
Friesen: Yeah.

03-02:33:32
Eardley-Pryor: The endowed chair on the College of Environmental Design, why did Candy choose that?

03-02:33:37
Friesen: Well, she was always interested in architecture, and she worked for Kapranos, the landscape architect, for a while. We were both actually interested in architecture to a certain degree. And it fit in with engineering.

03-02:33:56
Eardley-Pryor: Candy also seemed to have some sort of relationship with the UC Botanical Garden, as well.

03-02:34:01
Friesen: Yeah, she was always into plants, the garden. And we've gotten to know Paul [Light]—what's his last name?

03-02:34:13
Eardley-Pryor: At the Botanical Garden?

03-02:34:15
Friesen: Yeah, he was the dean of Letters and Science for a while. And then, when he retired, he went up to Botanical Garden. And so, she got on the board there.

03-02:34:31
Eardley-Pryor: Hmm. From Candy's deep involvement with a number of these organizations, it sounds like the discussions about where to give were very mutual, but it was often spearheaded by her interests.

03-02:34:44
Friesen: Right.

03-02:34:45
Eardley-Pryor: So, that leaves me to wonder, while you were having this entire career, what were Candy's passions while you were in your working life?

03-02:34:57
Friesen: Well, she worked for a number of years. She worked for about ten years for Barton, Batten, Durstine and Osborn, an advertising agency. And then when she left there, she worked for the Hearst organization for a couple of years.

03-02:35:15
Eardley-Pryor: What was she doing with them there?

03-02:35:18
Friesen: I don't know; she worked for [Jeff] Warren. What's Warren's first name? Warren, the son of the chief—

03-02:35:29
Eardley-Pryor: Earl Warren? Oh, Earl Warren's son?

03-02:35:31
Friesen: Earl Warren's grandson. Is it Bob Warren? I forget his first name. But she worked for him, and then she quit that and she started working for Kapranos, handling his business accounts and bookkeeping and so forth. And she got involved in some of the projects that he was involved with.

03-02:35:58
Eardley-Pryor: Another major aspect of philanthropy that you had in relationship with UC Berkeley was the Berkeley Art Museum, in particular, the new BAMPFA location. Can you talk about how that relationship began?

03-02:36:11
Friesen: Well, we were invited to a board meeting at a residence in San Francisco, the first one I remember going to. A group had just come back from Japan. They were so excited about the architects that they had run into, and we were sort of appalled because they had not interviewed the entire list of architects that they had. And it turned out that they did eventually then select Ito, the architect, to do the building, and he came out.

He started design work. He came out twice, to meetings that we went to at residences where he had shown his plans that he was working on, and what his thoughts were, and so forth were. It was an extremely expensive building that he designed,. The estimate came in at two hundred million, which was

more than double the amount of money that they had. So at that point, that's about the time that Larry Rinder came in as director.

03-02:37:29
Eardley-Pryor: Of the art museum?

03-02:37:30
Friesen: Of the art museum [BAMFA]. We met him. And Ito was then discharged. And Larry called up one day and he says, "You know," he says, "that building over there that we were going to tear down and put up the new building, that would make really a good building for the museum." And he invited Candy and me over on a tour of it. I have a picture of it; I'll show it to you if you want.

So we went over and we agreed that it would be a very suitable building for the museum to build in. In addition, and he took other people through and through that process, they decided that they would work within that building. But the problem was PFA [Pacific Film Archives]. Larry's original plan was that he was going to put PFA in that building. He was going to dig way down, and put the PFA down in the basement.

03-02:38:35
Eardley-Pryor: Where was the Pacific Film Archives before?

03-02:38:41
Friesen: Well, you know where the old museum was? PFA was sort of in a building next to the tennis courts there. They had a small auditorium that they used. So in the discussions, there was the parking garage next door, and we suggested to tear part of it down. I didn't like the idea of going down, because Bob Wong, who was an architect who we knew, was working on the law building up above. And he was talking about all the streams of water that are going underneath the law building, and how they had to accommodate and control all these streams. And I visualized the center stream was where the old waterway was, and that going down might be disastrous.

So we were talking, trying to find some other location, and suggested cutting down one bay of the garage. And that idea took hold immediately. So everyone was into that. And eventually it became two bays, then three bays, and then the garage became too small so the whole thing disappeared.

03-02:40:12
Eardley-Pryor: [laughs] So the museum eventually took over this entire garage area. What was your relationship with Larry during this process? Was it something you would sit down together and kind of make plans?

03-02:40:23
Friesen: Yeah, we'd talk. The first process was to decide how to get the architect selected. And so the plan was not to bid, but proposals were solicited from about ten different architects, most in the US, but there were several in

Europe. All of them put together proposals. And from those proposals, we had meetings with the board of the museum. The board had a special group that was handling the architecture and decided to pick four of the architects as finalists. Each of the four was invited to make a more substantial proposal.

We went through that process, and decided on Diller Scofidio [Diller Scofidio + Renfro]. During that process, a group of four people were going to go back to Boston and New York to visit several of the projects that Diller Scofidio had done, before we decided to give them the contract. And I went with the group. So we visited a museum in Boston, then we went to New York, visited their offices. They had done a big auditorium next to the Juilliard School that we visited. And we went through the Juilliard School on a tour.

And so, after that, we gave the contract to DS and R [Diller Scofidio + Renfro]. Then, Larry started sending me some of the early plans. And they had a local architect also working on it. I went over and visited them a couple of times trying to discuss how to locate things, how to coordinate PFA, where it's located in the rest of the building. And there were some problems, mainly elevation problems of trying to get from one to the other. It took awhile to resolve those, and in resolving them, it became necessary to have the second bay involved, in the garage, then the third bay, and by that time, the garage was doomed.

03-02:43:23

Eardley-Pryor: So it sounds like you and Larry really built a solid connection, traveling to visit these other sites, and then working together on planning the process forward. That's really neat.

Tell me a little bit about your decision to start being philanthropic with the university. In thinking back on what you had gained from your experience at Berkeley, it sounds to me like you initially and continue to really do a lot of student scholarships. And that then transitioned to broader and bigger endowed chairs, and then eventually what became a large gift to the museum itself after going through this process. Talk to me about your decision-making process and how your philanthropy changed over time.

03-02:44:10

Friesen: Well, we didn't have any heirs, so our money had to go somewhere, and this seemed like the best place that we could think of to have it go to. So we started getting more involved, and the more involved we became, the more things we got involved with.

03-02:44:28

Eardley-Pryor: Eventually with the art museum, you give a very substantial gift, a three million dollar gift. What did you envision that money going towards in particular at the museum?

03-02:44:39
Friesen: Just the general construction. There was no restrictions put on it. And since then, as a part of Candy's giving, there was an additional million dollars that went to the museum.

03-02:45:01
Eardley-Pryor: Oh, as a part of her estate, her will?

03-02:45:05
Friesen: Well, when her estate was established, I decided to disclaim. I had a life estate in it, so it would be put into a fund, and I would draw the income from it. And I disclaimed all that, so that all of that would go directly and quickly to the university.

03-02:45:27
Eardley-Pryor: Wow. Did you have a sense of where you wanted that to go, or was that just for general?

03-02:45:31
Friesen: Yeah, there were specific places that it went to.

03-02:45:35
Eardley-Pryor: Oh. Including the Oral History Center?

03-02:45:36
Friesen: Yeah. To each of the endowed chairs, then the money to Bancroft, and the money to the museum.

03-02:45:49
Eardley-Pryor: You'd mentioned that you and Candy had not had heirs. Was family something that you had chosen not to do on purpose? Was that just a feature of life that happened?

03-02:46:00
Friesen: That's a feature of life.

03-02:46:03
Eardley-Pryor: Tell me a little bit about that. I'm thinking through the 1950s being such a time in the postwar period, with the baby boom happening. Was that something you and Candy had tried to do then? It just was part of the culture at the time, it seemed to me.

03-02:46:21
Friesen: Well, nowadays, there are many things they can do to aid conception, which they could not do then.

03-02:46:34
Eardley-Pryor: Yeah. Had you considered adoption at any point?

03-02:46:38
Friesen: Well, it was discussed, and discarded. We knew of probably a half dozen examples of adoptions that didn't work out.

03-02:46:54
Eardley-Pryor: In what way?

03-02:46:55
Friesen: Well, the children were unsuited for the families, or they turned out to be much different than the families. There were several that worked out fine, but we were very aware of the fact that a cousin of hers had adopted a young girl, and then later had a child of their own, and there was always conflict. And we knew someone that I had gone to Spanish class with who had her story of two children, she and her husband had adopted, was strictly a horror story. So, in addition to the fact that there are many good stories, there are problems that we just decided that we would not do it.

03-02:47:49
Eardley-Pryor: It left you free to be able to give generously to the university later. In the 2000s while you were really ramping up this philanthropic gift giving—with the endowed chairs, and closer connections with the Goldman School of Public Policy, for example, the Library—it's also the point where you're moving into your seventies and then even into your eighties. Tell me about some of the changes that were happening in terms of health. This is around the time when Candy begins to develop some issues.

03-02:48:21
Friesen: Well, she started having problems, mainly falling, and a number of times she fell in the yard. One time I remember, I had gone to the tennis match in Sacramento, and I came home and she had fallen in the yard and laid out there for a couple of hours. And then she started having problems even in the house. I set up bars around the house. One in particular, we used. If she fell, the m.o. [modus operandi, method of operation] was to—I'd get a towel, get her on the towel, and I would pull her into the bedroom where this particular grab bar was. And between the two of us, we could hoist her up. And then finally, she was misdiagnosed by a doctor in Marin County. And as she got worse, we went to a luncheon held over in the University House for us and the Huhns. And—

03-02:49:41
Eardley-Pryor: This is Jim and Betty Huhn?

03-02:49:43
Friesen: Yeah. And there were about fifteen people there, and one of them was Shankar Sastry, the dean of engineering. And he came up to me, and he says, "You know," he says, "you ought to think about getting her into UCSF." And I says, "Well, our primary care physician had been trying for about six months, and there was sort of a blocking process that we couldn't seem to get

through." And he says, "I can get you in." So, he says, "We're doing work over there, and," he said, "I know all the people over there. I'll get you in."

So, within a couple of days, it was first decided that she'd be looked at by the head of neurology department at Berkeley. She and I went over, and he was a doctor but he says, "I don't practice." He says, "This is strictly on the side." So, he put her through the paces, and he says, "Well," he said, "there's two things that are obvious." He says, "You don't have what the doctor in Marin said she had." He says, "You have Parkinson's." So about two days later, we had an appointment at UCSF, and then she was a patient there for the couple of years that remained of her life.

03-02:51:20
Eardley-Pryor: When did you get this diagnosis of Parkinson's?

03-02:51:28
Friesen: Well, that was probably around 2010.

03-02:51:36
Eardley-Pryor: How did it affect you?

03-02:51:40
Friesen: Well, her health very quickly started to go down. And soon she was having to use a wheelchair. I was taking her around to different doctors then. One day I was taking her to the pediatrics guy to trim her nails, and I got her out of the car, and into a walker. She was trying to go across the driveway and got stuck in the middle. And she couldn't walk either way. So I went into their office, and they had a wheelchair which they came out and helped her in. And Doctor Davis then sized up the situation and he was responsible for calling Sutter Visiting Nurses. So the next day, I get a call from Sutter Visiting Nurses that "we're coming to see you." So they came in, and they had a visiting nurse who started to come in to visit her. About that time, I was having to have help come in. I had someone come in twenty-four/seven to help her.

No. Let's step back. One day, it was a Sunday, I was wheeling her around in the wheelchair, and she started to crash. So I called the visiting nurse and I says that "something has to be done right now." And she says, "911!" So I call 911, and she was put in the hospital. She stayed there for three days while they brought her back, her vitals all back. And they said, "You've got to get her out of here." So I had one day to find a convalescent hospital, because I knew I couldn't handle her. So I found one, and took her to it. And Medicare handles the first thirteen days of that procedure. If you spend three days in a hospital, they'll handle thirteen days in a convalescent hospital. So during those thirteen days—I didn't like the place that I took her. So I looked around for another place, found one in Tiburon, and at the end of the thirteen days, I bundled her up in the car and took her up to Tiburon.

And so, she was there for a couple of months, and she got better. When she was in this place in San Rafael's, she couldn't talk. She was losing control of her hands and so forth. She got better. And it was hard on me because I didn't comprehend. I couldn't stand to be with her, go visit her, and I couldn't stand to be away. So I was doing a lot of traveling back and forth each day just to visit her. And she got a little better and she didn't like the place. I'd ask her, "How was dinner?" "Garbage. Get me out of this place!"

So finally, I called At Home Caregivers company and met with the fellow. And he went with me to the place in Tiburon, and we arranged that she should be brought back to home. I had to buy a convalescent bed for her, and I had to buy a bed for the caregiver that was going to live here. And so this was all arranged and we made the arrangements. And from that point on, for the next two and a half years, I had a live-in caregiver.

03-02:55:57
Eardley-Pryor: What was that experience like?

03-02:55:59
Friesen: Well, it was restrictive in some ways, but not too restrictive, because the immediate handling of her problem was by the caregiver. And there were different caregivers. One would come in usually for three days, and one would come in for four days, and there were probably a dozen different caregivers involved with this process. Most of them were immigrants. A lot of them were from Uganda, Mexico, Fiji. This was an international house for awhile. And so, then as she slowly got worse, I had to stick much closer to home, because I would have to help the caregiver when we made transitions, say, to the bathroom, or into the kitchen. We had established a routine whereby the caregivers did certain things and I helped on certain things. I learned how to cook and did all the cooking for her, for two and a half years.

03-02:57:23
Eardley-Pryor: You learned how to cook in your eighties. That's wonderful. Can you tell me a little bit about what that experience was emotionally for you?

03-02:57:35
Friesen: Well, it was devastating. [long pause] That's all I can say. It was devastating.

03-02:57:45
Eardley-Pryor: How did Candy handle her decline?

03-02:57:49
Friesen: Well, she was very stoic about it. She didn't understand why it was her, and she went through all this. But the decline happened. At the end, she couldn't use her hands. I had to feed her, hold the fork, and cut her meat, and put it in her mouth. She'd always been an avid reader and she couldn't read. She'd lost, was losing her ability to read. So this was all a very difficult situation. I always said, "We are one choke away from ER," and we went to the ER once or twice on choking.

03-02:58:42
Eardley-Pryor: At the same time that Candy's experiencing this deteriorating health, it's also the time when the United States is also going through its own economic shifts. I mean the '07, '08, '09 financial crisis that happens and the Great Recession in its wake. How are you doing in response to these—the personal world and this outside world all having these convulsions?

03-02:59:08
Friesen: Well, it didn't bother me too much. By that time, I was handling all my own investments. So I was working on the computer, trying to decide what to do. And I changed the strategy a couple of times. One time I was 100 percent in municipals. Another time I went into oil investments. I'm still very heavy in oil investments.

03-02:59:33
Eardley-Pryor: Candy passed away when?

03-02:59:36
Friesen: January of '15.

03-02:59:39
Eardley-Pryor: So, after 2015, that seems like another pretty radical change in your life, having to care for Candy, but even beyond that, having these sixty-some years of partnership together. How did things change for you?

03-03:00:00
Friesen: Well, I certainly had a big load lifted off of me. The first few months were heavily involved with attorneys and accountants, too, because all of our affairs had to be looked into and accounted for. So I spent a lot of time doing that.

03-03:00:28
Eardley-Pryor: How did you move past that?

03-03:00:32
Friesen: Well, eventually life takes you past it.

03-03:00:36
Eardley-Pryor: What were the things that helped you do that?

03-03:00:41
Friesen: Well, I continued playing tennis. By that time, I had left the Rafael Racquet Club. I went over to another tennis club, and was only there a couple of years.

But I, with three other fellows, we met once a week, on Friday mornings, and played tennis. And I did that until a year and a half ago, when I finally had to give it up because of my own problems.

03-03:01:13
Eardley-Pryor: As you've looked back on your life, this long scope, a lot of changes, a lot of developments through your career. A lot of wonderful opportunities in your personal life—seeing the world and sharing that experience with your wife. What are some of the things that stand out as the most memorable aspects, that you're most appreciative of?

03-03:01:34
Friesen: Well, I think I had a good life. I think that for a farm boy to get up into the upper echelons of corporate life is an achievement. And I think that going to Berkeley was an experience, and that we enjoyed going back there.

03-03:02:01
Eardley-Pryor: What are the things you're most proud of?

03-03:02:05
Friesen: Well, I think I managed to accomplish some things that a lot of people don't run into in my life.

03-03:02:13
Eardley-Pryor: Like what, in particular that we've spoken about?

03-03:02:15
Friesen: Well, I think success in marriage. We were married for sixty-four years. And success in business, and success in other aspects.

03-03:02:31
Eardley-Pryor: What do you mean?

03-03:02:32
Friesen: Well, it was being in charge of the tennis group. Being in charge of the business group. And getting involved with Berkeley. I think those were all accomplishments that I feel good about.

03-03:02:54
Eardley-Pryor: Are there any things that you wish you could've done differently in the past?

03-03:03:00
Friesen: Oh probably a lot of things. [laughs]

03-03:03:04
Eardley-Pryor: What do you think will be your greatest legacy?

03-03:03:12
Friesen: I don't think there'll be much of a legacy. I think you live, you die, and then people forget about you.

03-03:03:21
Eardley-Pryor: Well thankfully, you've been kind enough to share your oral history with us. We'll have that on record, and it'll be a part of the Bancroft archives at the University of California in perpetuity. So, we won't be able to forget about you. Thank you so much for your time, Howard.

03-03:03:36
Friesen: Okay, thank you.

[End of Interview]

Appendix

Images courtesy of Howard R. Friesen

Henry Friesen, father of Howard R. Friesen, on family farm near Reedley, CA, 1937

Howard R. Friesen (far right), music class, Reedley, CA, 1941

G. J. YAMAS COMPANY, INC.

Environmental Control Systems for Business and Industry

G. J. YAMAS COMPANY, INC.

"Systems-House" Leadership For More Than 30 Years

G. J. Yamas Company, Inc. specializes in building automation, control systems and related equipment for commercial and industrial buildings. With five offices and over 100 employees, we are one of the largest independent organizations in this field.

Clients include electronic firms, manufacturing plants, government facilities, hotels, banks, department stores, high-rise office buildings, schools, and universities.

We place primary emphasis on complete-system engineering. A project engineer is assigned to each project under contract and is responsible for engineering, material procurement, management of installation, and final system checkout. A system test and balance department complements the other staffs so that the company can take complete responsibility for successful system operation. After owner acceptance, our service department is available for regular maintenance of systems. Quick response is a feature this department is known for and justly proud of. A large inventory of parts is warehoused for replacement and over-the-counter sales.

The offices in Sacramento and Fresno are similar to San Francisco with complete sales, engineering, installation, and service departments. Air Con Service, Inc. primarily maintains and services systems but also offers installation capabilities in the Reno area. A major product currently being marketed and installed by Gemini Audio Data, Inc. of San Diego is a Fire Life Safety & Voice Notification system which is approved by the California State Fire Marshall for new and existing building. All offices report to the San Francisco headquarters and share work loads for maximum efficiency.

Our company was formed more than 30 years ago, and all of the present owner-managers have been with the company over 25 years. Starting as a manufacturer's representative for Barber-Colman Company, our sales engineers soon developed an excellent reputation with consulting mechanical engineers based on their knowledge of mechanical systems and expertise—particularly as it applied to our various product lines. Consistent follow-through on the part of our project engineers has reinforced this reputation through the years.

The company is a licensed electrical contractor in California, Oregon, and Nevada with major projects under construction in each state. Overseas projects have included control installations and test and balance of systems in Honolulu, Canton Island, and Algeria.

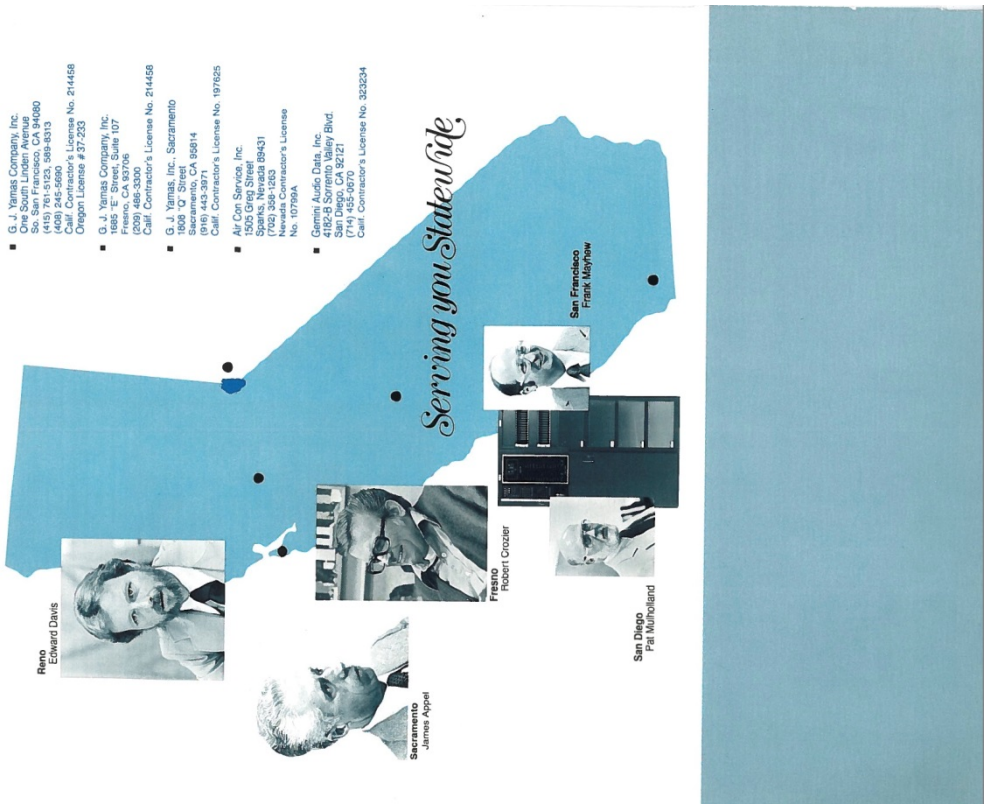
Temperature Control
Building Automation
Energy Management
Fire Life Safety
Air Distribution
Security
Computer Process Cooling
Parts & Service

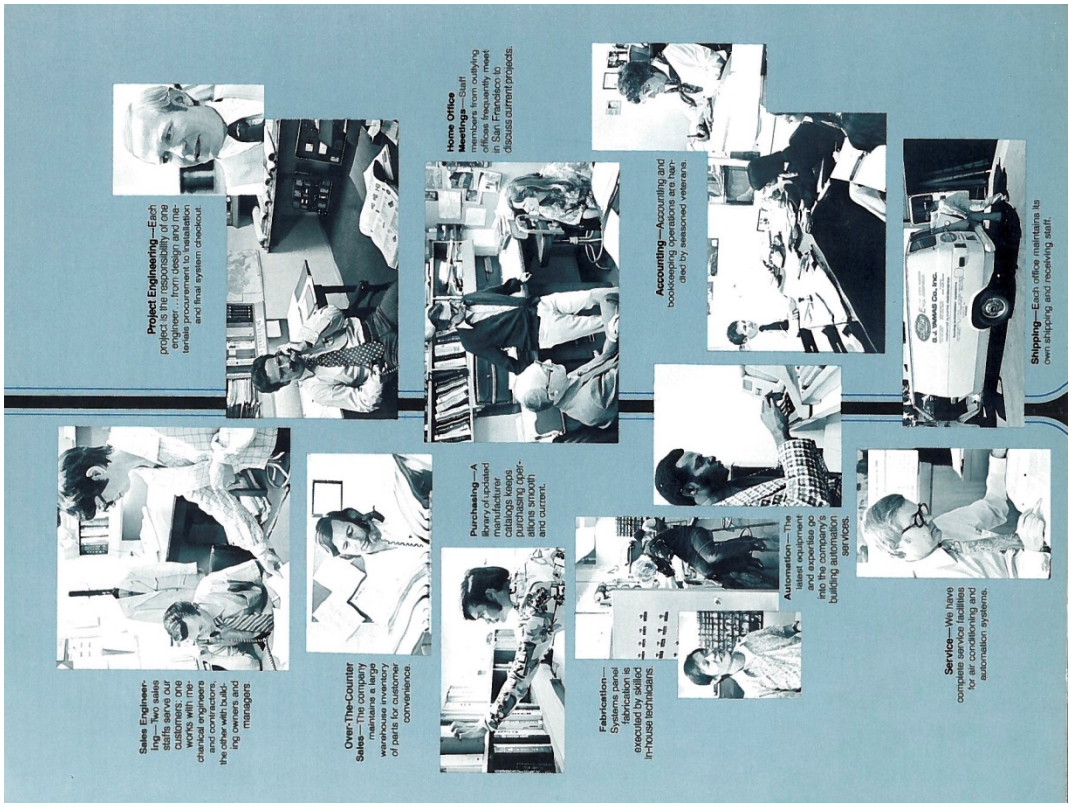
Howard Friesen, vice president & sales manager

Donald Delaney, president

Gordon Walker, secretary/treasurer & installation manager

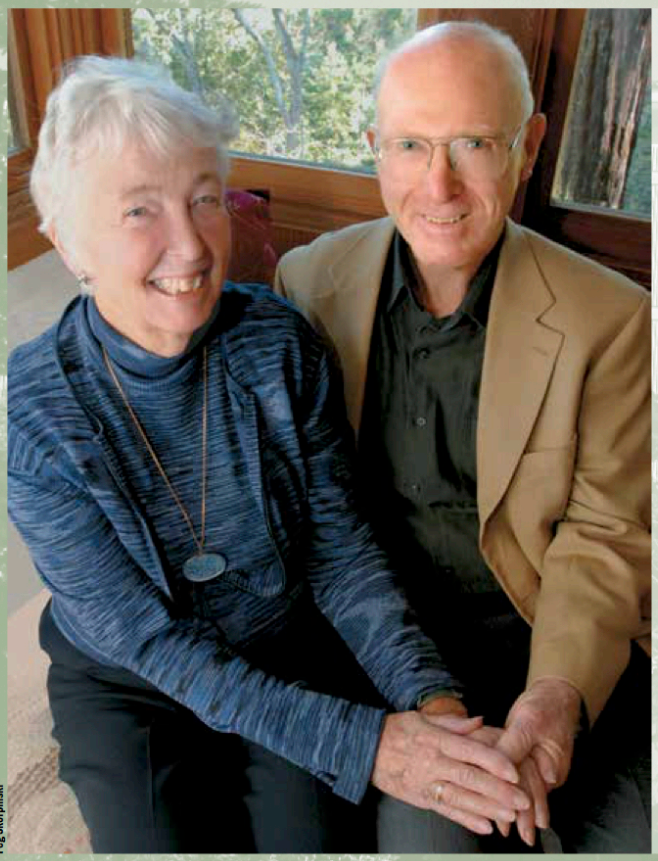
G. J. Yamas Company, Inc. advertisement front and inset 1 (Friesen bottom left), 1970s





G. J. Yamas Company, Inc. advertisement inset 2 and inset 3, 1970s

Your legacy gift secures the college's future



Peg Skorpinski

Candy Penther and Howard Friesen met at Berkeley in 1948 and married three years later. Devoted to helping Berkeley's students, the Friesens have funded nearly 300 undergraduate scholarships. They're thinking ahead, too—their estate plans include provisions for endowed faculty chairs.

Thanks to smart financial planning and expert advice from Berkeley's gift planning specialists, they found they could start funding three chairs now. Berkeley Engineering professors David Culler and Scott Shenker hold two of them. Thanks to the Friesens' generosity and foresight, these distinguished faculty members are able to pursue groundbreaking research and mentor promising students.

You too can benefit from a legacy gift, in several ways:

- Make a larger gift to Berkeley Engineering than you thought possible
- Reduce or eliminate capital gains taxes on the transfer of appreciated assets
- Reduce your income tax immediately
- Pass assets to family members or others at a reduced tax cost
- Increase your current income or provide income for a family member

"We recognize that the excellence of Berkeley's faculty needs to be supported. We're glad to know we can count on the university to carry out our intentions."

—HOWARD (B.S.'50 EE) AND CANDY (B.A.'50 HUMANITIES) FRIESEN

To include Berkeley Engineering in your plans, contact ***Jasmine Payne*** *in College Relations at (510) 642-2097 or visit* **engineering.berkeley.edu/give.**

Candy and Howard Friesen, philanthropic advertisement, *Berkeley Engineer* Vol. 6 (Fall 2014)

Howard and Candy Friesen at home, 2000s