PROFILES OF SWE PIONEERS

ORAL HISTORY PROJECT

Ruth Gordon Interview

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Ruth Gordon

Ruth Gordon completed her master's degree in structural engineering at Stanford University in 1950 and went on to become regarded as an icon of earthquake safety. She was first hired by Isadore Thompson to oversee the construction of a hospital in southern California. Gordon became the first female member of the Structural Engineers Association of Northern California in 1953 and the first female state-certified structural engineer in 1959. She worked for the Structural Safety Section of the California Office of the State Architect from 1959 to 1984, primarily overseeing the construction and renovation of hospitals and schools. In 1984 Gordon founded her own company, Pegasus Engineering, Inc., and conducted safety and earthquake survivability studies and post-earthquake evaluations on hospitals and schools. She resigned twice from the Society of Women Engineers national organization in political protest, but remained active in the SWE Golden Gate Section.

In her 2006 Profiles of SWE Pioneers Oral History Project interview, Gordon discusses her education at Stanford; her career as a civil and structural engineer, mostly working on structural safety for the State of California and for her own business, Pegasus Engineering; her experiences building and racing sail boats; and her involvement in the Society of Women Engineers, including her support for the local Golden Gate Section and her resignation from the national organization because of its lack of engagement with the women's rights movement in the 1970s.

- July 2016

RUTH GORDON

DR: This is an interview with Ruth Gordon on March 15th, 2006, for the Society of Women Engineers. And the interviewer is Deborah Rice. And I'd like to thank you, Ruth, for meeting with me today and agreeing to be interviewed.

RG: You're most welcome.

DR: Well, let's start off talking about your family background and what your early childhood was like.

RG: Okay. My parents were Russian immigrants. My father worked his way across Europe to go to the West. And on the way he picked up the knowledge – he worked in a machine shop, so he learned machinery. And he worked in a candy factory in another place; I think that was in Poland. And he learned to speak Polish. He already spoke Russian and German.

And then he finally got to Scotland where he could get a ship to come to the United States. And he was planning on getting a job somewhere in the United States, and then send for his fiancé, who's my mother. And she was a well-educated person. She spoke German, French, and Russian, of course. So they came here, I would say, I guess around 1900.

And I have one sister who was born in 1908. And she was very, very smart, and came to the highest level that she was allowed to in the City of Seattle Personnel Department. They wouldn't promote her to the top job, even though on her test she passed higher than the man (laughs) who got the job. So anyway, she worked consistently to see that more women and minorities could get jobs. And she's eighteen years older than I am.

So when I started school in Seattle, there was another girl and I who were quite bright. And one of the teachers used her lunch hour to coach us in English and arithmetic so we could skip the rest of the first grade and go right into the second grade. And I skipped another time in the seventh grade, so when I went to high school I was twelve years old.

And our high school, Queen Anne High School was just a marvelous, marvelous place. Meanwhile, I had also been taking piano lessons, and I was very good at that. So when I got to Queen Anne, one of the subjects I chose was the choir, as I recall. And I played the piano a little bit, and I was very good at that. And so the teacher immediately, instead of having me sing, he had me accompany the choir. And then I played in the school orchestra all through high school. And ironically, my only B in high school was in that first time I got a B in junior orchestra.

DR: Oh, really? (laughter)

RG: All the rest were As.

DR: Going back to grade school, do you remember, other than your teacher tutoring you in math, do you remember liking math and science that early?

RG: Oh, yes! Yeah, I liked numbers. As a matter of fact, (laughs) when I was taking my first year in college, I would — let's see, what was I doing — anyway, one of my classes involved numbers. And I saved my homework for that for dessert, because that was the most fun. (laughter)

DR: So when you got into high school, then, were your math and science courses your favorites? Do you remember?

RG: Oh, I liked everything. I liked – it was "arithmetic."

DR: Oh, okay.

RG: I liked arithmetic. I liked my music classes. And I studied Latin. That was interesting, all the Roman history. And I continued with my piano, and I was good enough that the high school music teacher had the orchestra and I play the Tchaikovsky Concerto.

DR: Wow, in high school.

RG: And then our graduation ceremonies – it was a huge class – there were two of us, another girl and I played the George Gershwin "Rhapsody in Blue," with the orchestra accompaniment – two pianos and orchestra accompaniment. It was in a huge auditorium. So however, my father admonished me that I must take something which I could take care of any children that I have myself.

DR: Right. You were saying earlier that your father was a feminist.

RG: Yes.

DR: Can you explain that?

RG: Well, he felt that women should be treated equally as men, and have a higher education.

DR: That was unusual for back then, though, correct?

RG: Oh, it was very unusual, particularly (laughs) for a streetcar man.

DR: That's what he did for a living?

RG: Yeah.

DR: So you had dreams of maybe becoming a concert pianist?

RG: Oh, yes.

DR: And your father suggested that you—

RG: And along with that, then I could take something for sure that I could make a living at. Well, to be a success as a pianist, you had to be exceptional, not just good. And so I decided, well, I better do something else. So I decided I was going to be an engineer. I didn't know any engineers, had no idea what an engineer did. All I knew was it used math.

And so one day my mother ran into a friend on a streetcar, and this friend told my mother that her son had just gotten a scholarship to MIT. And she suggested that I should apply for scholarships. So I did, and I wrote to MIT, and Purdue, which had a very good engineering school, and Stanford. And Stanford accepted me. I had to take the Stanford-Binet IQ Test, and passed number one on it. And as I say, when I wrote to them I didn't even know where Stanford was.

DR: Oh, really?

RG: (laughs) Yeah. So it was interesting. It was during the war, and Stanford admitted more women than usual.

DR: Because of that, yeah.

RG: Oh, and I'd like to backtrack a little bit about the wartime.

DR: Sure.

RG: In our high school, we had an advanced math class with trigonometry and — what else? — some of the other advanced mathematical things. And we learned much later that we were an experimental class, because the government needed people, lots of people, who were good at mathematics and physics. And so that was why we had this mathematics class.

DR: So the war did kind of influence, in some ways, what you took in math and science, and maybe your interest in it?

RG: No. That's backwards. I was interested in math before there was any involvement with that.

DR: But maybe you considered it as a career because World War II gave women more opportunities to go college for that sort of thing?

RG: No. I would have gone anyway, war or no war. (laughter) So anyway, there were fifteen women who signed up — or said that they were going to take engineering in that first freshmen class. And by the time I got my bachelor's degree, there were two of us left.

DR: Right. So did your family — then, you always knew you were going to college after high school? Was it a given?

RG: Oh, yes. My parents were very much interested in math, science, literature. I think that was European trait, anyway.

DR: So your scholarship, then, to Stanford, was that for a specific academic achievement or—

RG: Yeah. My scholarship — I got two for graduate schools, and they were from the ASCE.

DR: American Society of Civil Engineers.

RG: Yes. So I would go home for the summer, and I always had some kind of a job for summer. The second year that I was in college, my mother had a severe stroke, and was bed-bound. So I stayed at home and went one year to University in Washington so I could be with my family.

DR: This was post-bachelors?

RG: No, my second year in college. So that was my third year in college that I spent in the University of Washington. And there was an interesting thing there, there was one professor in one of the engineering classes – I don't remember specifically which one – but anyway, he was noted for using the same final exam all the time. (laughs) But you know, they had – we're staying in dormitories, you know, and they had old tests to look at. And I had to study. And that particular year, the professor changed his final, and I got the best grade in the class. (laughter)

DR: Oh, wow. So there probably wasn't too many women at the University of Washington, either, taking engineering?

RG: I didn't see anybody else. (laughs)

DR: So what was that like being one of the only women in a class full of men? Was that harder, do you think?

RG: No, I was getting used to it. I forgot where I worked. I worked for a year, and then I went back to Stanford.

DR: Did you say you worked at Boeing?

RG: Yeah, that's right. I worked at Boeing my summers in Seattle.

DR: Okay, back at home, right. What did you do there?

RG: Well, the first year I was in the Engineering Department, and I was a troubleshooter. Anywhere that they needed something done, and then I'd go. And I had a pass that let me into any of the buildings. And there were some interesting things there. They were doing experiments on welding to see if welding was as good as riveting. And that was very interesting. And oh, there were some breakdowns, and whatnot, that needed my attention.

And then the second year that I worked a summer at Boeing. I was working on change orders for the B-17, full-scale. And you laid on the ground on your hands and knees, I mean, on the floor, and crawl around in these — what do I want to call them — they're templates. They were metal, and they had paint on them, and you have to scrape off the paint, and then make the change. (laughs) And we worked nine and a half hours a day, hands and knees. (laughs)

DR: Wow. How much did you like that?

RG: Well, that was the way it was. So anyway, that was the summer that included VJ Day, victory over Japan, and everybody was out in the streets singing and having a great time. And the next day the Personnel Department sent people — all of the women at Boeing that were working in the so-called male jobs, to take a typing job at lower pay or quit.

DR: So they forced you to do one or the other.

RG: Yeah. So I only had four or five more weeks before I went back to school. So I think I was the slowest typist that they had.

DR: (laughs) How did they make you feel that they gave you that choice?

RG: Well, I thought it was outrageous.

DR: Right. So did you not ever go back to work for Boeing after that?

RG: No.

DR: That was the last—

RG: Yeah. So anyway, I went back to Stanford and completed my last year there. And then I got two scholarships from the…

DR: Did you say you had an ASCE Scholarship?

RG: Yeah, ASCE. Thank you. We had a class that involved earthquake engineering in that year. Oh, and I figured that in engineering I can make enough money to pay for my piano lessons, which had gotten very expensive.

DR: So you were still taking piano this whole time?

RG: Well, when I went back to – after I graduated, then I took lessons again, for a little while. But that wasn't destined to be. So anyway, in the meantime, there was a man who was a year or two ahead of me at Stanford. And I remember one time he invited twenty-two people to his home, for all of us to have dinner, in a very, very elegant house. It had thirteen bedrooms and seven baths. And it had been the woman who developed, you know, *Cheaper By the Dozen*.

DR: Oh, right, Lillian Gilbreth.

RG: It was Lillian Gilbreth's house, her old house.

DR: Oh, wow, right.

RG: That's why it had so many bedrooms and baths.

DR: Right.

RG: So anyway, the people that owned the house, they took a liking to me. So when I was going or coming from school I always stopped by and visited a little bit. And one of those visits — let's see, it was between graduation and getting my masters degree — I went around to the back, and there was a man working on his car. And he stood up, and he was the most handsome man I had ever seen. So anyway, back to school. And then when I finished my masters, I went back. Oh, and this man had come to visit me. He was a retired Air Force, and he was in the Reserves, so he had to fly a certain number of — every month. So when I was in school, he flew up to visit me a couple of times.

So then after I got my masters degree and was staying at the Sturgis House, one day — oh, he owned his own airplane and was working his way through school teaching flying. So he said, "Let's fly to Reno and get married." (laughs) This is the shortest courtship. So that seemed like a good idea. (laughter) So I told the woman who owned this house, and she said, "Nonsense. You're going to be married here."

DR: Oh, wow, so you got married in Lillian Gilbreth's house.

RG: Yes.

DR: Oh, that's interesting.

RG: So anyway, she put together quite a nice wedding for us. (laughs) So then we had to settle down and find jobs. And there was one of the perennial recessions, then. We were married in September, and Mike finally got a job in December, working for IBM. And IBM, at that time, was making typewriters.

DR: Oh, right. This is Michael Schnapp, your husband.

RG: Yes, yes. And so I kept looking for an engineering job. And in civil engineering, particularly in earthquake engineering, you just go door to door and look for your job. You don't go to the Yellow Pages, or anything (laughs) else like that. And I remember a couple of times women secretaries would tell me, "We don't hire women."

DR: Wow, so other women would actually tell you that.

RG: Yes, well, if they wanted to keep their job. So anyway, I think it was in April, there was one man by the name of Isadore Thompson, who didn't care if I was green (laughs) or if anybody was green, just so you can do the job.

DR: He didn't care that you were a woman, either.

RG: No. And this was funny: This was a Friday that he said that I could go to work on Monday. And I would be working on a hospital that would be built in Southern California, on welding fastenings, which was very, very new. And I didn't know anything about welding. Well, I told Mike this, I said, "I don't know anything about welding." And he said, "You have all weekend to learn." (laughter) So I learned welding, how to design welding things.

Meanwhile, we both liked boats. We didn't own any boats, but we knew we liked them. So we decided we'd live on one salary and save our money on the other until we had enough money to buy a boat. So when that happened, we went to a yacht broker, and we said we wanted to buy a boat, and we had so much money. And he said, "You know, this isn't going to be the first boat that you have. And you should buy a One-Design and race it, and keep up the value." And he just happened to have the right boat to sell us. She was a wonderful beginner's boat, and very forgiving. I think she was twenty-six feet long.

DR: This is a sailboat?

RG: Oh, of course. Is there anything else? (laughter) The others are stinkpots. So anyway, we started racing. Mike took to it like a duck to water because it's a lot like flying. So he got recalled to active duty during the Korean War. And he said, "You know, this boat was your idea, so you either sail it, or I will sell it." Which he could do, because women, the minute they got married, had no rights. So he was stationed in Florida, I think it was. So he sent me enough money to buy a Spinnaker, that's that pretty one up there [pointing to a picture on the wall]. That's our next boat. But anyway, that sail is what they call a Spinnaker. So anyway, I couldn't find any men who would race with a woman skipper who didn't know what she was doing. And so I got three of my women friends, one of whom had raced someplace in the Midwest. I got a friend of my husband's to teach us how to use that Spinnaker.

So every day after work we would go down to the water on Marina Boulevard. And we'd practice just going back and forth, and back and forth, and lift and down, and lift and down. And our coach said, "You girls aren't going to win the race, but you're going to have a lot of fun." So the first race we entered — I cannot imagine what we were thinking of! (laughter) It was the Vallejo Race, San Francisco to Vallejo and back the next day. And we bought sailing clothes at one of these outfits that makes those things.

And the night before the start of the race the class of this boat held their annual meeting. And there was another woman who was really the racer in her family, but her husband was the owner of the boat and the one who entered, and so on. So she said, "Oh, do you girls have your wire cutters on board?" We said, "Why do we need wire cutters?" "When your mast breaks you need the wire cutters." (laughs) So anyway, off we went. We beat two boats and came back. And my husband said when I told him about that, he said, "What happened? Did they sink?" (laughter)

DR: Oh, nice.

RG: So anyway, we continued racing our boat. When Mike came back, he was much better at it than I was.

DR: Now, wasn't there an article in the paper about the all-girl sail team?

RG: Yes, yes.

DR: Do you remember that?

RG: It's in my package here.

DR: And they said something about your outfits and—

RG: Oh, yeah. Yeah, Herb Kaye (phonetic), who was a very well-known columnist, he was nice to us. But this other man, who was a misogynist, he said that I had put together an all-girl crew, and I had them wearing shorts and low-cut blouses to distract the other sailors, "but too bad the girls haven't won a race." And that was a mistake — yeah, we hadn't won a race, come to think of it. So one of my crew members (laughs) said, "Yeah, we're dressed like we're out to entertain the troops in the arctic." (laughter)

So anyway, then Mike came back and we were working and started having our family. And we decided that the only way we could get a boat big enough for our family would be to build it ourselves. And there was a group of people, four people who got together, and had asked a famous designer, Myron Spaulding, to design a boat that could be built by amateurs and be good in the bay and in the ocean.

So the first four, they performed very, very well. And so then there were another five of us that bought plans in 1957. Let's see, I had just given birth to my third baby. And Mike came and said, "You have to pick a name for a boat." "Okay, I'm just trying to figure out the name for the baby." (laughter) And he said, "Well, they want us all to have names for our boats because they want to put the names in the yearbook." They have an annual yearbook.

So I looked at the names and "Pegasus" appealed to me. He was the God of Navigation of the ancient Phoenicians. So Pegasus it is.

DR: That's what the boat became named, then, Pegasus?

RG: Yes. I still have her. She's beautiful.

DR: Oh, okay. Great.

RG: So anyway, I worked at several different places. Let's see, I was working at one place—

DR: This was during the '50s?

RG: Yeah.

DR: You worked for Bechtel.

RG: Oh, everybody put in some time at Bechtel until they got a real job. (laughter)

DR: Western Knapp?

RG: Western Knapp, yeah, that was an engineering firm. They both did design and construction. And when I was working there, one of my old colleagues from my job at Isadore Thompson's had just gotten a job with the State of California. And he said, "Do you want to take the examination?" So I took it, and I passed it, and I went to work for the State of California.

DR: And this was to be a State Certified Civil Engineer?

RG: Yeah. And I spent twenty-nine years there. And they designed mostly school buildings for earthquake resistance, and also monitored the construction. There was one category that went out in the field and made sure the inspectors were doing their jobs. And it was the last chance to see if there's

anything else that needed doing. So that was a little up from where I was working. I was working in the office, checking plans.

So then there was an examination for the next level, and I passed that, and went to work out in the field. Oh, that was fun. I really liked construction. My territory was Mendocino County to Monterey County, and every public school or hospital, or any construction, reconstruction, you name it, those were my projects.

And the best compliment I think I ever got was a crusty old prototype of a construction superintendent. He said, "You know, I like working with you, because when I ask you a question, you answer me. The guy that worked this job before didn't." (laughter) And I thought, oh, I've made it! I've made it!

DR: You're in.

RG: Yeah. So I was very happy with my job. And oh, there was three of us out in the field. And our principal had just retired, and one of my colleagues replaced him. And one day we were out for coffee, two other of the field engineers and I, and the man who was in the new position. And when I came back to my desk there in front of me, up against the telephone, were two fortune cookie inserts. The top one said, "Woman's greatest desire is to be a man." And the one below said, "You are almost there." And a law had just been passed that included verbal attacks on women as well as physical as being illegal.

DR: Discrimination?

RG: Uh-huh. And so I went into Jim's office and said, "You have to do something about this." And he said, "I won't." And I said, "You've got to." Unfortunately, our chief was in China at the time, or things might have worked out differently. But I said, "Well, I'll have to complain to headquarters," which I did. And the only thing they did was require him to recirculate that notice. And I was pretty — so he wrote in felt pen across the bottom of that notification, "This reminder is because of a complaint to headquarters by one of our engineers." So it wasn't fun anymore. I still liked the field, but it just was no fun anymore.

DR: This was after twenty-some-odd—

RG: Twenty-nine years.

DR: Why do you think you — had you had any other types of harassment before that from—

RG: Yes. I think three or four months before, again, it was a newspaper clipping showed up on my desk that said that "women can now deduct facelifts from their income tax."

DR: Jeez. You would think that you would have gotten maybe more of that kind of thing earlier on in your career, you know, because—

RG: Well, see, I was a level higher than whoever was doing this.

DR: Oh, okay. So that was the problem.

RG: That was the problem. So anyway, I continued. And then one day when I was going to go to an earthquake conference, and I had the radio on while I was combing my hair. And there

was an announcement that the City of San Francisco was going to require ten percent of all their work go to women. And the minute I walked in there — remember, I'm the enemy they knew — the minute I walked in there, one of the consulting engineers came running up to me, "Have you ever considered working for yourself?" (laughs) And see, I was the enemy they knew.

So I kind of thought about it for a while, and thought about it, and talked it over with Mike. And he said, "Well, I support you in whatever you decide to do. So I quit my job. It just was early retirement. And it cost me $2,000 a month in my pension to quit that early. I would have had to have stayed five more years to get the full payment.

So anyway, I opened my business, Pegasus Engineering. And I never had to go out and look for work. (laughs)

DR: So this was in the 1980s, then?

RG: This was 1984.

DR: So you didn't have any trouble, then, finding work?

RG: Well, no. They needed that ten percent. (laughter) I knew the people, because they worked on schools, also — schools and hospitals. So they knew me from my job with the state. So it worked out.

Let's see, I closed Pegasus Engineering in 2001.

DR: Wow, so just five years ago.

RG: Yeah.

DR: So how did you enjoy that, being your own boss?

RG: Oh, it was fun. (laughter) And while I was there, that was when the State decided to get at the earthquake safety

of all the hospitals. Am I repeating — did I tell you that? No. So anyway, they got nine of us who were retired from the State, because we could go through the hospitals fast. And my share was forty-four hospitals, which had 200 buildings. We had nine months to complete this.

About midway through the project, all nine of us got a call from the man in charge, saying, "Be sure you check the hot water heaters." And it seems that there was an earthquake, Whittier earthquake, that knocked over a water heater, and it shut down the boilers. So at that point I was in the middle of evaluating one hospital. And the next day I mentioned this, that you'd have to fasten the hot water heaters, to these construction superintendents. They're just real macho guys. So the next day when I came back he said, "Look!" He'd done it already. I got along very well with the guys in the field. And I think that would explain why, because I told him how these things worked.

DR: Right. So they respected that.

RG: Uh-huh.

DR: That's great. Well, let's go back a little bit and talk about some things that are specific things that I wanted to ask you about.

RG: Okay. I have some things here I want to talk about.

DR: Okay, sure. Maybe some of them will be the same.

RG: Yeah.

DR: But I wanted to go back to your time at Stanford, for one thing. And you had mentioned when you began in the engineering program there were about fifteen women, and when you

graduated there was only two. But what you didn't mention is you were the only woman graduate of civil engineering, correct?

RG: Yes. Now, my colleague was electrical.

DR: Were you the first woman at Stanford to – I think you were, the first woman graduate from Stanford in civil engineering.

RG: No, I heard there was one other one. I don't know who she was.

DR: Okay. Well, how did that make you feel that you were the only woman to graduate in that field at that time?

RG: Well, by that time I was used to being the only woman (laughter) because, you know, the classes I was taking...

But there was one interesting thing. Let's see, it dwindled down gradually, so at one point there were three of us. I think that was when I was a sophomore. And we had to take some field classes – foundry, forging and welding. And they were late in the afternoon. And of course we wore jeans. And we could barely make it in time for dinner. We couldn't change our clothes or we'd miss dinner.

So then they had house meetings every Monday night. All over campus there was an announcement that certain women were seen in inappropriate clothes–

DR: (laughs) Oh, really?

RG: – below the library. Below the library you had to wear regular clothes. And so I wrote a letter to the editor of the school newspaper, and said, "Well, we're doing forging,

foundry, and welding, and if the university wants to pay our cleaning bills, we'd be glad to change clothes." (laughter)

So the following Monday, all over campus and also written in the daily, that "Women are to wear appropriate clothes below the post office, except for certain specified courses.

DR: (laughs) Oh, really?

RG: Yeah.

DR: So they were referring to the women engineers at the school.

RG: Yes.

DR: That's interesting. Did you like those classes, the foundry and the forging and that type of thing?

RG: Oh, not particularly. Oh, I had another practical joke played on me. The cement mixing, we had these large troughs. And at the end of class we had to clean out the troughs. And one day mine just didn't seem to be moving. And I looked around, and this great big husky football player was pouring his stuff into my trough. (laughter)

DR: Did that type of thing happen often in your engineering classes?

RG: No. The only thing other thing that happened that wasn't quite that bad, we were required to take – let's see, what was it? I'll look this up – land surveying. And you had these long poles, you know, with the (Inaudible). And Stanford has a nickname "the farm" for good reasons. So we were surveying in a cow pasture. And one of the men said, "You know, those cows bite." And so I'm carrying this pole and worrying

about getting bitten by a cow. (laughs) I had no idea. I'm a city girl. How do I know that cows don't have teeth to bite with? So I didn't do very well in that class.

DR: Do you remember what your favorite classes were in college?

RG: Yeah. There were some math classes, advanced math classes that I liked. And the others were requirements.

DR: So what made you decide to go into civil engineering as opposed to any of the other fields of engineering?

RG: Hmm. I think it's the only one that I'd ever heard of. Somehow or other, somewhere, growing up, I'd heard the words "civil engineer." I didn't really know what a civil engineer did. And when I was in graduate school, I took some other courses in the area Lillian Gilbreth made known [industrial engineering]. And I did very well in that. I've forgotten what it's called. But anyway, I was sort of torn between that and civil, but I stuck with civil. And in graduate school we had classes in earthquakes.

DR: Right. You actually got your degree in structural engineering, right, your Masters?

RG: My Masters degree in structural engineering. And structural engineering are really earthquakes.

DR: Right. So that was a division of civil engineering?

RG: Yes.

DR: So you discovered that that's what you were really interested in, then, were the earthquake...

RG: Oh, yes. And I stayed in California because if you're interested in earthquakes, it's the place to be.

DR: That's for sure, yeah. Well, you mentioned some of the practical jokes that your classmates played on you, some of the friction you might have had between your classmates. Do you remember any trouble from professors, wondering why there was a woman in their engineering courses?

RG: Yes. At this point there were the two of us left. And this professor called my colleague in and said, "Is Ms. Gordon serious about engineering?" And Patty(?) assured him, yes, of course, I was. "Well…(sighs) women."

So then the next day he called me in and asked if Ms. Bergman (phonetic) was serious about engineering. And I assured him that, yes, she was, and she was very smart.

DR: So he didn't think that—

RG: He didn't think we belonged there.

DR: — right, that you actually wanted to do something with your degree.

RG: That's right.

DR: Do you remember any professors that might have been encouraging, or a mentor to you during those years?

RG: Oh, yes, yes. The one that I mentioned, you know, that came to our wedding, yeah, he actually was the one who arranged for those civil ASCE [American Society of Civil Engineering] Scholarships.

DR: Oh, right, for your graduate study.

RG: Uh-huh.

DR: So that probably helped a lot to have somebody like that in your corner, so to speak.

RG: Oh, yes, oh, yes.

DR: Great. Were you involved with ASCE during your college years, or any other student organization?

RG: Oh, yeah. They had a student section.

DR: So you belonged to the Civil Engineers. Any other organizations that you can remember in college?

RG: No.

DR: So at that time you didn't know about any women's organizations for engineers or anything?

RG: No.

DR: Okay. Is there anything else you want to talk about that concerns your college days that we haven't covered?

RG: I don't think so.

DR: What was your family – I know you were expected to go to college, and your father encouraged you to do something that you could use to support yourself and your family. What did they think about your choice of engineering?

RG: Oh, they thought it was fine.

DR: So you had a very encouraging family as well.

RG: Oh, yes, and my sister, my very much older sister.

DR: Good. So when you were about to graduate, were there any job recruiters that would come to campus? Did you have any interviews?

RG: Are you kidding? (laughter)

DR: They didn't have that sort of thing?

RG: Well, if they did, I wasn't invited.

DR: Oh, you had to be invited.

RG: Well, you have to know when something is happening.

DR: Right. So you think because you were a woman, then, you were excluded from that?

RG: No, I don't think – I don't know if they had that.

DR: So you mentioned, then, that you had to go door-to-door, pretty much, to find your own job. I read – and I think it was one of the articles on you in the '50s and '60s – about how you would use your initials on applications instead of your full name?

RG: That's right.

DR: Can you talk a little bit about that, why you did that?

RG: Well, so I'd get a response, because they wouldn't respond to a woman. And the last day I was at Stanford there was a notice on the bulletin board that San Jose State was looking for a graduate civil engineer to work there and teach undergraduates. So I said, "Oh, I've got that requirement." The only requirement was that you graduate in civil engineering.

So let's see, I saw that, and then I was going to back to Seattle for the summer. So I wrote a letter with my initials, and received a response to – when I was in the vicinity to come and talk with them. And when I walked in this professor said, "Oh, we don't hire women engineers."

DR: Just straight off the bat?

RG: Straight off the bat.

DR: Huh. I bet that was pretty discouraging.

RG: Yeah, there weren't any civil rights laws.

DR: No equal opportunity.

RG: No. It was many, many, many years before that.

DR: So how important, then, was it to you that you got your first job with Isadore Thompson?

RG: Oh, it was very important, because then I could say I worked at engineering. And it built a resumé for me.

DR: Right, sure, yeah. It gave you a foot in the door, so to speak.

(INTERRUPTION IN RECORDING)

DR: Okay. This is tape two, for the oral history interview with Ruth Gordon. And you were just about to tell me a story about when you were in high school.

RG: Yes. Our school had a lot of talented people. And every year they put on kind of — I guess you could call it a vaudeville show, and people would have different acts. So that was something that I did every year, I designed the act and got the people together. And we did very well with those.

DR: And were you part of the show as well?

RG: Oh, sure. I usually did acrobatics.

DR: Oh, wow!

RG: I was an acrobat.

DR: Wow, so an acrobat and a pianist?

RG: Yeah.

DR: I wanted to go on and ask you about your years in the early '50s, where you had several different jobs, and you were

beginning a family, and how you juggled all the responsibilities of a family – you had three children – and working full time.

RG: Well, I hired housekeepers. You know, we were a two-income family, so we could afford that. And I had the housekeeper also cook dinner. We took care of ourselves for breakfast. (laughs) And sometimes I did dinner. I didn't like to cook, but it was necessary.

DR: Now, was there a time – I thought I read in one of the articles – that you were doing consulting work so that you could work from home? Did I get that wrong, or – it was around when you had your first child, I think. Let me see if I have the article here. Yeah, here we go. Do you remember this photo article? Maybe that was when you were working for Russell Fuller? That was a consulting firm, correct?

RG: I don't remember much about this.

DR: So at that point in time, you never were in business for yourself doing consulting work from home?

RG: No.

DR: So you've always had a position with an outside firm?

RG: Yeah.

DR: Okay. So let's talk about the story about when you had to take your test to become a structural engineer. You were the first woman licensed in the State of California as a structural engineer. Can you talk a little bit about that?

RG: Well, it required a lot of studying. First, you have to be, as I mentioned, licensed as a civil engineer, and then work for a minimum of three years under the supervision of a

licensed structural engineer, and then take this sixteen-hour exam. And actually, there was six years between the time that I took the civil and took the structural.

DR: So you were licensed as a civil engineer before you went to work for the State of California? It says here you started your career with the State of California in 1959.

RG: That was when I got my structural license.

DR: Oh, okay.

RG: It was ‘59. Yeah, and I worked at those various other jobs between that time as a civil engineer, but working with structural people.

DR: So back to the test. You were telling me earlier about how most people don’t pass on their first try?

RG: Yeah, twenty-five percent pass the first time they take it.

DR: Only twenty-five?

RG: Uh-huh.

DR: And what were your family circumstances at the time when you were going to take your test?

RG: Michael Jr. had a temperature of 104, and I was up all night with him. (laughs) And I did not expect to pass it the first time. I was kind of sleepy. But I did. If I hadn’t passed it the first time I don’t know if I would have had the energy to do it again. It’s so tough!

DR: It sounds like it, yeah.

RG: And it was a long time before there was another woman structural engineer. I don't know when Vicki (phonetic) got her license. It was a long time.

DR: Who was it? Vicki, you said?

RG: Vicki. I can't remember her last name.

DR: Okay, that's fine.

RG: Oh, Vicki Wagner (phonetic), that was it.

DR: Did she work for the State of California as well?

RG: No. She worked for consultants.

DR: So can you talk a little bit about – you started to work for the Architects and Structural Safety Section, correct?

RG: Yeah, the State Division of Architecture Structural Safety Section, yes.

DR: And during the 1960s, this was when there were the beginnings of real standards, earthquake standards?

RG: No. That was in 1933. In 1933 there was an earthquake, the Long Beach Earthquake, where the most dangerous place to be was in a public school building, because they used a lot of unreinforced masonry bricks. And those bricks just fell into the exit doorways. Fortunately it was 5:00 in the afternoon. One person was killed. And the legislature went into emergency session and passed a bill to require certain safety procedures for public school buildings. And it was patterned after a Dam Act that was started in result of a 1915 dam failure.

Oh, and the architects didn't like us at all.

DR: No? (laughter)

RG: Because the architects wanted to do their own engineering, they didn't want to have to hire a licensed engineer. They didn't like that. They were always trying to get rid of us.

DR: (laughs) Because you made them do things that they didn't want do, right?

RG: Yes, yes.

DR: So you said you worked mainly on hospitals or public schools, correct?

RG: Uh-huh.

DR: Do you remember speaking to girls at a one-room schoolhouse?

RG: Yes.

DR: Can you talk about that story?

RG: Oh, that was wonderful. There was a really perceptive school principal. It was in an area way up in the hills of Northern California, a little school, hard to get to, and a very young principal. He was principal, and he was also superintendent for that one school. (laughter)

They were building a new auditorium, and that's how I happened to be going there. And he asked me if I could please take a little time to talk to the girls about opportunities that could be open to them. He said, "We're so isolated, our girls don't see women doing anything except just mundane sort of things." I thought that was so perceptive for, particularly, a young man. So I did it gladly, of course.

And this happened one more time. It was a high school, but not in such an isolated place, it was a normal place. So I did it again.

DR: So this was during the course of your field work, you would get asked to actually speak to some of the students?

RG: Yeah.

DR: Well, what must have been—

RG: And I don't think that they did that with the male engineers.

DR: Oh, okay. So they really wanted to reach the girls in school?

RG: Uh-huh.

DR: Oh, that's nice.

RG: Yeah.

DR: Do you remember having any mentors during your career for the State of California, anybody who kind of encouraged you and looked out for your career? Do you remember having anybody like that?

RG: Oh, yeah. That was my boss who retired. See, he had four daughters, and his wife was a librarian, so he was a feminist.

DR: So he really encouraged you to—

RG: Encouraged me to go out in the field, because that was the next step up.

DR: Right. And there weren't probably too many women or any women at that time doing that?

RG: No women, none.

DR: Right. There was one point where you were acting office engineer, where you supervised a group of ten engineers.

RG: Yes.

DR: What was that experience like?

RG: Oh, it didn't involve very much of anything except passing out which building they were going to work on, and taking phone calls.

DR: So did you find – other than the certain – the couple of instances that we've already talked about where you were harassed on the job, did you find in your career with the State that there was any sort of job description – you know the term – have you heard the term the "glass ceiling"?

RG: Uh-huh.

DR: Did you encounter that at all, or were you always able to go for promotions and step up to the next level? Or did you feel that you were really kind of restricted?

RG: Well, no. I went almost as far as I could.

DR: Okay. And that was when you retired you were – what was your position?

RG: Oh, I have to remember.

DR: Oh, that's okay. That's fine. So you didn't feel that, except for isolated instances, the fact that you were a woman and one of the only women or sometimes the only woman in the office really hindered your job progress at all?

RG: No.

DR: Okay. What did you find most satisfying about your work?

RG: Well, it was wonderful to see a building grow, you know, and be able to look at some construction and know exactly what each thing in that construction was doing. It was really fascinating. Oh, and there was a very touching thing that happened when — I think it was on a school building in Sonoma County. There was a woman electrician, and she came up to me one day and said, "Can I shake your hand? I am so proud of you." And she said, "Thank you for being there." That was so touching.

DR: Oh, I bet. I'm sure that meant a lot.

RG: Oh, yes.

DR: Do you think of yourself as a role model, as maybe having been a mentor to women like her, and others?

RG: Oh, yes. That's why — you know, look at the list of talks that I did. Half of them were talking to girls and young women about — not just engineering, but any field — any of the way — being able to go up, how important it is, how important it is to get as much education as you can, and study math and science. And I reminded them that everything you do somehow is touched by math, even if you count your change when you pay your bills. (laughter) That's using math.

DR: That's true. So you feel that that's an important role, then, for women who succeeded in math and science to give back?

RG: Oh, yes. And every chance I get I try to encourage girls.

DR: That's wonderful. Well, just a little bit differently, but do you remember any specific earthquakes, or the aftermath of earthquakes that stick out in your mind during your career?

RG: Let's see – well, of course, Loma Prieta, that's San Francisco.

DR: That was in 1989?

RG: Yeah. And I don't think I talked to you at length about that. Oh, I talked to the other lady.

The earthquake affected an area of San Francisco that's called The Marina. And it faces on the San Francisco Bay. And there was severe damage to houses. Some of them just kept going down. And it was for several blocks, actually, you had this phenomenon of the buildings actually sinking.

Well, it turns out that in 1951 – no– 1915 there was a World's Fair. And they built a lot of buildings. Now, this was away from where Marina Boulevard is right now. And then when the fair was over, they threw all the buildings and debris and anything you can imagine into the bay. There's only one of those buildings left. And it turns out that they were building over those sites, and so what they did, they just sank.

And a similar thing happened in the 1906 Earthquake, that of course, you're hearing a great deal about now, because it's the hundredth anniversary. They needed more land for the gold rush people when they came and settled down, and so on. So they just started building, literally, on garbage dumps. And so when that earthquake hit, they just went down. And there were some

apartment buildings, I remember one in particular, a five-story apartment building, it went down about two stories, and those people were trapped, people in those two stories.

This was going on all around San Francisco. Same thing with the — there are very famous pictures there of the San Francisco City Hall. Well, that was built up on very shaky ground at the bottom of which was an old cemetery. Then there was something built above that, and then the City Hall built above that. And for a few months before that earthquake, the building was settling already.

DR: So what is it about working earthquake safety that you really enjoyed, as a structural engineer?

RG: Well, as a structural engineer, you have to blend your engineering with the architecture, and you have to be pretty creative about — with architects being what they are. (laughs) It's very satisfying.

DR: It almost seems like you learn something every time—

RG: Every time. Oh, I had a funny experience with an architect one time. One of the things that concerns us is that these drop ceilings are fastened to the walls. And this architect had his ceilings out maybe a foot from the walls. And I told him, "Just bring those back, the roof all the way out, and I will be satisfied." And he said, "But it'll interfere with the movement of space!" — in that type of a voice. And I said, "I'm worried about the movement of ceilings." (laughter)

DR: Right. So let's change gears a little bit, and talk about SWE, the Society of Women Engineers, and when you first heard about them. Do you remember?

RG: Gee, I don't remember when I first heard about it. I know that I was in engineering before SWE started. I think it was two or three years later. Gee, I don't remember how I found out about it. But I was really delighted that there was such an organization, and I joined it.

DR: What made you join it? Why did you join it?

RG: Camaraderie. Most of the women, though, didn't work in my field. It's a rather limited field.

DR: Right. That didn't really matter?

RG: No.

DR: Because SWE is really an interdisciplinary society.

RG: Yeah.

DR: So it was really just to talk to other women who are engineers, right?

RG: Yes.

DR: And you were involved locally with the section that started here in San Francisco, correct?

RG: Yes, yes. We had a SWE convention here sometime in the 1970s. And I was very much involved in the planning, and so on, of that.

DR: Now, prior to that, you had resigned in 1960, was the first time you resigned from SWE. Do you remember why?

RG: It wouldn't be 1960.

DR: There was a letter in the archives that you had written. Let me see—

RG: Are you sure it wasn't 1980?

DR: No. There was another one in 1980. This was one from 1960.

RG: Let me see what I was annoyed with.

DR: (laughs) It sounded like the bylaw that prohibited political activity—

RG: Uh-huh.

DR: — that dealt with equal rights for women and tax relief for working mothers.

RG: Yes, all that good stuff.

DR: So you felt very strongly then that SWE should be a voice for the working woman engineer?

RG: Oh, absolutely.

DR: That they needed to get involved in issues larger than just engineering, but as part of the workforce as a whole.

RG: Yeah. And see, what affects the engineers is the same thing that affects other professional women. And I feel that they should be part of that.

DR: So SWE has always had sort of a dual role, both for supporting professional women who are already engineers, and encouraging young girls in K-12 and in college to become engineers. Did you feel that SWE had a larger responsibility to professional engineers, as opposed to students or—

RG: Oh, no. I think the students are more important. That's why I give all these talks to girls and young women.

I've given, right now, it's an even 100 talks, equally between talking about earthquakes for the laypeople – and you know, people are just starving for that kind of knowledge, because it can affect their houses and everything.

And then also talking to girls and young women about how important it is to study math and science.

DR: Do you do that through the local section of SWE, or another organization?

RG: Yeah, another organization – primarily the Math Science Network, which is an interdisciplinary organization. It was started at Mills College. And every spring they have an all-day program for about junior high school girls, particularly where they bring adult women in various fields to talk with girls, that girls can go from different displays, and talks, and so on. And at the same time they are also putting on, separately, sessions for parents, because the parents are so important. And I've been involved with that ever since it started.

DR: And that's a local group?

RG: Well, now it's worldwide. They started at Mills, and then they just kept going, and going. And now I think they're in Australia, and so on.

DR: Oh, wow. So you came back to – you rejoined SWE in the '70s, the mid '70s. Do you remember writing a letter to the SWE president at the time, which I believe is Arminta Harness about the Golden Gate Section joining the California Legislation Council of Professional Engineers? And you talked about the tax

status of SWE. And you mentioned also the upcoming convention that they were having in Denver, and how they were going to be touring the Coors Brewery?

RG: Oh, yes. (laughter)

DR: Can you talk about that a little?

RG: I don't remember very much about it. I remember going to the convention. And I remember, of course, (laughs) most women know about Coors, that they fought against the Equal Rights Amendment vigorously. They probably put more money into that than any other company. So I didn't think it was appropriate to have women engineers have to buy that.

DR: Right. But you also thought that the local section here, the Golden Gate Section should be able to join a larger organization here in California that I believe some other engineering and technical societies belong to as well?

RG: I don't remember that.

DR: Okay. But you finally resigned from SWE. Your final resignation was in 1980.

RG: Yes. Because I felt that they should be supporting the Equal Rights Amendment. Of all people, women engineers, who are probably at the bottom of the heap as far as being recognized, and so on, that just boggled my mind that they wouldn't support it.

DR: Is that because engineering has been typically seen as such a man's world—

RG: Yeah, yeah.

DR: — so it was even more important to stress.

RG: Oh, absolutely.

DR: Have you been involved in other ways with women's rights? The thing that comes to mind is the Pacific Stock Exchange in 1980.

RG: Oh, yes. That was fun. Well, I normally don't attend NOW meetings. But they were having an election that was a contested election. And there was a woman there that I had no respect for, so I thought I better go and vote against her.

DR: This is the National Organization of Women.

RG: Yeah, but it was the local section. So at that particular meeting, they were asking for volunteers to barricade the Pacific Stock Exchange with a banner to indicate that the Equal Rights Amendment women's rights are affected by the financial. So what we were going to do was gather at 8:00 o'clock in the morning, and we weren't going to tell anybody — or it was 8:30 — and make it a surprise, come there and fly our banner, and so on.

And so I looked at what they were doing. And we had a state fire marshal attached to our office, and I asked him if he would go over and — as far as safety is concerned, what we should do. There were two exits, and they both would be blocked if we ran our banner all the way. So he went and looked at it and he told me how many feet to move back, and so on. (laughs)

So anyway, I was getting ready to go, and somebody from the League of Women Voters, I think it was, had given us some instructions about if we're sent to jail. So I had, you know, a

clean pair of underwear in my bag, and was all ready to go to jail. (laughter)

And at that time, my daughter was working not far away. Anyway, when I was getting dressed, it was on the morning news, early morning news, somebody had spilled the beans. But anyway, so we all had our – let's see – see, we had parts of the chain, I think, that we were going to fasten together, and we had under our jackets.

So anyway, we got there, and we unfolded our banner. And of course, cars were stopping and everybody was watching what we were doing. And then the Stock Exchange people had one of their security people come and had these big chain cutters. It was a big chain that we had – big chain cutters – just getting ready to cut it. And my daughter runs up saying, "Don't you hurt my mother!" (laughter) That made my day, absolutely made my day. And of course, the press was all over us, needless to say. But it really made my point, I was a mother of a grown child.

So we waited and waited and waited. Nobody came to arrest us. (laughter) So we finally left, went over to the Engineer's Club to talk things over. And we learned later the reason that they didn't arrest us was because the general manager of the Stock Exchange was in Washington DC at a Gay Rights meeting. (laughs) And so there was no way was he going to let them do anything to us.

DR: Right. Oh, that's great. (laughter) So had you always been involved in women's issues and women's rights throughout the years.

RG: Yeah – well, not when I was in school. It wasn't needing my attention. But my sister was very much involved with women's – well, not just women's issues, all minorities. And she was in a position to do something about it because she was an assistant top personnel person in the City. She opened doors for women and minorities.

DR: Do you think you passed it on to your daughters, or to all your children?

RG: Not really actively. I guess Marcia (phonetic) is the one mostly – she's my middle child. She writes letters occasionally. Madeleine is too busy. Michael is in Taiwan.

DR: He lives over there?

RG: Yeah. He's part owner of a computer peripheral company. He's been there about twenty years.

DR: Wow. Have you been over to visit?

RG: Yes, and never again. It is the most polluted place you could ever imagine! Oh, the air is awful! I guess if you get outside of Taipei it's not as bad. But everybody has motor scooters, and they park them up against the sidewalks. Once was enough. They come here a couple times a year. And Michael occasionally comes through on business.

DR: So you've continued your local involvement with SWE, correct? You still keep in touch with the Golden Gate Section?

RG: Yes.

DR: Why is that important for you?

RG: Well, I like them. (laughs) I think it's very important. And the local section has always lived up to my expectations. (laughs) So I pay my local dues.

DR: So in a way you are — you're not a National SWE member, but you're a local SWE member.

RG: Yes. And I contribute $1,000 a year for scholarship to the local section.

DR: Oh, okay, wonderful. Are you involved, then, with some of their activities, or career guidance activities in the area still, or not so much anymore?

RG: Well, there's an organization called ERA, Equal Rights Advocates. And they have a good luncheon every year that I attend. And let's see, there's another thing that's coming up. And they're a very activist group.

DR: This is kind of a big question, but what do you see as the purpose for SWE, as a national organization?

RG: Well, one thing, you should be visible, as women in engineering, and particularly successful women in engineering. And also to encourage girls and young women to study engineering, and also encourage them to take all the math courses they can.

DR: So do you feel that there is a need, then, still today, for organizations like SWE?

RG: Oh, of course. You know, there's going to be another depression. And women, you know, are the last hired and first fired. That has not changed. There are some stars at the upper

level, but at the journey level, you know, women are expendable, I think, still. Have you noticed that?

DR: Have I personally?

RG: No, not personally.

DR: I haven't, myself, no. But I can see your point, yeah, definitely.

RG: Yeah, I think that women need a respectable voice, and in various professions, not just SWE.

DR: But despite your differences with SWE, do you still think that they do a good job at that?

RG: Well, yes, I think so. And I'm very fond of the local section. (laughs)

DR: Right, right. Now, you were also involved in other professional organizations. We mentioned ASCE. But you're also part of the Structural Engineers Association of California, and first female president of the Bay Area Engineering Council. What was that like to be a first?

RG: Well, I was very proud of that. And I was kind of surprised.

DR: Okay. Can you talk a little bit about your current involvement with the Centennial of the 1906 Earthquake?

RG: Oh, yes. The Structural Engineers Association, of course, is very excited about this. Will you hold it a minute? I'm going to get something here.

(INTERRUPTION IN RECORDING)

DR: Okay. You were going to tell me about becoming part of the Structural Engineers Association.

RG: Yes. Okay. When I became eligible for membership — and membership was open to licensed civil engineers, as well as structural engineers. So when I got my civil engineers license, I applied for membership. And oh, I didn't hear from them, and didn't hear from them, for ages. And sometime later I was told by a man who had been the president at that time that I ruined their board meetings for quite a long while about whether to admit me, because they were afraid I would ruin their meetings. So they had a complete change of board, and they finally admitted me to membership.

(laughs) And their worst thought really came true at one of the state conventions. They have a lot of speakers giving papers. And three of the speakers had girly slides, naked girls, scantily-clad girls. So I thought, oh, dear, I've got to do something about this. I don't want to, but I've got to, because I'm there on sufferance, anyway. (laughs) So at coffee break I went up and spoke to each of the three. And oh, I'll give you an example. Now, there was another speaker who was talking about wind, and he's shown children flying kites. Now, that's suitable; but not girly slides.

So anyway, the first two that I talked to agreed that it was inappropriate. And then the third one was a vice president of an international corporation. He said, "Well, I tried it on my secretary and my wife, and it was all right with them." What are they expected to say?

So then I had to do something. So I wrote a letter to the editor of our local section, that there should be appropriate

things in their talks. And then what did I do? Oh, I wrote a letter to the State President of the Structural Engineers Association. And I succeeded there, in that I have the letter that he wrote to — I guess they have some sort of a person that deals with these things — that included in the instructions to speakers that they be in good taste. So I solved that. But anyway (laughs) I was kind of thorn in their neck.

DR: Yeah, so their worst fears did come true, then, huh?

RG: Yes, it did. So okay, let's go fast-forward.

DR: Sure. We're talking about the Centennial.

RG: Yeah. And look at the list of speakers. I am an icon, now [handing the interviewer a paper]

DR: Uh-huh, and the only woman, I see.

RG: (laughs) Well, it was years and years and years before there was another woman.

DR: So what does that mean that you're an icon?

RG: An icon? You know, someone to look up to.

DR: Right. What does that mean to you, though, that you've been named an icon?

RG: I'm admitted to the old boys' club. (laughter)

DR: Right.

RG: So anyway, then there's this, it's just saying that they want designated speakers [handing the interviewer a paper].

DR: Oh, okay. So have you done any speaking yet for it?

RG: Not yet.

DR: So the local media or some events— they might call on you to talk about earthquake safety.

RG: Yeah.

DR: Well, that's exciting.

RG: Oh, yes.

DR: Is this all year long, or—

RG: Oh, no, no. This is the Centennial, it's just for a couple of months. I gave a talk at the Commonwealth Club last year on the earthquake, the Ninety-Ninth Anniversary, which was very well received. The Commonwealth Club is very prestigious. So I was kind of nervous, because see, my short-term memory isn't much good anymore. And I was going to turn it down. And somebody said, "Get a partner." So I got another woman engineer. And we talked about four earthquakes, two each. I talked about the '06 Earthquake, and the one in that — that hospital disaster. And she talked about two others.

DR: Oh, okay. Great. So I wanted to ask you what you think was your most important contribution to engineering? Is there any one thing that sticks out in your mind?

RG: Well, I think the type of work that I've done, you know, to insure safety of public buildings, I think that's probably the most important thing that I do, as far as the public is concerned.

DR: Sure. Yeah, that's very important. What do you see as the future for women in the engineering field?

RG: Well, I think it looks very good because there are so many particularly large corporations that are funding women's events and giving scholarships, and that sort of thing. So I think it's very bright — with a caveat that we may have a

depression. Our financial situation isn't very good. And then I'm a little concerned.

DR: What advice would you give to young women today, then, who are considering a career in engineering?

RG: Go to it. (laughter) It's a very rewarding profession because you know that you're really doing something for humanity, because engineering deals with safety. Every branch of engineering deals with safety.

DR: Okay, yeah. I never looked at it that way, but you're right. Do you think that the public at large is really aware of what engineering is?

RG: No. They keep thinking you're architects. (laughter)

DR: So obviously we need to do some more work there.

RG: Architects have just a wonderful outreach to people, and everybody knows architects. But structural engineers? Engineers in general? Engineers drive trains?

DR: Right. So obviously there needs to be more education — educating the public on what engineers do.

RG: Yeah. So that's why I think I've contributed a lot with all of the talks I've given to laypeople. And as I mentioned, people are really starved to know about safety in any form. And I really encourage all of you women engineers to do that. And the people that I have talked to, a lot of them are women's groups that feel more comfortable with listening to a woman. I think that's important. So often, even in our day and age, girls and women, they don't really think about stuff like that. (laughs) And so it's good for us to be seen. And

several of the talks that I've given – they were, you know, through knowing me, or somebody told them about it – were church groups, of all things.

DR: Okay. Was there any other further experiences that you wanted to talk about that we haven't covered?

RG: Let me look at this.

DR: Okay. Let me turn off the camera for now.

(INTERRUPTION IN RECORDING)

DR: Okay. This is tape three of our interview with Ruth Gordon.

RG: Are you familiar with the Exploratorium?

DR: No.

RG: Oh, it's an on-hands kind of a museum. It appeals to all ages. Oh, it's a fantastic thing, a huge, huge, huge building with a lot of prestige nationwide. I'm surprised you haven't heard of it. Well, anyway, after the Loma Prieta Earthquake, I was invited to give a two-day talk at the Exploratorium, which was such an honor.

DR: Great. This was to – who was the talk given to?

RG: Well, I think it was a lot of people in the Marina, because the Exploratorium is located – it's a big, big building, but located in the Marina. And of course, they were the ones that were losing their houses.

But anyway, the first day was well-attended, and the second day they had to have loudspeakers outside because so many people wanted to come.

DR: Oh, wow! That's exciting.

RG: Yes, that was. You might want to look at these [handing papers to interviewer], talks that I've given and—

DR: Oh, okay.

RG: That's in your package.

DR: Sure. Do you want to talk about that at all, how you said you'd given around a hundred different talks?

RG: Uh-huh. They're all listed there.

DR: Okay. So both technical and career guidance, then.

RG: Uh-huh, both. I've reached lots of people.

DR: Great. So which do you find more rewarding, or are they equally so?

RG: Oh, equally. And even after all of that, I still get nervous before I'm going to give a talk.

DR: Oh, really?

RG: Yeah.

DR: Was there anything else you wanted to mention?

RG: Not at the moment.

DR: Okay. I wanted to just take some pictures of the things that you've shown me about your sail boating career. Because we talked about it briefly, you know, earlier, about how you built your own sailboat with your husband and everything. Is it okay if I take the camera around.

RG: Sure, of course.

DR: Let's take this off so you can get up. And we'll just pause—

(INTERRUPTION IN RECORDING)

DR: So these were items that you knit yourself, correct?

RG: Yes.

DR: The sweater, and then the socks.

RG: Yes.

DR: For your whole family?

RG: And our crew. I made eight — nine — nine of them.

DR: And they all represent the sailboat that you built with your husband, correct?

RG: Yes.

DR: So this is a picture, then, of your family wearing the sweaters that you knit for them?

RG: Uh-huh.

DR: And then up here is a photo of when you were working on the sailboat. And you talked about how your sailboat was—

RG: It was constructed in accordance with the Earthquake Safety for the Public School Buildings.

DR: Ah. Well, it had to be pretty unique, then, for a sailboat, correct?

RG: Yes.

DR: Okay. Well, thank you for sharing. Well, I just want to thank you, Ruth, for talking with us today.

RG: Oh, you're most welcome. My pleasure.

DR: Okay. Thank you very much.

END