

Interview with Stacie Condrell  
(PenRen)  
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Cameron: This is an interview with Stacie Condrell of the Pentagon Renovation Program. It is being held in the OSD Historical Office on October 30, 2001. The interviewers are Drs. Alfred Goldberg, Ronald Landa and Rebecca Cameron. First, would you please describe your job.

Condrell: I have a funny job. My title is group leader for a cluster of activities pertaining to the Pentagon renovation that we refer to as the Prism Group. Prism is a classic kind of DoD acronym that stands for planning, partner relocation, requirements integration, standards, and space management. There is some other stuff in there that doesn't qualify, but my group is responsible for several things. One is strategic planning for the renovation—who we move where, how we do it, how we phase it, what can't move until the end, what has to move early, big things like that--and space management. In the Pentagon renovation, the things that we build are not terribly challenging, technically. It is the renovation that adds another element of the unknown, but the real trick is that we are doing it while it is occupied. The DoD mission has to continue through that entire cycle. The space management element is the movement of the agencies during, before, and after—some related to the renovation, but mostly related simply to the fact that all of the agencies change through time. They lend space back and forth from each other, they borrow, and all of those changes could affect a plan, new missions and things like that. My group is responsible for the liaison activities with the services, so we speak to the Army, Navy, Air Force, and OSD in the capacity of the tenant.

Cameron: But you answer to OSD?

Condrell: OSD, and each of the services. We do those liaison activities so that the Army, for example, is aware and educated as to the steps they need to take to prepare for the renovation. Similarly we hear Army's particular pain, angst, issues, evolution or initiatives that may impact our work. The same with all of the services. We also engage in the public liaison activities, for example, with the Historic Preservation Societies, the disabled community, Arlington County, all of those people who might be interested in the Pentagon's work and renovation. We put together all of the standards, negotiate requirements for a specific agency or group, like yours. Policies determine that renovation can provide certain things, and certain things are not in our purview. We do the design integration as those requirements turn into something tangible that then we will build. My group gets a little rest, technically, when we go out to build. But then we come back in and deal with the transition, space that needs to be created, so that we can go from one phase to another. For the commissioning of systems, QFFD, so that they are prepared for the O&M on their station transition. Lastly we do the tangible planning for a physical relocation. You met some of my men when you moved into this office.

Landa: It seems like a lot of responsibilities. How many people are in your group?

Condrell: About 46 today. It changes a lot.

Cameron: They are all government employees?

Condrell: No, it's a very mixed bag. In fact, my group is relatively heavily contractors.

Cameron: From the folks on the construction site who we talked to before—Jack Kelly, Edwin Pickins, and Rock Reiner—trying to figure out who works for whom is challenging.

Condrell: Our group, and the whole program, is relatively color-blind as to who is paid by whom, because we are all part of the Pentagon renovation team and the common mission is purple. We sometimes have different leave schedules and things like that, but that's about it.

Landa: Who is above you in the hierarchy?

Condrell: I report to the deputy program manager, Mike Sullivan.

Landa: How about Tony Conques? Where does he fit in?

Condrell: Tony is a non-renovation entity. He has several roles. He is the director of space policy and acquisition, a division of RE&F, so we have parallel functions in that lots of the planning and allocating that we do relative to the renovation, Tony will do in the post-renovation world. So the custody of space issues that we manage through the renovation process, we turn over to them to manage when we are done. The part of the building that has been unrenovated is a little bit in limbo-land and we do that jointly.

Pieces of the unrenovated building that are vacated to go into renovated space become PenRen because we have actually completed an action relative to an announced space. For somebody else to back-fill it, we then would do that action again.

Cameron: Does your job disappear on that future day when the building is finished?

Condrell: Yes, fifteen years from now, or sooner.

Cameron: When did your function begin?

Condrell: I started in February 1995, but the job I am doing was very different then. I was under a completely different renovation structure without a whole lot of forward momentum.

Cameron: But there was an existing renovation function?

Condrell: Yes, the renovation actually began in 1991. It was a glimmer in somebody's eye in 1989, 1990, and 1991 when the building was purchased from GSA. It's the only building that is owned by the Secretary of Defense. The other DoD properties are actually owned by the services, by the Army, Navy and the Air Force. It's the only one that is specifically DoD or OSD controlled.

Cameron: That purchase was done when?

Condrell: It was actually 1991. I think the paperwork may have started in 1990. The concept was developed in 1989 and needed congressional approval. The basic concept was that the amount of money that the Department was paying GSA to maintain the building, if paid into a common pool, would actually fund the renovation. Which, ostensibly, it does do. Although that's a very simplistic way of looking at the actual funding mechanisms.

Cameron: Are you involved in the funding considerations?

Condrell: Like all good project managers, we are very much involved in budgeting, that is, in estimating costs and being faithful to a predetermined spending plan. But not for the budget in terms of the yearly DoD budget cycle. For our program, we have a research management group that coordinates directly with the service budget groups and with the OSD comptroller, WHS comptroller, and everybody else.

Cameron: The budget must have changed dramatically with the destruction. What new costs will you have, where will the money come from and how will you manage it?

Condrell: Where it will come from is a double-edged question. Part of it relates to the color of money from a formal governmental budget perspective, and that, thank goodness, is not part of my responsibility. But estimating the actual costs to do a

particular body of work, as a subject matter expert in a number of areas—those costs do come from my group. To give you an example, we immediately lost 1,400,000 square feet, mostly of space, when the plane hit. In that space were contents. The Pentagon renovation in Wedge 1 to that date had been involved in supplying only systems furniture, not free standing furniture, seating, or specialty furniture. The determination of those costs came about in the pre-incident days, when there was a significant and challenging budgetary constraint on the Pentagon renovation program. Following budget guidance from the Deputy Secretary and Secretary of Defense (Secretary Cohen and Dr. Hamre), we redrafted our program to provide more building and less amenities. After September 11, we no longer supported things that happened inequitably across services. For example, Army has large groups that tend to be dominated by more lower level employees and many fewer high level employees. Army's typical office suite is very large, with a lot people in it, and maybe only five to six percent of the space has private offices. The rest are all open plans. Navy has many more smaller suites, so their average size is much smaller with a slightly higher percentage of private office space and executive-type amenities. The proportion of those offices tends to be almost twenty-five percent. For OSD it goes even farther. Formerly, each of the agencies was paying proportionally to their total amount of space for executive furniture. In the simplest iteration, Army would pay for OSD's executive furniture, since they were paying proportionately to the amount of space they occupied. We removed those sorts of things from the Pentagon renovation program proper, and now the agencies directly fund those items and make decisions within and around their own budget constraints—did they bring things from home, or did they buy new; if they

bought new, they did it within their own budget. All the material used in Wedge 1 was lost because the plane hit and it burned up, or because of mold growth due to sprinklers raining on it for many days at a time. There are a series of decisions that need to be made about all those things. In their macro-guidance, Congress and the Office of Budget decided that the loss from the incident is recoverable, refundable. But from whom? There are practical concerns also, not only about who funds it, but about the logistics that relate to it. If you order something, typically it's delivered to you, but where can it be delivered in this case? Working on the Pentagon renovation, hundreds of thousands of square feet at a time, getting material in and out of the building is very difficult. It is unfortunate if you have a furniture delivery and are counting on the elevator but have not made sure it was available—the same with the loading dock and DPS. In the current security climate, those things are very complicated. Clearly, it is logistically easier for us to make those purchases that the renovation did not originally buy. We are doing the design that locates and sizes them, all of those things; we have relationships with all the furniture contractors. We are one entity making those arrangements versus each service and each group, which would be an incredible number of purchase entities. There is also the logistical tracking. We've been very active not only in budgeting the cost, but also giving them advice on the industry standard for replacement. We have an opinion about what is the better way to do it.

Cameron: Do you actually tell them what to buy?

Condrell: In this case, we probably are; that decision is still at the OSD comptroller level.

Landa: In one sense you are fortunate that the blast occurred in a building where there was already construction going on so there were experienced people already in place. But there will be differences that you've touched on. Are there any others that you are anticipating?

Condrell: Yes, what is important today is completely different than what was important on the morning of September 11, not only for us, but for the services. For example, typically an admiral newly assigned to the Pentagon may come in, take a look at his office, and ask someone if his wife can replace the drapes and the furniture. It's a traditional thing, it happens with all the services. With the renovation you are dealing with 30,000 people in large areas, and the admiral's wife will wreck our plans. There are also things that are inappropriate to do, so we set particular policies about what we will or won't do that protects our program and still provides a window for the admiral's wife to do what she wants to do. This sounds very cheeky, but it is a simple way of explaining it. Before, it would happen after they moved in and wouldn't get in the way of government work.

Cameron: Would it have been the case previously the Navy paid for that the admiral's drapes?

Condrell: Yes. We found ways to protect the DoD from the capriciousness and unpredictability of such things, because it was appropriate to do so and it was smart business. We found a very efficient way of dealing with it that didn't cost the government money and didn't jeopardize our program. But today I know that no agency will ever come to us on an issue like that. They have people who are the government equivalent of homeless. They need to work. This comes at a time when they have

suffered the injustice of an attack and the lessening of mission capabilities. Now they are fighting a war, so the mission is much more serious than the rest of this stuff. The petty things that are a byproduct of people being involved in our world are not on the radar screen. At the same time, the missions are changing. The missions of the agencies were all changing because of the new administration, anyway.

Cameron: How does that translate into your work?

Condrell: They stand up a terrorist task force, a group they didn't have space for. So you need to create new space.

Landa: What about the grouping of services or functions? I understand that a present byproduct of the renovation was to provide a more rational system for locating people. Do they tend to be scrambled now, with the new missions and more reconstruction?

Condrell: I think we will see some positive relief on that particular front. You are referring to the occupancy of offices in the Pentagon being based on an original plan and then 60 years of things that happen to that plan. When missions disestablish, they tend not to relinquish space. It's uncanny. Spaces are relieved or reapportioned within an agency when a new mission becomes more important. It has not been done in a logical way, but is traditionally based on a political priority list within the Pentagon that has led to goofy bed-down plans—Army least, Navy most, and Air Force quite significantly because Air Force was shoehorned in after all the other services got locations. So the Air Force was all over the place. OSD, too, because, as the owner of the building in the last ten years, they have taken anything that has come up. Those occupancies are very fragmented and not very efficient relative to "normal" working relationships that would happen in a normal business environment. Part of the



renovation's purpose is, as possible, to co-locate services to take advantage of those efficiencies. But in reality we don't tend to see any release of extra space as a result. For example, a group with three locations, each with a copier room, if seated together does not need the three copier rooms, but they will still need the area for another purpose.

Landa: Is there thought being given now to revising the plans for locating the offices because of the destruction?

Condrell: Yes and no. There is no plan to adjust the specific allocation of space that each agency had at the start. So if some started with 100,000 square feet of space, they will end up with 100,000 square feet. The specific location of it will change, but probably not radically. There are a couple of specific elements that will yield some change, one being the dynamics of the next phases, where everyone has ended up as a result of the incident. To make phases flow smoothly from one to another we need to keep in mind the amounts of space each agency gets. Otherwise, some agencies have to bring in people from off-site and others have to send people off-site. All that is expensive and time consuming. It increases the amount of time between phases. That's really the only one that is specifically renovation related.

Cameron: What about the location of some of the senior staff? They may be advised from a security standpoint not to have offices on a certain side or location.

Condrell: Seniors, command centers, entrances, parking and cars, planes—the world is very different. It has always been part of our mission to be practical and prudent about those things, regardless of the political ramifications. The last Secretary of Defense wanted to be in a particular location, with a particular relationship to the other services.

This Secretary of Defense doesn't have an opinion yet. If we waited for someone to make a move at the time someone needed to make a plan, it would never get made, so we have lots of plan adjusters to have the capacity to do things that are smart and to not be surprised. For six and a half years we have briefed that if the Pentagon was hit by a terrorist incident on the perimeter of the building we could expect an executive reaction to the location of their offices. It would be foolish not to be prepared for that moment. So part of our plan does take that into account, and we work that every day. Whether they ever end up there or not is their call. We are building it into the planning because we can. It is not very expensive space in the magnitude of the whole renovation. The difference between the Secretary of Defense's office and your office here actually isn't much. The Secretary of Defense's office and space of that caliber is a tiny fragment—only about five percent of the total area. It is a lot cheaper than command centers, a lot cheaper than cafeterias, a lot cheaper than bathrooms. The systems that supply it are where the costs are.

Landa: You say you have been briefing for six and a half years for the contingency of a terrorist attack on the Pentagon. Was there anything concrete and specific in place? What was the contingency planning? Was there a consensus?

[Introduction of Dr. Alfred Goldberg to interview ]

Condrell: We have done a lot of very specific things. We have provided A and B ring locations for all of the seniors as part of our long-range plan. We have provided a variety of locations for future command centers. We have the primary plan as well as probably four layers of backup plans. We have alternate configurations for all roadway entrances. We have alternate configurations for all perimeter roads at present. We

have security mitigation measures that we have briefed up one side and down the other and have construction documents of them.

Landa: Once the attack occurred, how much were existing plans followed?

Condrell: The emergency response is not part of our purview. It is not something we have actually ever been involved in. But we have been involved as builders in what we can do to be smarter and better prepared against things like this. I will say that the particular plane incident that we thought would happen would not be in this location and not of this type. We expected that perhaps one of the regularly scheduled U.S. Air commuter flights from North Carolina that flies directly over the center courtyard ten or twelve times a day would have a crazy pilot who would crash into the building.

Landa: Actually crash, not drop a bomb.

Cameron: So you weren't thinking of projectiles from the air.

Condrell: No, not from commercial aircraft. The reason for that, very simply, is because all of the people involved in analyzing the physical threat to our environment—the Threat Reduction Agency, DPS, the Secretary of Defense and the service secretaries—mention over and over again that it's the only national military headquarters in the world that allows commercial overflight. If somebody says that once, you remember it. If they say it twice you'd better think about it. There are things you can do to a building to mitigate against damage done by a disaster of the type that we have experienced. We had done as many of them as were feasible for which there was political support. My opinion now is that there is no way to protect the entire building from *any* damage, it's not practical to do so. If I were voting, I would vote never to reopen National Airport. I think it's foolish, personally. There is no reaction time for anyone to do anything about a

plane on a normal flight path that makes a last minute decision to do something, when the flight path is over the building. But that is not an issue appropriate for an architect or the renovation program to decide. But we have certainly thought about it and discussed it when we brief other security measures.

Cameron: Did you discuss that with the senior people?

Condrell: Yes, but closing the airport is not something that the renovation program would be involved in.

Cameron: It has come up in discussions and you have made known your opinion that there is no way to protect the building from the air?

Condrell: There are things that you can do. You can harden the wall beyond all recognition; fortify the perimeter; put a series of [ballard-type?] objects way up in the air, something with berms in it that would have changed the particular incident that we had. Whether it would make the incident less or more damaging is hard to know.

Landa: How about a crash on the roof?

Condrell: The worst, in my opinion, would be if it had happened to hit a corridor in an unrenovated part of the building. We would have less physical impediment to the path of the plane and it would carry jet fuel much farther into the building. That could happen with very, very good flying. Into a roof would have been a different type of disaster but, in sum, about equal depending on where it hit. If it hit in a part of the building that didn't have a fire suppression system or where the fire spread to an area that was completely occupied, the damage and the catastrophe would have been very different.

Landa: You were talking about hardening the exterior, is there any way to harden the roof?

Condrell: There are ways to do it. It is very expensive to do, to stop a jet liner full of fuel like that.

Goldberg: Did the renovated walls and windows pay off?

Condrell: Yes. The jetliner hit a building with 30,000 people in it and we had 125 casualties from the building. That is a phenomenal success. We have a building in which there are 30,000 people every day. We have 24,000 workers and the rest are visitors. Some of the casualties or fatalities that we had were visitors to the area. You can't hit a building with 30,000 people in it with a fully fuel-loaded aircraft and do any better than we did. There are two reasons for that, in my opinion. Some were the code compliance of the renovation; some were new spaces that were simply less cluttered than old spaces. A significant amount of the fire spread into the unrenovated area, where we had a lot of vacancies already due to the transitioning, and the fire suppression system that prevented the fire from spreading into the renovated part of the building. There were more egress opportunities. At the same time we know that certain elements of the code compliance were perfectly useless in a circumstance where aviation fuel burns particularly black and hot, and people only got out by crawling and following other people's voices because the exit sign was irrelevant.

Goldberg: Is it your observation that the structure stood up longer than it might have otherwise?

Condrell: Yes, and I believe that if the plane hadn't hit right at the expansion joint the upper floors would have stayed up. To my knowledge no people were lost on the upper floors, above the second floor. Everybody got out. Some people from other services

and the Marine Corps were next to the area that fell and their offices, which are now demolished, were perfectly intact.

Goldberg: So you are not in agreement with the thinking that the renovation of the walls and windows did not make that much difference?

Condrell: I don't believe so. The second floor in the buildout was a very large open area with four exit stairs. It's about 20,000 square feet, an Army area with few offices. It is very logically laid out, pointing to all of the exits. Two of the exits were involved in the crash. Two others were available. The eyewitness/survivor reports of evacuation from that area from people crawling on hands and knees said that they became very disoriented in the space. They said they knew the space inside out, they could have done it blindfolded, then the moment came and they were confused. They were aware that they were disoriented and struggling through.

Cameron: Was that from the blackness of the smoke?

Condrell: The perspective was different. They're crawling on their knees—every cubicle looked the same. There was debris from the percussion of the blast. There's smoke and fire.

Goldberg: The area most affected was Corridor 4 to 5, half of which had been renovated, and half had not.

Condrell: Correct. On the first floor at the line between renovated and non-renovated space, a tire from the plane went rolling through and killed seven people from DIA. There were sixteen people in the space. The burning tire full of jet fuel came flying through the wall with no notice and killed seven people. Those were the only fatalities [correct ?] in the unrenovated side. Other casualties in the unrenovated side and the

amount of damage were due to the fire that raged very hot through that part. The bulk of the fatalities were from those on the plane and those in the direct path of the plane itself as it came through on fire at 342 mph.

Landa: The people who escaped from that area, crawling on hands and knees—did they escape purely by luck, or did they have some common element in their stories that helped them?

Condrell: Another part of our organization has spent time listening to those dramatic and significant stories. The report is being written and I will see it this Friday. Because we are actually reoccupying areas of the building, there are certain elements of that that are vitally important to us today. As planners, designers, and builders we have an opportunity unlike any other, although the reason is very sad, to see how our decisions and persistence and work fared in a circumstance of this type. The rest of the Pentagon has not been code compliant since 1952. So to make Wedge 1 code compliant is a huge step forward, but is it the appropriate mark? To use an analogy not related to the incident: the ADA, the Americans with Disability Act, is a wonderful, progressive piece of legislation that the DoD believes we should comply with as appropriate. However, I can do all sorts of things that are absolutely wonderful, compliant with ADA. But the Pentagon population that uses wheel chairs because of the large horizontal distances that they travel, tends to have double or triple battery packs on the backs of their wheel chairs. No ADA rule, law, or guideline was written around that extra large wheelchair. So, I can create a perfectly compliant code toilet stall that eighty percent of the disabled population in the Pentagon can't use because they can't close the door to the bathroom. We make practical determinations that go beyond code because it's appropriate to do

and doesn't cost us any more. Those are good decisions. We are looking at code compliance and egress and evacuation from those same perspectives. Another example is that for the building operators, the ones who maintain the building, it is much easier and cost effective not to have to maintain the battery packs behind an exit light. You could write a business case that shows that it saves \$250 million annually not to have to maintain the number of battery packs in a building as large as the Pentagon. But if you have an incident like ours, where the power system is severely compromised and the power goes out, battery packs would provide light to show that exit. In the case of this specific incident, with the blackness and the way jet fuel burns, it would have been irrelevant anyway. But for a normal incident in the building, that is smart business. The fact that the incident has happened changes your perspective, changes the priority list, and makes that the smart thing to do.

Landa: Is sound at all used as a way to guide people to the exits?

Condrell: In general, sound was the thing that worked for the people in the immediate area. And there were people blasted through a wall who survived because of serendipity. A man sitting at his desk was pushed right through the wall by the blast; he was injured but will recover completely. That is complete serendipity.

Landa: How about sounded exits?

Condrell: Those are great, and we will likely design and fabricate a full exit or egress plan that is controllable. In this circumstance, there were four exits in the same second floor Army space, but two of them were lethal. Those exit signs can be chirping like crazy, but may not be safe if there is fuel spillage or the like. The real solution, I think, is a controllable circumstance. The Building Operations Center that had opened already



in that Wedge was able to stay on line for hour and a half after the incident and monitor some of those things. Their substantive help was to the firefighters, because they could monitor where they were. They were dealing with live electrical systems. They could keep the power up and running until the last minute and then shut it down just before the firefighters got there so they didn't get electrocuted. That was very helpful. That same facility would know where an incident was and ought to be able to activate the sounded exit systems.

Goldberg: The windows didn't blow, did they?

Condrell: No, they did phenomenally well.

Goldberg: Did they contain the explosion so that subsequently there were no places to escape?

Condrell: There were two blasts in the building, one where the plane hit on the perimeter, and subsequently within the building when the plane hit other things.

Goldberg: You mean the columns?

Condrell: Yes, and electric sub-stations on the C ring. The windows at the perimeter clearly saved many lives.

Goldberg: Did one side blow and the other side not? I mean the exterior windows.

Condrell: On the right, where there are three floors, the first and second floor is solid, with no intervening light well. At the roof of the second floor there is space with a light well. Only the fifth, fourth, and third floors have windows here, the second and first floors are solid inside over to the E ring. The perimeter E ring windows have different blast protection because it was anticipated that a large blast event would come from the outside. Clearly, those protected all of the people in the adjacent space.

Goldberg: It also contained the explosive effects?

Condrell: No, because a large amount of the explosion dissipated outside anyway when the plane hit. It goes through the least pressure.

Goldberg: How about the windows from 4.5 to 5?

Condrell: They blew out for about five times the distance past where they blew out on the Wedge 1 side. There is an interesting pattern. There are Wedge 1 windows that are still in place, exactly to the line, and blown out farther away from the source of the perimeter blast. The blast that happened inside had an interesting effect in that it found the path of least resistance, which, in general, was the elevator and mechanical shaft.

Goldberg: Where it was carried up to the roof.

Condrell: It spread aviation fuel up in those areas as well and spread the fire. A blast will always, unfortunately, find the least resistance.

Goldberg: On the floors it is even more freakish, isn't it?

Condrell: Yes, because they reform, roll and then reform.

Goldberg: Years ago in WWII a V-1 hit about a quarter mile from the house in which I was living. It blew out all the windows in the house, and the houses on both sides were intact. That's how freakish the blast was from a quarter mile away. It depends in some respects on the air currents, I suppose.

Condrell: I understand that something about the harmonics of a blast changes its effects. When it hits certain obstacles it not only affects the pressure, but changes the harmonics.

Cameron: There was a new fire engine sitting outside the building. One of the engineers said the plane demolished it but it kept the fireball from hitting the heliport and killing the men.

Condrell: Yes, because otherwise the pressure would have hit the heliport directly. The interesting blast was the one in the building and what it did to the new exterior windows and the light wells on the inside face.

Goldberg: The inside ones are not blast resistant, are they?

Condrell: They are not blast resistant in our terms, but they are much stronger than the old windows, with tempered and laminated glass. They were not designed to take a direct blast.

Goldberg: Do they have cast iron in them?

Condrell: No, they do not.

Goldberg: The outside ones do.

Condrell: Right, but the kevlar fabric is actually in the wall. It has to do with the pressure inside the walls. The inside walls are poured in place concrete, so they have a higher resistive strength than the exterior ones anyway. The exterior walls are concrete columns, concrete slabs, with brick in between. The brick is there so we could mount the limestone to it. So a piece of limestone is pushing against brick that is approximately equally sized.

Goldberg: The brick is there because the brick layers' union demanded it.

Condrell: Yes, but it also gives you something to put the pin that the limestone is supported on into. It was a practical way of doing it at the time. The pressure on the limestone would push in not only the limestone at the joint, but also the brick behind it.

That's what the kevlar is for. That doesn't happen on the inside walls because they are solid poured concrete, a much stronger perimeter wall. On the inside, as the blast rolled up the inside wall, it pushed in the windows on one side. On the other side of the light well they were sucked out by the dynamic of the blast. In this incident you can see all the pressures very clearly. It is interesting that the building was not designed to resist a blast within its walls.

Cameron: When you redesign, are you going to further blast-proof the building?

Condrell: There are things that we can do that will make an incident more survivable and cause less damage. Now that we have had an incident, it's easy to say that we should plan for these things. Could we withstand this plane anywhere in the building? Probably not. Would it ever bounce off? No, but we can do better to protect the lives of the people who are working there. We did great, but we can do better, and there are simple things that we can do to improve survival. The people who are in the direct path of the bullet are likely to die in any circumstance. It's the people around the path of the bullet you can potentially save. That would be the appropriate focus of our efforts. There will be less controversy over the expense of such things.

Goldberg: Do you deal with the chief engineer in these matters?

Condrell: Yes, Dr. Glantz is the one overseeing the task force.

Goldberg: Are you a member of the task force?

Condrell: I'm not, but my staff is.

Goldberg: There will be a report?

Condrell: She's doing a report now, they are caucusing on it.

Landa: It's a truism that we can become prisoners of our history, that generals planning to fight a war fight the last one. Do you worry that this will happen here?

Condrell: Sure, which is why I said that what we are attempting to do is look at a general environment to make it safe, regardless of specific incidents. We could plan for a bomb anywhere within the building, for a place where the pressure could be released. However, when you do that, whatever is released becomes airborne. Technically, it gets out of control, with mitigation measure after mitigation measure. Each of them causes other problems that you have to mitigate as well. To do that over the six and a half million square feet of the Pentagon will never be successful. You can't contain it all and have a building.

Cameron: What does that mean to the cost benefit analysis of perimeter defense?

Condrell: I think the place that is appropriate for the DoD to spend money on the renovation is on the physical security of the perimeter at various levels, and probably multiple perimeters. There are simple things to do pertaining to cars, trucks, roadways, parking lots, and even some simple things you can do with planes. These kinds of things are not part of my analysis, but they would certainly change the event, such as building berms around the perimeter to make it harder to get into the short perimeter of the building. Putting light poles all the way around the building with large lights would cause damage to a plane's wings that would move the incident to a less controlled location. But do we like the statistics in this plan better than the randomness plan? There are lots of things we can do, but I believe our best focus is on the simple things, to just accept that the people in the direct path are lost, but focus on how we save the

people around the incident. I think that's a great use of money and energy and it's an appropriate strategy.

Landa: How well was the building evacuated?

Condrell: I can't tell you that. I was at the Pentagon renovation complex. I have anecdotal and unsubstantiated stories, but I was on the helipad most of the day. It is my understanding that the fire alarm system in Wedge 1 worked, so they did get information in the BOC, at the operations and control center. They were able to get information out. They could hear things, but they couldn't pay attention because they were struggling with the smoke and fire.

Cameron: Where was the BOC?

Condrell: The BOC is in Wedge 1 at the A ring on the first floor, by Corridor 3.

Cameron: Who controls that?

Condrell: PBMO, the Pentagon building manager's office. It is really a control center for building functions. It monitors fire alarms, temperatures, thermostats, water flow, all those things in Wedge 1, and will monitor all those things in the rest of the building.

Cameron: We understand that you were on the scene all day.

Condrell: When the plane hit I had heard about the World Trade Center incident about two minutes before. I was in our complex on the north end of the North parking lot.

Cameron: The MOC?

Condrell: Yes, or DAB, we have all sorts of acronyms. I had walked by the conference room where our public affairs people were tuning in the TV to the World Trade Center incident. There was clearly an aura in the room that was very anxious. I was returning to my office and went back to listen to the TV report when the plane hit the Pentagon. I

knew right away that it was a terrorist incident, but had no clue that it was a plane. First of all I needed to find my staff so went to my part of the building and started gathering them up. We have crews working in the area all the time. There were about twenty-five people who were not with us so we looked for them. We made lists of home phones and started systematically trying to find them. While that was going on we got evacuated like the rest of the building.

Cameron: Did DPS come in and tell you to leave?

Condrell: We really didn't know who it was who told us, but as we got outside there were these Army guys herding us out in a refugee-type column going up to Arlington Cemetery. I was not happy about that, because I was still worried about locating my folks. A DPS car calling over a bullhorn came looking for me and a colleague. Our deputy program manager, Mike Sullivan, was in the back. They needed drawings of the incident area because they couldn't come up with them. DPS took me back to my building and I pulled the papers out. Although I just knew generally where the plane had hit, I had not focussed on the jet fuel yet, but the projectile element was clear. I grabbed everything I could think of that might show this part of the building and hopped back in the car. We went to the mobile command center, which was under a little bridge at 395 and South parking. Then I was taken to several other sites and left drawings and explained orientations and building methods and where sprinkler systems were and things like that. Then I was taken by DPS to a location where I did the rounds with the Arlington County fire department and the FBI and eventually the Fairfax County rescue workers to orient them and answer questions. The rest of the day I spent on the heliport with the Arlington County fire department. Shortly after dark someone from my office

came for me and took me back to my office. I was asked how high the fatality list would be and such statistics.

Cameron: Your guess at the time, was it high, or low?

Condrell: It was higher. I figured there were about 600 people in the path of the plane. This part held up for 35 minutes so there were not as many people trapped. Through the course of the day I was asked what agencies were in the target areas, and how full they were. So we had to call people back with information.

Cameron: Did you yet know if all the construction people and the crews were accounted for?

Condrell: It was about 10:00 p.m. when my last guy was accounted for.

Cameron: So nobody was injured?

Condrell: We did lose a DPS contractor who was in that area working on an alarm system, but in our larger PenRen community we had no fatalities, which is quite remarkable. A lot of people ran for their lives. A couple of guys ducked the plane as it came in. A lot of people went back in and helped people get out. When I got back to the office at dark, my men were going through the seating plans of the area, helping agencies make a missing list. We did that most of the night, checking the numbers, checking them again.

Cameron: By that time you were consulting with representatives of the Army, Navy, and so forth?

Condrell: We'd been in contact with them all day.

Cameron: How long was it before they got a more accurate sense of their missing people?



Condrell: The difficult part for everyone was the victims whose bodies were never recovered, virtually all the people on the plane, and several others. The agencies really couldn't confirm who was dead, only who had survived. There were some interesting early issues with that. Someone who worked in that area would go to get a cup of coffee. They got out fine but their purse, their keys, their cell phone or something personal would be left in their office. They walk up 395 and somebody in a pickup truck takes them home. When they got home they would call someone in the office to say they were OK and of course no one answered the phones. A couple of services resorted to call-in 1-800 numbers. But I think that in a couple of days the missing list was pretty accurate.

Cameron: How soon did you gather your forces and start to think about the future?

Condrell: By 5:00 a.m. the next morning we had people attempting to evaluate the damage, talk to the FBI and get a grip on everything. There were immediate things the agencies needed to have in the building to move forward with their mission. Their area was damaged and they were now going to work someplace else. And they're fighting a war. All those things started immediately. In our case we had contracting actions pending for other purposes that we could use so we were in a position to mobilize very quickly. People needed a lot of things to support this craziness.

Cameron: We hear stories of people and businesses offering supplies. Did someone take charge of this peculiar new civil-military relationship?

Condrell: No. Largely because I or somebody who replaced me was on site all the time. So the Arlington County fire department always had someone to assist them. We set up a phone number, a cell that got moved to a ground line. We manned it 24 hours

a day. It also let us communicate since normal phones and e-mail didn't work because nobody was sitting in their offices.

Cameron: So your office has been in charge of all the on-site activities?

Condrell: No, the Arlington City fire department was in charge first. There was a brief window when the Fairfax City emergency rescue people were in charge. Then the FBI was in charge. FEMA was never really in charge, just on the scene. The Forestry Service and EPA were also there. Everyone had 24-hour trailers.

Cameron: But you took over once the area was released as a crime scene?

Condrell: In that period, about four days afterward, we started daily and twice daily briefings and exchanged information. We needed to make plans about how to move forward. The FBI would have been happy to keep everybody out of that space, but if some general or admiral wants to get back into his office for war plans, somebody needed to put all those needs together. We now have daily and weekly briefings on what we are doing and we are moving forward.

Landa: You listed one of your responsibilities as curatorial. I'm curious to know about the library, I know they lost many books. How about artifacts and art work?

Condrell: We retrieved everything we could that any agency was interested in. They had to express an interest or answer questions. Some art was left in the building that no agency was interested in. We have removed and stored those.

Landa: Is there a curator of OSD art?

Condrell: Not of OSD. OSD Graphics serves that function. Some services have a curator. I don't think the Air Force does.

Landa: Did you have a good inventory of what is on the walls of the Pentagon?

Condrell: We initially got all the curators together to take their own inventories. We work with them a lot to get their stuff out before the renovation.

Landa: In the past we have fielded questions in this office about where a particular painting is and to whom it belongs. It has been very difficult to pin it down, because there is no central inventory.

Condrell: Navy's and Army's inventories are spectacular, down to the room number. Unfortunately, some of the rooms are gone. It is harder to get memorabilia that have a symbolic value back to some work groups.

Landa: Irreplaceable.

Condrell: Yes, they are especially important to a group that has suffered an attack—a bell that was on a ship, or something from somebody's desk. We have taken some things out that may seem irrelevant from a cost efficiency perspective but are important to certain groups. We pulled desks out with cranes because they were important to someone. A glove of General Eisenhower, a lot of stuff belonging to Admiral Nimitz scattered all over.

Landa: We covered a lot of ground, and appreciate your time. Is there anything else you would like to discuss?

Condrell: Yes. We had called in all our computer drawing people to help us reproduce hundreds of thousands of drawings to keep the agencies going. There is no amount of document preparedness that is inappropriate. One thing we did was to make little packages on a CD so that if something happens in this facility it will not take as long to get information. It didn't take terribly long, but I was shocked that the building had to come get us. They just couldn't get their hands on the drawings as quickly as we could.

If something happens again we will be much more prepared. On a personal level, I think about my adult children all over the world. We're doing our bit for the tourism trade! We fly to Chicago to see our younger son and I have watched people on the plane. When the flight attendant does the usual security briefing, hardly anybody pays any attention. There is an amount of evacuation and egress training and preparedness that we can do. As a program we demonstrated fire egress hundreds of times. It was part of our routine, in writing and physical demonstration, but if we are lucky maybe two percent of people pay attention. Now we had a circumstance where we needed to use that information and people were unprepared. When we are going to do a fire drill or alarm test, every single agency in the building will call us and say it's an inconvenient time. While we are working on the renovation we try to accommodate the agencies and schedule the tests for off-hours when nobody is there. That's a bad time to do it, and our lives may some day rely on it. To the degree that each of us can help our colleagues pay attention to their personal safety, it is important, because their lives may some day depend on it.

Landa: Now is the time to do it, when people are more receptive to it.

Condrell: Yes, it is. We talk about it all the time with the agencies, so that they will share some of the burden. When we move people back into the space, we put an evacuation plan in each chair, because we can. There's nothing I can do to make them remember it, but I can at least put one in their hand.

Goldberg: How far can we go in the direction of security without compromising our lives and our way of doing things and without creating a very powerful negative effect on the whole society and its function?

Condrell: It's one of those wise but unanswerable questions, like how does humidity happen.

Goldberg: As you said about National Airport, you have a very strong feeling, apparently.

Condrell: Yes, I have a very strong feeling about that. The good news is that I don't have to be exposed to any statistical evidence that tells us why these things are a threat. I may muse over the fact that the Pentagon was vying with some other building, the Capitol or the White House, for being the number one or two terrorist target in the world. I wonder how people come up with those statistics. I presume it's based on some actual intelligence that indicates the likelihood of attack. I don't know that, and I am glad I don't, but knowing that, there are things to do. One thing is to look at true innocents, like the Pentagon Metro. More people travel through Pentagon Metro, just traversing Northern Virginia, than there are people going to work in the Pentagon. In my opinion, that is not a good thing. If I were one of those people I would use Pentagon City. If I were Arlington County or Ramada, I would have taken that information and done something different, such as getting the DoD to invest in an intermodal station on private property and let the DoD get back to a base-type reservation that could be securable in times of heightened security. It's a political issue, I recognize. At the time the Metro was done years ago, the incident hadn't happened. Today, I am sure that Arlington County and Ramada are remembering everything we said to them. They are probably feeling a little foolish and nervous, because they know they had the opportunity to do it and didn't have the political stomach to even go up and down their own chains to educate everybody on why that was the smart thing to do. From our

perspective, we did the right thing. We told everybody, we came up with appropriate plans, workable plans, better plans that were unworkable because of the politics of the moment, and that, I believe, is the appropriate strategy. Relative to locations of seniors, command centers, some locations we have today are dangerous. The Army did a briefing with a graphic released to the press with a picture of the plane and where the Secretary of Defense sits. It said it was declassified due to multiple sources of information. That is true. Look in the phone book, in hundreds of places, thousands of people know where the Secretary of Defense sits. But is it smart to put it on a drawing and release it to the press? Probably not. I don't believe that is being paranoid. Does he want to move to another location? That is a personal, professional decision unrelated to us. Should someone give those persons options? Yes, they should.

Goldberg: They have been offered options, and have refused them.

Condrell: Yes, and no. I think they are more interested than we think.

Goldberg: That goes back to my question having to do with risk taking. We are going to have to continue to take a lot of risks whether we want to or not. No matter what we do there will still be risks. The question is how far can we go in that direction without disturbing the function of our whole society, which has already happened to a certain extent.

Condrell: For the Pentagon, there are some basic guidelines. I think it would be inappropriate for this building to look fortified.

Goldberg: A lot of people think it looks like a fortress already.

Condrell: I think that would be unfortunate. But a landscaped berm would afford protection from a tractor-trailer, etc.

Goldberg: A berm?

Condrell: A hill. You see them in a lot of places. To keep vehicles from going across the golf course, for instance. Those sorts of things are very smart, they improve the look, they provide tangible protection.

Goldberg: You are talking about a couple of miles of berms?

Condrell: Yes.

Landa: How about the roads that come so close to the Pentagon?

Cameron: Is that Arlington's jurisdiction, or can the federal government deal with it?

Condrell: There have been meetings with the governor about that. Actually, Rte. 27 and Rte. 110 are state roads.

Goldberg: They are talking about moving them, but you know what that means in terms of time.

Cameron: You have their attention now.

Condrell: Yes, we do. The state has been terrific.

Goldberg: How effective will be the movement of the bus station outside?

Condrell: Significantly helpful. Perfect, no. The damage to the exterior facade depends on what size of blast there is—how much can a person conceal and carry, then a sedan-sized car, a rider truck-sized van, then tractor-trailer size vehicle—those are typical sizes. For a tractor trailer size the difference is that you would get the same effect of that vehicle at 1500 feet, which is on the other side of 395, for a non-renovated perimeter, as you do moving up to 400 feet on the renovated. It's a huge difference, and that is because of the windows, mostly. The unrenovated windows are thin panes of glass that will blow out with anything. So the new windows enable things to get that

much closer. There is a certain amount of risk that can be accepted. The smaller and smaller the thing is, the better off you are. There is a certain amount of perimeter hardening you can do that will allow you to keep your perimeter envelope pretty much where it is.

Goldberg: When is that supposed to be completed?

Condrell: The buses are supposed to move back and transfer to the new location on December 15. It moves them 280 feet away from the face of the building.

Goldberg: Will they have a berm there, before that, and then the building?

Condrell: Yes, and the next generation of security perimeters as well. All of the security checking and clearing will happen in a building outside the Pentagon—separate air supply, cut off from the main part of the building.

Goldberg: So the next attack will be by bus loaded with explosives driven into the building somewhere along the way.

Condrell: I think it will be something in South parking.

Goldberg: If they decide to do the Pentagon again it will be something a lot easier.

Condrell: Route 110, South parking.

Goldberg: It's hard to see that they would be able to carry out another major terrorist attack on the scale of this one. One would expect something of a lesser order, we hope. So moving the bus station is a fortuitous thing.

Condrell: And long overdue.

Goldberg: It will be healthy for the bus riders because they will do more walking than otherwise.



Condrell: It makes it about the same as a normal commute by public transportation in the city.

Goldberg: It tends to be well validated in light of what has happened. And you also get rid of the Metro underneath.

Condrell: It will get rid of the direct connection from the Metro up into the building.

Goldberg: Would you have people come to Pentagon City and come over from there?

Condrell: The Metro doesn't trouble me, now that there is no direct connection. The problem with the Metro is not really a blast in the tube, because there is a lot of baffle around it. The problem is nuclear, biological, or chemical stuff, because as the train comes through it pushes the air out. The existing escalator connection does not exist now, but a Sarin gas incident in the station, with the train pushing air up into the Pentagon, would be bad, and that needs to be fixed. The other thing is that it would push it out through all the air grates around the reservation, and the air vent shafts that are next to the facilities on the reservation. That should be thought about, in parking lots, and things like that. But the train itself doesn't cause much damage. There's enough mass over it that it would be more contained, which makes it a less attractive thing to do.

Cameron: Thank you very much and good luck with your projects.