

**ADVISORY COMMITTEE ON STRUCTURAL SAFETY OF VA FACILITIES
MINUTES OF JUNE 20, 2006 MEETING**

COMMITTEE MEMBERS:

CHRIS D. POLAND, SE, Chair
WILLIAM E. KOFFEL, PE
LELIO H. MEJIA, PE
SUSAN NICULESCU, PhD, AIA
SHARON L. WOOD, PE

VA STAFF

LLOYD SIEGEL, FAIA
KURT KNIGHT, PE
DAVID P. KLEIN, PE
FRED LAU, PE
KRISHNA BANGA, PE

GUESTS

RICHARD KUCHNICKI, International Code Council
JOHN BIECHMAN, National Fire Protection Association
NANCY MCNABB, National Fire Protection Association
JACOB GADD, American Legion
PHIL RIGGIN, VA Office of White House Liaison

1. Chairman's Introductory Remarks

MR. POLAND: Good morning. I'd like to welcome you to the Annual Meeting of the Advisory Committee on Structural Safety at VA Facilities. My name is Chris Poland. I'm the Chairman of the Advisory Committee and a structural engineer. Before we go any farther, I'd like to go around and have a round of introductions.

Everyone present at the meeting introduced themselves.

MR. POLAND: Thank you. Before we proceed, I'd like to remind you that while this is an open meeting, and we're pleased to have guests with us, that the discussion is limited to members of the committee and to members of the staff. And if our guests have any comments or questions, if they'd write those down and hand them to Mr. Banga, I will be glad to deal with them. And then the other thing is that voting on the issues that we have is limited to the members of the committee.

Our agenda for today is quite full; it has a series of issues related to resolutions and comments that we made at our meeting last year and then a number of items of new business. We'd like to get started on the agenda, and have a look at the minutes from our last meeting. Since we've gone through and reviewed them and approved them, and I'll sign those now to indicate our approval.

2. VHA Program Guide PG 18-3 Update

MR. BANGA: There were two resolutions made at the last committee meeting to update the document. The first resolution had four parts, and we incorporated three of them precisely. One has not been done, and we will take care of it now. There was another resolution, which we considered we covered it in the Structural Design Manual. During our discussions at the workshop yesterday, the committee did not quite agree. So we will incorporate that also in PG-18-3.

DR. NICULESCU: The two resolutions that were not quite correctly incorporated, I have a motion to correctly incorporate them now.

Move that the VHA Program Guide, PG-18-3, Topic 1, Code Standards and Executive Orders, be amended as follows:

A. Under "General", delete "shall adhere to, but not be limited to" and substitute it with, "has adopted";

B. Delete "National Fire Protection Association and NFPA Codes, with the exception of NFPA 5000" and substitute it with, "NFPA National Fire Codes, with the exception of NFPA 5000 and NFPA 900"; and

C. After the last bullet point and before “Local Codes”, insert a new paragraph titled “Conflicts Between Nationally Recognized Codes and Standards and VA Requirements”. This paragraph should read: “Should a conflict exist between VA requirements and the VA-adopted nationally recognized codes and standards, the VA requirements shall prevail. Should a conflict exist between VA-adopted nationally recognized codes and standards, the conflict shall be brought to the attention of the VA.”

D. The committee further recommends that the resolution of the conflict be made by the authority having jurisdiction for the VA to ensure consistency system-wide.

The motion seconded by Mr. Koffel was unanimously carried.

3. VA Secretary approves adoption of IBC.

MR. SIEGEL: There's been a lot of deliberation about this. As you know, we analyzed the codes, we analyzed the states' adoption of codes, and other jurisdictions' adoption of codes, and we prepared a letter for the Under Secretary for Health to send to the Secretary to get his approval on our selection of the International Building Code. Rather than reading the entire document here, I'll pass a copy to each of you, and one for the record. If you have any questions about this, I'd be happy to try to answer them.

4. Comparison of fire-safety requirements of IBC 2006 and NFPA 101

MR. KNIGHT: As per the motion from last year's meeting, the VA is underway with a contact to compare the life safety requirements of IBC 2006 and NFPA 101, to determine whether there are any differences in those two codes, and to develop a document that stipulates VA's decisions on any differences identified. There'll be several documents that will result from this, a code interpretation document that will list VA's exceptions to either IBC 2006 or NFPA 101. That will be developed into a separate document where, VA's decisions on those differences will be identified.

In addition, as discussed yesterday, we will take that material and present it to both NFPA and IBC in 2006 in their code development process, to identify VA decisions on certain exceptions to their codes, and to work with both organizations to try to encourage them to look at VA's exceptions and see whether they're appropriate for potential adoption in their code processes.

MR. POLAND: When did you say that you expected to have the study done?

MR. KNIGHT: Expected to have the study done in about two months. We have HDR, a firm that's been contracted with to provide the material, and we've had several discussions and meetings with them to ensure that the scope is clear to everyone.

MR. POLAND: Any comments or questions from the advisory committee?

DR. NICULESCU: Yes. I would like to say that I think it's great that the VA is doing this study and will provide this information and their decisions to the various code agencies so that they can be incorporated, hopefully, in the codes, and the codes can advance yet another step.

MR. KNIGHT: VA will also take this comparison and the results of these decisions and update our fire protection design manual, which is another critical fire protection document in VA criteria. So the goal would be to ensure that all our documents are coordinated and represent VA's fire and safety position.

5. VA's commitment of necessary resources to provide input to IBC development process

MR. POLAND: Kurt, you commented in your remarks last year about the need for VA to commit the necessary resources to provide input to the IBC development process. We had made a recommendation to you last time that you ought to be involved.

MR. KNIGHT: Yes, and we fully agree with that recommendation and will move forward on the completion of these comparison and studies underway to try to accomplish that over the next year.

MR. POLAND: Okay. In our workshop yesterday, we decided that we wanted to provide you some clarification about what the level of input was. So Bill has a motion for you.

MR. KOFFEL: Yes, thank you, Mr. Chair. We would like to commend VA for their past involvement in the development of nationally recognized codes and standards -- for example, the NFPA -- and we encourage VA to continue this effort and extend the effort to include the IBC and other codes and standards that VA has adopted.

At a minimum, VA involvement within the ICC and NFPA processes should include the following: Review of proposals and comments, submit proposals to revise the codes and standards to address conflicts and concerns identified by VA, and, as deemed necessary, participate in the public hearings and committee meetings at which proposals and comments are addressed. VA should commit the necessary resources to ensure that the needs and concerns of VA are properly represented in these processes.

MR. POLAND: Thank you. Kurt, does that sound like something you can handle with the resources you have, or is this going to require additional resources?

MR. KNIGHT: Well, it'll be difficult, and there was some discussion yesterday about possibly involving consultants to provide additional resources to support that. Our staffing resources are somewhat limited; however, we have had in the past some funds to address standards development. We expect those monies to continue to be

available, but it's a budgetary issue every year. Our field fire safety staff has been reduced over the last few years. This is a concern. However, we'll be working to try to accomplish the goal to increase VA's involvement in these codes through field resources, CO resources, and potentially consultant resources.

MR. POLAND: Bill, as far as you can tell, is it okay to use consultants for that sort of activity?

MR. KOFFEL: I believe it would, yes.

MR. POLAND: Okay. What kind of cycle are we on now for the next round of proposals to go for IBC?

MR. KOFFEL: The proposal closing date has passed, the committee hearings are scheduled for the last two weeks of September, and the committee recommendations will be acted upon by the ICC membership in May of 2007. There would then be a subsequent cycle to submit an additional set of proposals that could be considered prior to publishing the 2009 edition of the I-codes.

MR. SIEGEL: Where will the hearings be held?

MR. KOFFEL: The hearings this September are in Orlando, Florida, area, and last I checked, I did not see a location for the May 2007 meeting.

MR. POLAND: So the proposals that you talked about that we're talking about in our motion what deadline do we have for those proposals?

MR. KOFFEL: It would be late 2007 -- I'm not sure of the exact date, but we have time to work on those proposals.

After this discussion, the motion seconded by Dr. Wood was unanimously approved.

6. Update on the Fire Protection Design Manual and fire protection of IT spaces.

MR. KLEIN: There are two issues from the last meeting for which I would like to provide updates. The first is the Fire Protection Design Manual. The revision to the VA Fire Protection Design Manual has been completed. The fourth edition was published in November 2005. The Fire Protection Design Manual is maintained by a task group of VA fire protection engineers and is updated as new issues are identified.

The second issue is fire protection of IT spaces. This issue is addressed in the latest Fire Protection Design Manual. Guidance on the level of fire protection for IT spaces is based on the criticality of the space.

MR. POLAND: Any comments or questions?

MR. SIEGEL: I have one, Mr. Chair. Dave, would it be possible to send a copy of the new manual to the members?

MR. KLEIN: Certainly. Yes.

MR. SIEGEL: Thank you.

7. Seismic safety in operability of equipment and material - Status

MR. POLAND: At our last meeting we'd made a recommendation to you about considering the seismic safety and operability of equipment and materials at our VA facilities. Kurt, do you have a status report for us?

MR. KNIGHT: Yes, we have not implemented this motion as of yet. There has been a little confusion on my part regarding its scope. I think that's clarified. We support the idea that we need to identify additional equipment and materials and how to maintain their operability after an earthquake scenario. But as to date, we have not made very much progress.

MR. POLAND: We spent some time yesterday on our workshop talking about this and realized that we didn't make ourselves very clear last year. We are now looking at this from two aspects, and we have a couple of motions for you to clarify our intent. There are activities that need to go on after an earthquake, which are the response activities, and then there are the activities that are needed to do in preparation for an earthquake, that are preparedness activities.

DR. MEJIA: Thank you, Chris. Yes, I do. This motion is to clarify our position from the last meeting, as you said, and focus on the processes that go on ahead of an event. And the motion is as follows:

VA shall conduct a study to develop guidance to ensure the seismic safety of furniture, moveable equipment, and supplies, and report back to the committee.

The motion seconded by Dr. Wood was unanimously carried.

MR. POLAND: Thank you, Lelio, for the motion. Trying to clarify that we're talking about the contents, what's inside the buildings. Any questions?

MR. KNIGHT: No, I think we clarified it yesterday. We're going to ensure that necessary equipment is protected before an earthquake, so it can remain operational after an earthquake and be capable of being used in medical care.

DR. MEJIA: And we thought that a study would help you identify to what extent this is an issue, and then to the extent that it is an issue, develop guidance to address it.

MR. KNIGHT: I think it's useful. We have in our standards some equipment that is braced, and I think we'll need to carefully review that and do this study to make sure that we've identified a broader range of equipment. We've had problems in the past on some of our projects with ensuring that all the necessary equipment is braced properly, making sure that our design standards are clear on this issue. VA has a number of pieces of equipment that are installed after the major contract is awarded and completed, and we need to make sure that the contract procuring this equipment contains appropriate language.

DR. MEJIA: In these types of studies, it seems quite helpful to actually look at your own experience during past earthquakes. We discussed, I think, in some of our previous meetings, that some of the experiences you had during that Loma Prieta earthquake and the Northridge earthquake, for example, would shed some light on what is the extent of the problem and possible ideas on how to address it.

MR. KNIGHT: I think that's certainly true, and VA has done quite a bit of that in the past. After most of those quakes, we have improved our standards. But it's a constant issue that needs to be addressed; medical equipment is changing all the time, and bracing it to ensure that it remains operational, is a continual issue.

MR. POLAND: The thing that's falling through the cracks, just to say it a little bit different right now, is the small pieces of equipment that are carried in that are so critical to providing service. They need to be moved around, they get relocated, they get replaced, and a lot of times the procurement contracts that purchase those pieces of equipment really don't deal with the seismic safety because it's not part of the facility's process, it's part of a procurement process. Also the hazardous materials you know, acids and things that are purchased and stored are known from past earthquakes that cause difficulties, and created problems. So those are the kind of things that we're really talking about. I think that the design guides and the codes and standards that we're using are really capturing the large pieces of equipment, the housekeeping pieces of equipment, the big pieces of medical equipment; it's the smaller stuff that we're concerned about. And we're not completely sure that it all needs to be dealt with. You know, there's some part of it that does, but there's some of it that doesn't.

MR. KNIGHT: We'll certainly have to work with our hospitals in the field and field engineering staff to ensure that when they purchase equipment, the seismic component is addressed. Much of this equipment is purchased by the medical center, and there needs to be appropriate policies and guidance to make sure that the seismic policies are addressed.

DR. NICULESCU: The policies need to cover use as well as purchase, because it might be used in one room and then moved to another room and so on. It needs to be tethered or tied down in some way.

MR. POLAND: We only want you solve a problem that hasn't been solved before.

MR. KNIGHT: We're always striving to improve, and I think this is certainly in that vein.

MR. SIEGEL: One of the sources we will look into is the California Hospital Council, and whether they have any suggestions on this subject. I would imagine it's been something experienced all over California more than any other jurisdiction in U.S.

MR. POLAND: Right. And yesterday we learned that it's really the environmental controls, environmental safety and safety officers, and risk managers at VA, who are the people that really worry about this. You'll find that in other hospitals, it's not the facilities folks so much that worry about this. And I think that there is a body of information there about what they're doing about this in hospitals and other industries that you can learn from. But it's a different avenue that we need to worry about.

MR. KNIGHT: It's a fairly broad avenue, too, with VA being as distributed as we are, with hospitals across the country, and individuals managing those from a safety, environmental, and engineering aspect. There are a number of things that would have to happen to accomplish it, but obviously, the first step is to do the study and make sure that we identify needs and look at policies, procedures, implementation procedures et cetera.

MR. POLAND: That is right, and learning from the implementations that have been tried in the past and haven't worked. We were told yesterday about shelf-bracing systems that were dismantled because they're just too disruptive to operations. We need to look for new ways to accomplish that. Is there any more discussion?

Now, moving on to the post-earthquake time and response, Bill, do you have some comments and a motion?

MR. KOFFEL: Thank you, Mr. Chair, yes, I do have a motion to offer.

The committee requests that information on policies, procedures, and experiences with facility recovery be provided to the committee at the next meeting.

The motion seconded by Dr. Wood was unanimously approved.

MR. KOFFEL: I just wanted to point out for the record that while this comes under an issue of seismic safety, the committee's real thought is a multi-hazard concept that whatever the event or occurrence that might have caused a closure of a facility or the emergency evacuation of a facility, that we look at the policies, procedures, and experiences related to recovery of that facility from that event.

MR. KNIGHT: VA has several organizations that are involved. Emergency Management part Office; as well as the physical security of the hospital, and the Office of Security and Law Enforcement. And there are a number of policies and procedures in place to address those issues. I think the charge here is to take a look at ensuring

that we have a well coordinated, integrated policy that ensures facilities remain operational after an earthquake, which is our goal.

MR. SIEGEL: Or a flood or other natural or manmade disaster.

MR. KNIGHT: Right.

MR. KOFFEL: That's correct. It is more than just seismic activity.

MR. POLAND: So this request is to have somebody come to our meeting next year and brief us on what the policies are, which I think would be really outstanding. We've talked about this for a number of years, but we've never really had that I recall, a full briefing.

MR. KNIGHT: Parts of the security and emergency management of VA have been involved over the years. The physical security has been more recent, but it certainly has had a higher level of visibility in the last few years, and it's a good opportunity to coordinate and communicate as best we can.

DR. MEJIA: How does that tie into the study that was conducted a couple of years ago on addressing multi-hazard risks?

MR. SIEGEL: What we did in that study was to assess the condition of VA's most critical facilities, and that led, as you're aware, to the Physical Security Strategies study, which came up with 25 items that VA should concern most itself about. The strategies document was completed in the fall, but it wasn't approved by the Secretary until more recently. Subsequent to his approval, we are now -- and Kurt will go into this a little bit later -- we are now in the process of starting to create standards for new and existing facilities both for mission critical and for life-safety-protected-only facilities, four different classes. And we'll be coming out with these new standards in a manual discussing the whole subject. The manual will be multi-hazard-focused.

DR. MEJIA: Will it focus primarily on preparedness or address both preparedness and response?

MR. SIEGEL: Preparedness more than response, because response is an operational responsibility.

MR. KNIGHT: The process of moving from the strategies to criteria and standards is underway, and there is an advisory group that VA's established with members of various organizations in VA, including the National Cemetery Administration, Veterans Benefits Administration, and Veterans Health Administration field representation, et cetera, that will be reviewing these standards. There is a process to ensure that all elements of VA involved in physical security protection, including Security in Law Enforcement and the facilities side is involved in the standard development process.

DR. MEJIA: Another question: going back to the motion to the extent that response procedures are dependent upon each facility and the needs of each facility, how much uniformity do you think there is between those types of procedures from one location to another?

MR. SIEGEL: I really can't answer that question. I don't know. It's been our experience when we assessed facilities that there were a very large number of commonalities. But on the other hand, when we looked at how certain problems had been addressed at the different facilities, we saw that they had been addressed in many different ways, partially due to the time they were done, how long ago that was, the amount of money that was available to attack the particular problem, and the skills of the people doing it.

MR. KNIGHT: All VA facilities have Emergency Management Plans. They involve coordination with the surrounding communities to integrate VA plans into the local response. Policies and procedures are in place. There is significant amount of overview and guidance provided by the operation maintenance elements of VA. The physical security part is how to protect your facility against these threats. Multi-hazard scenario is the more recent addition that is being accomplished through the physical security assessment reports and strategies. That's a newer element to VA threat protection planning.

MR. SIEGEL: In addition, there is a whole body of work being done by the American Hospital Association on this by TISP. The Infrastructure Security Partnership is made up of private sector and public sector organizations. VA is a founding member. TISP issued, this past fall, a plan armature for different elements of the infrastructure to organize on a regional basis, so that all of the critical infrastructure will be protected in that region. TISP, after long discussion, concluded that the best way of attacking this problem nationally is by regional alliances. If I'm not mistaken, the first of these is in Northern California, and is actually in operation. There's a tremendous amount of activity going on. Even before this activity, as Kurt indicated, our facilities have been involved with other health care facilities in their areas to work out emergency health care plans. As we stated in the workshop, VA's internal system unites other VA facilities. In the hurricane-struck areas last fall, there was a tremendous response from VA nationally to help in the South. This included supplies, personnel, volunteering, et cetera, and patients were able to be shifted from the affected areas of New Orleans, et cetera, to other facilities across the country. Because of VA's patients electronic medical record system, their medical records were accessible immediately all over the country wherever they were relocated.

MR. POLAND: So that I understand, these emergency response plans that you said that each of the local facilities have are those written plans?

MR. KNIGHT: Yes.

MR. POLAND: And there's a section in there about responding to earthquakes.

MR. KNIGHT: Well, responding to emergencies. I'm not sure that it singles out earthquakes per se. It outlines responding to any emergency that creates a problem that impact medical care.

MR. POLAND: And it's the Operations and Management Group at Central Office here that directs the development of those plans? Do you have any written directives that they have?

MR. KNIGHT: There are a great deal of policies on the operation and maintenance of VA facilities, what the hospital director, in essence, is charged to do, and that's quite extensive in a whole variety of areas including emergency management.

MR. POLAND: We've seen that it's not at all uncommon for the emergency response planners to be not fully informed of what the facilities people are building, especially when you're going out of your way to build really remarkable buildings that are seismically resistant, that are supposed to operate after earthquakes. It's not always reflected in the emergency response plans. In my mind, part of the reason for this motion is for us to better understand the operation and maintenance side so that we can see that it's consistent with what we're doing on the facilities side. So that's why we thought it would be a good idea to try to dig in and understand and get somebody to come talk to us about what's on that side.

MR. KNIGHT: There is a staff that does that. I think what we probably need to do is identify that person and identify a series of issues that we would like to discuss and coordinate with the committee during the year, so at next year's meeting we can have a presentation that addresses the specific areas that you feel need addressing. We'll work with you over the next year to develop a presentation with an outline presented to you.

MR. SIEGEL: That presentation may take a fair amount of time, so it might be better presented to you during the workshop time, rather than in the actual annual meeting.

MR. POLAND: And the things we were talking about, I think it's worthwhile to talk through this at the workshop and to put some structure around our ideas. Now, help me out here, what are the things that we are worried about?

DR. NICULESCU: Well, we wanted to know after the earthquake or tragedy or whatever happens, how --

MR. SIEGEL: The popular term these days is "extreme event."

DR. NICULESCU: "Extreme event," okay -- after the extreme event, how the facility goes about, from a facility point of view, how it's checked and confirmed that it's safe to be occupied again. So, I don't know, but maybe there are checklists like pilots use when they take a plane up into flight, but there are a lot of things in a facility that need to

be verified and checked. And if not everything is working, you can still sometimes occupy a facility with knowledge that those things aren't working, and you're making some other -- we were talking about if the sprinklers aren't working, you can have some fire safety people there to -- just to keep an eye on things and make sure that if there's a problem, fire is dealt with. So there are probably some checklists or something and we just wanted to understand them better and understand if there was some involvement, some looking at the structural aspects of the building, is it still sound, is a parapet about to fall down, those kind of issues.

MR. KNIGHT: Certainly the VA has done that in the past. The question is, what kind of policies, procedures are in place to ensure that happens.

MR. SIEGEL: As we told you in the workshop, after Katrina, the Office of Facilities Management put together a group of people, including Fred, a structural engineer, to go to New Orleans and some of the other facilities. They inspected the facilities. We also included one of our estimators as part of the team. They arrived at some advice on the usability of the facility, which was then evaluated by the Director with our estimates of what it would cost to fix things up.

DR. NICULESCU: So that was done out of central office.

MR. SIEGEL: Out of central office, together with the field engineering personnel, and not just the local engineering personnel from New Orleans, but from some of the other medical centers in the region.

MR. KNIGHT: The Veterans Integrated Service Network, the VISN, is a vehicle also to coordinate that, because it has six or eight hospitals in that general geographic area, which often are not impacted as much as the one particular facility. So there is a lot of shared resources with engineering, materials medications staffing, nurses, and doctors, of VISN hospitals. Ultimately, if they need, additional assistance, from other VISNs is made available.

MR. SIEGEL: In addition, it's not uncommon in situations like that for VA to send the mobile health care vans we have to service some of the rural areas. They also go down to these affected facilities to give mostly first-aid type of care, which is usually the most required care after an extreme event.

DR. NICULESCU: I think that what we're mostly interested in is not so much the health care side of it, but the actual getting the facility back up and running again, and how that's put together.

MR. KOFFEL: I think we know what process is used to commission a new building; now we have a building that's been through an extreme event, and what type of commissioning and checking is done on that building.

MR. SIEGEL: It also leads to almost immediate changes to some of our standards, as we've discussed at previous annual meetings on the physical security assessments. Even though we don't have the new standards yet, we would never put emergency generators in a subsurface location again. That was one of the biggest problems not only with our facilities after the floods caused by the hurricanes, the surges, and the breaking of the levees. I've been involved pre-VA, and I'm sure most others have, in situations where just huge rainstorms can put a hospital out of business, because the emergency generators, transformers, and that kind of equipment has been uniformly located in the basements or subbasements; and they get flooded.

MR. POLAND: So since these meetings only come once a year, I wanted to have some discussion so the minutes had kind of a sense of what we were looking for. Maybe we can have some e-mail correspondence a month or two before the meeting and kind of firm up what this looks like.

MR. SIEGEL: Also, if any material is generated previous to the meeting, we'll send that out to you as well.

MR. KNIGHT: we will make an effort to get whatever documents exist and at least a summary of those documents. I need to identify the titles and what's available, and we can provide that to you.

8. Proposed modification to H-18-8

MR. BANGA: Last year, several recommendations were made by the Committee to make changes to H-18-8, and we have attempted to make those corrections in a draft form. Why do I say draft form? It is because of the latest development in the IBC; we need to make some more changes. Recently IBC 2006 was issued and major revisions were made in that document. In fact, it's leaning towards ASCE 7-05 for seismic design. We felt that a time may have come when we need a major overhaul of H-18-8; and hold up changes. Many references are now to ASCE 7-05, and it wouldn't be right to refer to IBC. That's where we are right now. We are looking for guidance on how to proceed. Shall we make a major overhaul of H-18-8?

MR. POLAND: Okay. We, at our workshop yesterday, talked through this, and Sharon has a number of comments for you.

DR. WOOD: Yes, I have two motions related to H-18-8. The first motion deals with the proposed revisions for 2006. These are changes that should be implemented within the next month and published in 2006.

There are four parts to this motion. First, as you mentioned, because the 2006 International Building Code refers to ASCE 7-05 for earthquake loads, H-18-8 should be updated to refer to ASCE 7. We identified 14 specific cases where these changes need to be made.

Second, ASCE 41, which is a standard for evaluating existing structures, has just been published. Therefore, H-18-8 should refer to ASCE 41 rather than to FEMA 356. There are three places where this needs to be updated.

Third, the descriptions to the acceleration response spectra need to be updated. We have a list of six locations where this is needed.

Fourth, we recommend that Sections 3.2 and 3.3 in Tables 5 and 6 be deleted, as these are now addressed in ASCE 7.

Finally, this motion would be for immediate changes to H-18-8 for the 2006 edition.

MR. POLAND: Okay, we have a motion, are there any comments?

MR. BANGA: I strongly commend Sharon for making this effort to offer those changes. I do have the complete list of changes in detail provided by Sharon, and they will be incorporated within a week or so for 2006 publication. After that we will work out the plan on how we make a major overhaul of H-18-8.

DR. MEJIA: I had a question. Do you have projects ongoing where these changes could have an effect in the design? Will they be easily incorporated or taken into account in your ongoing project?

MR. BANGA: Yes, in most cases we have consultants who are very familiar with the developments of code changes, especially about IBC 2006 adapting to ASCE 7-05. So, along with provisions of H-18-8 they follow current code requirements. For example, on our new project in Las Vegas, the consultant will follow IBC 2006. That's one of the reasons that I am suggesting that the time has come to make a major overhaul of H-18-8. We'll take out the material which is a duplication of the codes already in existence.

DR. MEJIA: Would there be any problems or confusion generated by the changes in the documents on the existing projects?

MR. BANGA: No. Every time there is a new project, we have the first kickoff meeting where the consultant makes a general type of presentation. It is primarily architectural, but they do bring a structural engineer with them. A concept is presented on what they are thinking of proposing for the structural system. We discuss the proposed options, and make sure that the latest codes are followed for the project.

MR. KNIGHT: Basically, then, VA has a process of ensuring compliance with our criteria and standards. In years past, we had an in-house group that did that review; which is no longer the case. We do hire peer reviewer on most projects that oversees the design by the design AE and ensures that it's complying with standards and any recent changes. In addition to that, we've reinstated a process about six or eight

months ago to conduct an in-house review at SD2 that involves mechanical, electrical, structural, architectural meetings with the consultants to ensure that they're using our criteria, standards, etc., and there's no major problems. A procedure that's been reinstated to ensure that they are complying with the latest VA standards. It's turned out to be a good quality control approach, and since we've lost the ability to review with internal VA staff. Another element of that that's a little bit out of the scope of what we have several discussions, there's a Memorandum of Understanding for High-Performance Buildings that was signed by VA in February of this year; and one of the mandates is total building commissioning. VA will be developing policy and begin the implementation of total building commissioning on all of our design projects, another element of ensuring appropriate standards in design criteria, et cetera, are incorporated into the building.

MR. POLAND: One of the things that's being talked about in terms of commissioning buildings is to add the information necessary for the post-emergency response, what the expectations are for damage from various kinds of extreme events that come along. And it's just starting to be talked about in California now, where some of the building officials are saying they would like to have the structural engineer of record when he submits a set of drawings for a building permit to have declared how the building's going to be damaged and at what point it needs to be closed for repairs before it can continue to be used. As you just mentioned, this total building commissioning. I think that's something that would be nice to add in.

MR. KNIGHT: VA has varying ways of quality control with Project Management staff, IDQ/AE reviews, and in-house reviews. Total Building Commissioning is involves more than what VA currently does. We're developing a specification or criteria to support that right now. If you could provide us any contacts or information, we could include that kind of effort in our commissioning process.

MR. POLAND: The chief advocate for this is the chief building inspector, City of San Francisco; his name is Laurence Kornfield. I can get you his contact information. He was responsible for inspecting all the buildings in San Francisco after the Loma Prieta earthquake, and, as you can imagine, had a significant experience. And I've got some written material that proposed -- it's still in the development process, and I don't think the city's quite ready to embrace all of the recommendations, though I think they're outstanding recommendations.

MR. POLAND: Okay, so we're in the midst of two motions related to modifications to H-18. Because of the adoption of the IBC 2006, the first motion relates to immediate changes that we would like to see done and put in place this month, and then the second motion will deal with the long-term changes. So any more discussion on the first motion related to the immediate changes?

The motion seconded by Dr. Mejia was unanimously carried.

DR. WOOD: I have a second motion now that deals with longer-term issues in H-18-8. What we're hoping is that these could be applied for the 2007 edition of the document. And there are three parts to this motion.

The first is that we support making major revisions to H-18-8. The information in many sections is included in ASCE 7-05; therefore, only sections that are specific to VA facilities should be retained in H-18-8.

Second, the values of spectral acceleration that are listed in Table 4 for the different VA facilities should be checked to ensure that these values correspond to ASCE 7-05. It's our understanding these were developed with the 1997 NEHRP design maps and so we just need to check for consistency.

And third, in Section 3.4 we provide a list of acceptable seismic force resisting systems for VA facilities. We'd like you to compare the list with the entire list in Table 12.2-1 of ASCE 7-05 and make sure that the selections are appropriate for VA facilities.

The motion was seconded by Dr. Mejia and unanimously carried. This was followed by a brief discussion on the values of S_S and S_1 .

MR. BANGA: I have a question in regards to checking values of S_S and S_1 with the USGS publications and ASCE 7. ASCE 7 and IBC have provided seismic maps that are based on contours. And, USGS has provided specific seismic response spectra values based on exact location (Zip Code or Latitude & Longitude). So, which one is more appropriate to use?

DR. WOOD: I went on the Web last night. If you go to the USGS mapping website, they have interactive software that allows you to input latitude and longitude or the ZIP code, and you select which document you'd like to check against -- so you can select ASCE 7-05, for example -- and then if you put in latitude and longitude, it will give you the values that are interpolated from the maps.

MR. POLAND: So we expect that you go in and check the values related to ASCE 7 for the two and fifty earthquake -- for the design values.

DR. WOOD: For the maximum considered earthquake --

MR. POLAND: Are they referred to as design values or probabilistic values?

DR. WOOD: When it says "maximum considered earthquake," that includes both the probabilistic values and the deterministic limits.

MR. POLAND: Okay. So, for the table, somebody could go through and just literally get the longitude and latitude for all the medical centers and then go through and then

give us an update because, as I recall, we first created those tables based on the '97 USGS maximum considered earthquake maps.

DR. WOOD: Yes.

MR. POLAND: And there has been some modification to those maps since '97.

DR. WOOD: Correct. It's my understanding that when you used the old software and entered a ZIP code, you would get the average spectral accelerations for that ZIP code, Now, you will get the maximum and minimum values within the Zip code. So I'd suggest you use latitude and longitude rather than ZIP code so you get a better identification of where your facilities are located.

MR. POLAND: ZIP codes in some areas can be pretty big.

DR. WOOD: That's right.

DR. MEJIA: We talked about this yesterday, but I'm not sure exactly where we left it. If there are changes in those values and changes have occurred, say, over the course of the last few years, and the implication is that some of the design values then become updated -- I'm not sure we discussed the process to deal with the changes in enough detail, and I'm wondering if we need to do that. Let me just put an example out there. If the values do not agree, say, with the current values in the table, it seems to me that we need to go through the process of making a comparison and determining a course of action before they're actually changed automatically, don't you agree?

MR. POLAND: Well, to me, it's similar to a code update. And the code update represents the best thinking of the folks that write the code, and it's a consensus of the profession. So I'm not sure what we would re-evaluate. It certainly would be different, it might be more stringent, and we would expect that that's appropriate. So if the values come through and they're higher, what do we do? Now, Kurt, if you have a major medical center under design, and they're almost finished, and we discover that the values should be higher, chances are contractually you have to go ahead and finish up with the code that they started out with, which is just -- that's just normal, that's a way the process has to work. If we're starting a new project, then we use the new values. For projects that are designed, then they sit and wait until they're substantially remodeled, then we have that provision in H-18 about when we update things. So they sit and wait for that to occur.

MR. BANGA: The other question is what value we should use when we do the comparison, and find that USGS maps have higher values than ASCE 7?

DR. WOOD: If you go to USGS website, you can select the design document you want to use, so you would select ASCE 7-05, and then you would get the values that correspond to the design maps in ASCE 7-05.

MR. BANGA: So what you are saying is that USGS has modified those values based on the codes being applied or used.

DR. WOOD: That's right. The USGS website has the code values, so you could compare what happened between the IBC 2000 and the IBC 2006 at each site if you wanted at each site. You get to select the design document you want to use as your basis

MR. POLAND: There are two things in my mind that figure into the changes. One is a change in the earth science -- they have new information, new research that has led them to believe that there's a change in the seismicity -- another is a change in how the engineers have decided to use the information the USGS delivers probabilistically in determining their design values. And so when you select a standard that you're going to use, like ASCE 7, then it really picks up both of those changes. And we think that there have been changes in both areas. Is that right?

DR. MEJIA: Correct. There's actually ongoing research, which is to be wrapped up relatively soon, on the subject of ground motion attenuation, and I suspect that it will filter itself into the practice, and once it does that, the USGS will be applying those findings in development of new maps. I don't know what the schedule for that might be, but in the next -- in the course of the next few years, say, we can expect to see some revisions to those maps and the design values. And it could be a significant revision.

DR. WOOD: It's my understanding that the revisions to the new maps at USGS is just beginning, and they have a series of workshops around the country, they try to compile the latest seismic information or -- so it's important to keep updating this because these numbers do change.

MR. POLAND: The Denali earthquake records that were lower, and also the Parkfield records.

DR. MEJIA: Well, some of the foreign earthquakes, for example the earthquake in Taiwan and the earthquakes in Turkey have led to the idea that some of the ground motions, particularly for very large earthquakes along strike-slip faults that rupture very long lengths, are lower than we previously thought. That research is incorporating those ideas now.

DR. WOOD: And they've also taken yet another look at the New Madrid area and decided that maybe they were overestimating some trends there.

(Recess)

9. Greetings & Welcome Address by Mr. Robert L. Neary Jr.

The Chair introduced Mr. Neary, saying, "Mr. Robert Neary has joined us. He's the Acting Chief Facilities Management Officer. Welcome. Do you have some comments for us?"

MR. NEARY: Thank you. I do. I want to welcome you. My first message is to apologize for the fact that the Secretary has had to cancel his time here today. He was unexpectedly called to meet with the Senate Veterans Affairs Committee and won't be able to make it. It's a disappointment for all us, I'm sure. We don't get the Secretary to come visit the Office of Facilities Management that often, so we look forward to it. But I'm pleased to have the opportunity to say hello and to welcome you to VA and thank you for all the work you're doing supporting us.

When I talk about our program, I often talk about the fact that on February 9, 1971, an earthquake on the San Andreas destroyed the VA hospital at Sylmar in the San Fernando Valley. People often remark how I remember that day. It happens to be my wife's birthday, so it serves another purpose as well. But I had just started. I'd been at the VA for three months when that happened, and the man that I worked for at the time, who was a long-time VA executive, was very intimately involved in the activities of that day and of the events that happened after that, including the establishment of the Structural Advisory Committee.

The loss of 46 lives was certainly a tragic event, and it served to give VA a good nudge in the right direction. We've done an awful lot in the seismic safety area since then, but we still have a lot more to do. We have projects ongoing now to correct seismic problems in San Francisco, San Diego and Memphis. We have a project in design in Los Angeles, we have two projects that are funded, and we're on the street for one and shortly for another at Palo Alto in California.

So it's an important priority for VA, and we've invested a lot of money in trying to make our buildings safe. To your great credit, this advisory committee has been extremely helpful to VA over the years in working with us in identifying what our requirements ought to be and things that we ought to do in this regard. So for that I thank you and those who've preceded you in the 33 years, I think it might be, that this committee has been in existence. I hope you have a productive meeting. I won't take any more of your time. Again, thank you.

MR. POLAND: Thank you very much. Before he goes, are there any comments for Mr. Neary?

DR. MEJIA: We want to thank you and thank the staff of VA for great support to the committee in making our jobs easy.

MR. POLAND: We are very pleased with this gang that you've got here; they're very responsive. And there's no end to what we continue to bring as ideas to share with them -- and that's what's you expect us to do -- what's going on, and what new things to do. We appreciate the Secretary signing the order to implement the IBC 2006 and we're encouraging them to be involved in the IBC process because -- you know, the VA has always been in a leadership position when it comes to setting standards for health care facilities, and we need to continue to have that happen.

The other thing that I just want to share with you is we're talking and we're going to be doing some studies and thinking about what's going on inside the facility in terms of the movable equipment and the material that's begin stored and supplies and the furniture, and getting our hands around what we may be doing to better protect the facilities so they can operate in a quicker manner and better understand what's going on in the operations and management side with the emergency management plans.

One of the things that we've been observing throughout the country is that there's often not a real good connection between what we're building -- the facilities groups -- and the operations and maintenance groups and what they're planning for their emergency response. And there's a lot to be learned in bringing those two together, so we're going to be working on that.

MR. NEARY: Well, there's a government-wide exercise that's taking place tomorrow and Thursday regarding emergency preparedness. My executive assistant and I will be going to an offsite location, along with other executives from VA, and I guess every agency of government is going to wherever they go when an event occurs. We will be put through a drill which I believe has to do with weapons of mass destruction, but we're not supposed to know yet --get the phone call to take our get-out bag and get going, you know. Again, thank you.

At this point Mr. Neary departed.

MR. BANGA: Before we start, I'd like to recognize here Phil Riggin, who's the Advisory Committee Management Officer. He not only manages our Committee, he manages 25 other committees.

MR. RIGGIN: You ably manage this one, Kris. I just help out with the other 25. But, again, I want to reiterate what Bob said. I appreciate your involvement in what VA is doing; your expertise and your advice on these issues are extremely important. Please accept the Secretary's apologies for not being here. His life has not been his own for the last 30 days, as you might imagine, with some of the issues that we've been dealing with at VA, and he is on the Hill and was unable to do both things. But I wanted to let you know that he's deeply interested not only in advisory committees overall, but certainly in the construction program at VA and how seismic issues are certainly a part and parcel of all that.

Again, Kris thanks for recognizing me and this committee is ably administered by Kris Banga, and I'm sure you all know that. Again, thank you very much.

MR. POLAND: All right, we're ready to move on our next agenda item by Fred.

10. Inspection of Facades update

MR. LAU: Thank you, Mr. Chair. Progress was made in incorporating the façade inspection program of VA facilities into the Facilities Condition Assessments Program. The facility condition assessments are conducted by the Consulting Support Service within FM, and they follow a three-year update cycle. In the past year, we have submitted the cost estimates for the façade inspections and also the statement of work to the Consulting Support Office, and also with that information we have submitted requests for funding for the fiscal years 2006, 2007, and 2008. Because of the timing of the funding and some remaining contracting questions, façade inspections are not going to be conducted for FY '06, but we're expecting to resolve those questions and start the program for FY '07. That's the status of the Façade Inspection Program.

MR. KNIGHT: Our goal is for this process to become an integral part of the facility condition assessment update process. It will always be a continuous updating and review and inspection process.

MR. POLAND: We appreciate you moving forward with this because it's something we brought to you a few years ago, and we're now making steady progress. We had a chance to talk about the scope of work that you shared with us yesterday, and Susan has some comments about that.

DR. NICULESCU: Right. The scope of work is very good, very clearly written and straightforward, and I just had one minor comment about Part 8(b) of the scope of work. I would like to suggest a minor change to it. It's defining the report that should be written about the façade, and the way it's written right now says, "Written recommendations for repairs of any severity." And I would like to make a motion.

If possible, that it would be changed to, "Written recommendations for three levels of severity: 1) Structurally unstable: emergency, must be repaired right away; 2) Will become structurally unstable, must be repaired within three years; and 3) In acceptable condition, should be inspected again in five years."

If that change could be made, I think that would be an improvement and would help the VA determine which items should be repaired immediately. It's in line with the way this is done in New York City, at any rate, and I believe in other major cities.

The motion seconded by Dr. Wood was unanimously carried.

MR. LAU: When we incorporate the inspections into FCA, the Level-3 severity requiring re-inspection in 5 years would exceed the FCA's 3-year cycle.

DR. NICULESCU: Well, if you're doing a three-year cycle in the FCA, then in three years would be more appropriate.

MR. LAU: So the default will be three years, no matter what the severity is.

DR. NICULESCU: Yes.

MR. LAU: So we'll just say, "No repair needed until the next inspection," which automatically will be another three years.

DR. NICULESCU: Right, that would be the third portion of the motion. "In acceptable conditions, should be inspected again in three years."

MR. KNIGHT: Well, let's clarify. You want the word "three years" in there, not the next cycle.

DR. NICULESCU: Oh. Well, the next cycle would be appropriate if the next cycle is three years.

MR. KNIGHT: I mean, if the cycle changes or the money doesn't become available.

MR. SIEGEL: It's probably better to give it a "three year" rather than "next cycle."

DR. NICULESCU: Okay.

MR. POLAND: So we're going to change the "five years" to "three years"?

MR. SIEGEL: Or perhaps you would consider "no more than five years."

DR. NICULESCU: That's appropriate, yes. Okay, so the item 3 would read,

"In acceptable condition, should be inspected again in no more than five years."

MR. SIEGEL: That's good.

MR. POLAND: Okay, we have a motion and a second to recommend a change to the scope of work for façade inspections. Any other discussion?

MR. KNIGHT: That's a good addition, and it certainly clarifies the necessary response, so I certainly agree with your motion.

11. Report on the ANSS Seismic Instrumentation Program

DR. WOOD: We had a slightly broader discussion yesterday, which was not limited to ANSS. And so I have a motion that has three parts regarding strong motion instruments in VA facilities.

The first part is that VA should take action to ensure a smooth transition of existing instrumentation from the National Strong Motion Program to the Advanced National Seismic System within the USGS and that all the strong motion data recorded at VA facilities are archived and available on the Internet.

The second part is VA should expand the strong motion instrumentation plan in support of emergency management activities.

The third is to organize a conference call with both Woody Savage and Bill Leith of USGS to solicit feedback on the VA proposal to ANSS that was submitted in 2005. Chris Poland and I should be invited to participate in that conference call.

MR. BANGA: The first part, where you indicated that the records should be available on the Internet, that, again, we will have to approach USGS to provide it.

DR. WOOD: Well, that's part of this transition from NSMP -- the National Strong Motion Program -- to ANSS. It's my understanding that -- right now, the instruments that are part of the National Strong Motion Program, it's very hard to get access to those records. It's not just at VA facilities. Because half the staff from the National Strong Motion Program retired, they're going to be incorporating those stations into ANSS, and they will have a database for engineered systems that's in cooperation with the California Strong Motion Instrumentation Program. So what we want to do is and I believe that you have modern instruments, make sure that there's a timely transition into the ANSS and that you know how to access records. I don't know how hard it is to talk about any archival records -- I think that should be discussed, but it's certainly -- records that are recorded in the future, you want to have access to them.

DR. MEJIA: Just a quick clarification: The archival of the records and providing access to those records via the Internet is actually done by the ANSS program, not the VA itself.

DR. WOOD: That's right. Because these instruments are maintained by USGS, and it used to be through National Strong Motion Program, when they make that transition to ANSS, then archiving the data should all be done through USGS.

MR. KNIGHT: Will we be able to access historical information when this transition gets accomplished?

DR. WOOD: I am not sure about the historic records.

MR. KNIGHT: In the meantime, should VA contact USGS and try to obtain historical data made available?

DR. WOOD: I think it would probably be a good idea.

MR. KNIGHT: For various facilities that we have that were impacted by earthquakes in the past.

DR. WOOD: Yes, I think that would be another thing to discuss with Woody and Bill when you have the conference call. We want to make sure we have the records from older structures. They were part of the National Strong Motion Program; and the VA needs to have access to all available records.

MR. KNIGHT: It was identified yesterday that we had some project designs going on that being able to provide the consultant historical or archival information would have been useful and helpful in the design of the seismic upgrade; and that we should make an effort to obtain that information or at least discuss that where it can be obtained.

MR. POLAND: I think what you want to do is ask them to put it in the Engineering Data Center with the other ANSS records on the Internet so you have access to them, because otherwise you're going to end up with an electronic copy of a record, then you're going to have to figure out some way to maintain it and distribute it and I'd suggest you just let ANSS take care of that for you. But I think you need to specifically ask Woody and Bill to go back and get the records from the earthquakes that we've had that are of significance, e.g. Loma Prieta, Northridge, Big Bear, Landers probably, maybe Whittier for which they've recorded for you -- they've got them somewhere -- and then bring them forward and get them in the engineering data center

MR. SIEGEL: Would they have Nisqually as well, or just California?

MR. POLAND: Yes. There should be records there. Do you have instruments at American Lake?

MR. SIEGEL: Yes we do. You just said "available to everyone." The Federal Government is very concerned about access to critical information. I don't know if that's going to create a problem.

MR. POLAND: I don't think it's critical information myself, but --

DR. WOOD: It's interesting information if you're designing a rehab or a new structure at that site.

MR. KNIGHT: It's available now at some level -- somewhat difficult to find, but it was available on recent projects. I think USGS goal is to make it available as requested. We need to run it by USGS.

DR. NICULESCU: What is the definition of critical information?

MR. SIEGEL: Would it be helpful to someone who wanted to do ill to our facilities?

DR. WOOD: Well, right now, they wouldn't be releasing any drawings of the facilities. All they would be doing would be releasing the records at that site. Now, your consultants who are doing the design would have the drawings.

MR. SIEGEL: We are in the somewhat Alice-in-Wonderland situation right now where we have certain interagency standards we must follow for physical security, yet those standards are noted as "For Official Use Only", because most agencies don't have the legal ability to classify documents, only a few can. Consequently, when we give our design standards to our consultants, each person who works on the drawings, not just the office or the firm, must sign confidentiality agreements, and we must keep those confidentiality agreements on file. It's a situation where, you want to disseminate the information, but on the other hand the information is not supposed to be disseminated. I just wonder if this falls into that category. It's a similar problem that exists between the Federal Government's emphasis on promoting e-commerce and putting projects out electronically for bidding purposes, and the counter requirement that you can't put the building plans out to the public. It's a very difficult problem.

MR. POLAND: Do you know if you share atmospheric information -- you must have temperature, wind, rainfall monitoring stations on your sites that are shared -- the information is shared. Do you know?

MR. KNIGHT: I'm not aware that we do that.

MR. POLAND: Okay, because this is the same thing. It's just -- you're just recording how strong something is shaking. It has no relationship to the condition of the building or its capability or anything else. It's just a record of how strong the ground shook.

DR. NICULESCU: Would it, in fact, be identified as a VA location or just as location number 237 or whatever?

MR. POLAND: Just a longitude and latitude.

DR. WOOD: I don't know -- and these would be things we'd have to ask -- of how things are identified. You're right, if it's just latitude and longitude, then there'd be no connection -- or no tie at all in the public information to the VA. However, what you're mentioning might be a serious issue with -- in trying to get a dense instrumentation array through ANSS, because one of the requirements there is there has to be access to drawings after the earthquake.

MR. KNIGHT: Are you aware of any other government agencies that have instrumented buildings that participate in the ANSS program?

DR. WOOD: It was my understanding that other agencies were participating, but I do not have specific information. Woody gave a presentation at the last meeting where he was talking about over 800 instruments that had been part of the National Strong Motion Program, and they were gradually transitioning those into ANSS for archiving, and also to make sure that the stations were up to date, so they were still using digital recorders as opposed to the film recorders. But I haven't discussed these specific issues with him. I think it's best discussed with them rather than relying on my hearsay information.

MR. SIEGEL: Could you please also elaborate on the second part of your motion?

DR. WOOD: Right now, it's my understanding that there might be one structure at each VA facility that has one set of instruments, usually in the basement. Because these facilities have multiple structures, immediately after the earthquake, you would be interested in trying to identify which structures are safe to occupy and which ones you'd have to keep people out of. By putting one or two sets of instruments in multiple structures on these facilities, you then would have information that would allow you to make very rapid decisions after the earthquake regarding occupancy and use.

MR. KNIGHT: As I understand it, it would be a significant expansion of the instrumentation of VA facilities that are at high level of risk. Very high and high seismic areas would have to be done first. But the good would be to provide this data to allow post-event data real time facility evaluation.

DR. WOOD: Right. Yeah, and one of the things that's happened is it used to be an hour before you'd get a magnitude estimate, it was days before they were releasing response spectra for an event, and now they have the shake maps -- I'm not sure if you've seen them, but they're intensity-type maps where within 30 seconds to a minute after the earthquake, they have contour plots, essentially, identifying the locations where the highest levels of damage occur. Caltrans, for example, is using these to then set priorities on where the highest levels of damage have occurred, they overlay the GIS of their bridges and they go out then and decide, oh, these four bridges are in the highest shaking area, we need to go to those immediately to assess them. And so other facilities managers get this information very quickly. Certainly less than 10 minutes after the event.

MR. SIEGEL: So in other words, these instruments will tell us how strong the shake was, but not how the building took it.

DR. WOOD: Well, if you have them only in the basement, they'd be telling you only what the ground motion is -- or only in free-field sites. If you also have them on, like, the roof, it's then giving you an indication of how the structure performed.

MR. SIEGEL: So in other words we should have it at both locations at our buildings.

DR. WOOD: I think when they've been trying to talk about it for emergency management applications -- immediately after the event, is it safe to go in the building or not, you need to have it at a minimum of two locations.

MR. SIEGEL: Just knowing what the ground motion was, it seems to me for the purpose of knowing whether the building can be occupied, you absolutely need both. Remember at Palo Alto, the main building had a plus one G at the roof.

MR. POLAND: But it also had 60 percent G or 80 percent G at the ground. I don't remember.

DR. MEJIA: Yeah. I don't recall the exact number, but it was quite substantial. I was going to say that where you have several facilities within a region that is affected by a large earthquake, it is helpful, even if you don't have all that information, just to know how strongly the ground shook at the various facilities, because that might help you to focus resources on that area where the ground shook the hardest.

MR. SIEGEL: But isn't it potentially possible, or probable, even, that if you have a building with a high degree of vertical motion at the roof, relatively lower at the basement level or ground level, that's more of a danger than one that had a high ground motion but no motion at the roof?

MR. POLAND: Actually, I'd say it would be the opposite of that. If you had a building that had a high ground motion and no motion at the roof, that means it had broken off from the ground, which -- something's gone wrong. Buildings naturally vibrate like flagpoles if they're tall, and so you're going to get a higher level of acceleration at the top anyway. What really matters is what's going on inside the building.

MR. SIEGEL: How do you know that from the instrument at the bottom and at the top?

MR. POLAND: When the building is designed, there's an expectation on the part of the structural engineer about what kind of movement and forces the building's going to experience and how strong the ground's going to shake. So, just like we were talking about the short period acceleration and the one-second, it's that same thing. If we record an earthquake that equals those design values, we know that the building is experiencing a design level earthquake, we'd better get out there and look at it and see what's happened. If you're going to send an automatic message out, and you recorded that strong a ground motion, you'd send out a message that said, send the engineers, we've got to find out what happened. If you got a ground motion that was a tenth of that, and the engineer knew that that wouldn't even get the building warmed up, for instance, then there'd be no reason to send an engineer automatically. If you saw significant damage, you might have somebody come and look at it. So you can set thresholds, even with a little bit of information. Even with a shake map, you can set a threshold because the shake map will tell you for a whole region whether it's -- what the

intensity level was. Now, it's not very accurate, you know. If you say that a whole area experiences strong shaking, it may only be a couple of places. If you have an instrument at the ground near the building you've got a better idea, but you still don't know what's happened throughout the height of the building, but at least you know how that compares to how strong you think the building is. If you have the building instrumented, and you can start predicting how much it's moving, then you have the best chance of understanding what its specific damage is. So there's value in all this, in giving automatic alerts and you've heard me say for years that the tendency of people is to evacuate buildings and leave them evacuated when they don't need to because it's such a violent experience. So that -- the building can experience, let's say, 20, 30 percent G, and the interiors can be quite scattered, but the building's still safe and could continue to be used if it needs to be, especially if we have critical patients that really can't be moved, or you have people that need to be kept in secured environments. So that's where the instrumentation can really help.

MR. KNIGHT: And in that frame it would help make the decision whether you need to evacuate critical patients or patients who are intensive care patients or other patients that are difficult to move and life-threatening to move them. I mean that would be a major justification for that kind of decision.

MR. SIEGEL: It would seem to me that since we have 45 stations where we have recently replaced old analog instruments with modern digitized instruments and a total of 56 instruments. It would seem to me our first priority would be those institutions that do not have at least one at the basement and one at the top. That would be our first priority because those 45 locations are the locations which were deemed to be the most critical.

DR. MEJIA: I would suggest that priority should be given to those areas of high and very high seismicity, where the likelihood of future earthquakes is greatest.

MR. BANGA: That's how we picked up those 45 stations. They are located in high and very high areas of seismicity,

DR. MEJIA: And as resources allow, then you can expand that to other areas where the likelihood is lower and you might not see an earthquake for a long time. But those areas that are likely to see an earthquake in a relatively short time should be the focus of this program, this idea.

MR. SIEGEL: New York City has finally adopted an earthquake code.

DR. NICULESCU: Yes.

MR. SIEGEL: Does it say anything about instrumentation, do you recall?

DR. NICULESCU: I don't know.

MR. KNIGHT: But now, as I understand this motion, it basically changes the focus of the seismic instrument program. Previously our program was just to provide data that helps us design buildings. The focus of this program, as proposed in the motion, is to use those instruments as an emergency planning tool after the event.

DR. WOOD: Right, so we're coming up with another reason. I mean, the data that you would collect could be used immediately after the event for emergency management would also be very valuable the next time you're building another structure at that location.

MR. KNIGHT: But it's really a change in focus of the seismic instrument program.

DR. WOOD: I think it's only because of recent advances within ANSS. The stations have telemetry, so you get the records very quickly. They have come up with ways to very quickly process the data and then to push it out. So, for example, there's a software package called PAGER where you register with USGS and you say, I want every earthquake over a certain magnitude. You can also limit latitude and longitude. So you could have -- you have your different regions -- your regional emergency managers could get notification of earthquakes that occur within their regions, so then they know to start focusing their efforts and do more detailed study -- do I need to send people out to look at it. You can set tolerance thresholds. All these sorts of things are available to the general public.

MR. KNIGHT: So the technology has allowed this to be used for an emergency management tool where previously that was not an option.

DR. WOOD: Previously, especially if we go back to your old film recorders, it took months to recover the records and then digitize them. With the modern equipment, everything has become very quick. And the December 2004 tsunami that happened in Sumatra made everyone recognize how important early warning -- early notification after an event is. So that really gave a push to USGS to get information out as fast as possible. And then Katrina has also highlighted how if you don't have information and you're trying to make decisions without that information, you often will make the wrong ones.

MR. KNIGHT: As I understand it, it's a relatively low cost approach to dealing with some of these emergency response situations, because the instruments themselves individually are not that expensive. USGS has a system in place now that can use that data and provide it instantly, as you pointed out -- so I mean these are all elements that have changed over the past few years that would allow this to be much more effective, and using it as an emergency planning/emergency response tool.

MR. SIEGEL: Another question about these instruments, please. They are, of course, primarily seismically oriented. Are they of any great help in hurricane areas?

DR. WOOD: The way they're set up right now is there is an acceleration threshold, and if you exceed that threshold, the instrument starts recording. They have some structures that have continuous monitoring, and I think the continuous monitoring would be the type that you'd want for hurricanes or tornados or something like that. You're now talking about another level of complexity, which I think -- if you have some extremely vulnerable structures, you might want to consider it, but it does make things more complicated. The instruments we're talking about now, are well defined, so USGS personnel know what type of instrument to use, how to install them, and how to interpret the data quickly. But, you know, it may be good to ask USGS to come over and give you a presentation of the capabilities. You can then talk about how it could affect your emergency management planning, and then decide if it's worth moving forward. But things really have changed in the last few years.

MR. POLAND: I would imagine that if we actually get the briefing about what you're doing with your emergency planning and how you trigger the inspections and how all that's going on, then we might be able to better focus how to use this capability. I don't know that anybody's using instrumentation to measure in-building movements in wind. I don't think that's happening. And the instruments that are in high seismic regions generally are not hurricane-prone regions, so we don't see any normal overlap.

MR. SIEGEL: New York is not high seismic.

MR. POLAND: High vulnerability.

DR. MEJIA: I'd actually like to follow up on Kurt's question, whether there is a significant change in the focus, and I don't see it that way. I think that using the instrumentation and the recordings to provide feedback into the design process is still the main focus for providing instrumentation. I view this item B specifically more as an expansion on the focus. In addition to using the instrumentation for that, it can be used for emergency response purposes.

MR. SIEGEL: It's not a change in the focus, it's an elaboration.

DR. WOOD: Or it's an enhancement due to changes in technology.

MR. SIEGEL: We, in our questions, are also thinking about appropriate presentations for our request for money for additional instruments.

DR. WOOD: But that's why I think it would be good for you to hear it directly from USGS. You can hear about how Caltrans is using the information. I know BART (Bay Area Rapid Transit) is also working with USGS. Other groups, such as Bank of America, are also interested in getting information quickly after an earthquake, they want to know when an earthquake occurs and all their ATM machines go down in an area. So there are many different people using this information in different ways, and VA would have to decide what way is best for them, but it's something that was not available even five years ago.

MR. KNIGHT: I think the presentation's an excellent idea, and we'll certainly pursue that and we'll need to include our emergency management personnel in such briefings so they can get a better understanding of how it can help them, because the support for funding such a program very much enhances other programs in VA. So I think it's an excellent idea and we'll certainly pursue that.

MR. POLAND: I'd just like to clarify that Sharon's talked about two different kinds of monitoring. One is weak-motion monitoring that reports back on magnitudes and distances, and the other is strong-motion monitoring which is the actual instruments we've been talking about. In my experience, the strong-motion monitoring really gives you a much better tool to work with and to understand what's going on at a particular site. So I really think you want to go in that direction. Some of the earlier announcement programs that are out there and still running that tell you about a magnitude and a distance are interesting -- they don't give you enough information about what's happening at a particular site -- and we have the shake map capability now that's based on strong motion instrumentation that gives you a much better idea about what's happening in a particular area.

DR. WOOD: Right. But I mentioned -- that product is called PAGER. You may want them to discuss it because you have regional offices, the person at the regional office may not feel the earthquake when it happens at one of your sites. And if they got an e-mail or a pager or voice-mail notification that there was an earthquake above a given magnitude, that type of alert is very helpful.

MR. POLAND: Okay, we have a three-part motion regarding the further use of ANSS.

The first part of the motion has to do with making sure we get a good transition from the National Seismic Program to the ANSS program and make sure that the historic records are available for design because that's what they were always intended to be available for. And we have some evidence that they're not readily available or understood.

The second is to develop program related to emergency response, which is what we've just been talking about.

And the third is to get together and find out how we get on this last round of proposals to instrument new buildings -- instrument additional sites under the ANSS program so we can have more VA sites instrumented.

After all this discussion, the motion was seconded by Dr. Mejia and unanimously carried.

12. Buildings located in high seismic areas and designed/constructed in the '80s. Do they need to be reevaluated?

MR. BANGA: Let me first give the background for this item. We started the seismic study program six years ago under FEMA because of a new executive order 12941 signed by the President in 1994, which required all Federal agencies to take a seismic inventory of their owned buildings, estimate the costs of mitigating unacceptable seismic risks in those buildings, and submit the data to FEMA, which was to submit a comprehensive report to Congress by the year 2000. That led us to discover many things, which required us to do additional studies for many of our buildings. When that program was developed we gathered data of 6,000 buildings. We concentrated our efforts to study buildings in high seismic areas. In developing the inventory of seismically vulnerable buildings we established an in-house rule that any building which was designed after 1978 would be exempted from seismic concern, because these particular building were designed to meet the requirements of H-18-8, published in 1975, when seismic requirements were much more stringer than any other prevailing code in the country at that time. Just in the last month or so, a renovation project got started in Reno, NV. This lead to questions on how is the building seismically. We looked at our database and saw that that building was checked in 1982. It is a concrete building with shear walls, and it came out all right. In fact, they did some field testing of the structural elements, and the concrete strength showed as 5,500 psi. So the consultant opined that this building was seismically safe. However, when the renovation project still was on going, the consultant working on the project, questioned the detailing requirements, "Does that meet the current detailing requirements, as the building was completed in 1945? Most likely it will not meet the current requirements."

DR. WOOD: How many stories?

MR. BANGA: The building is divided in six or seven parts, and some are four, five, and six stories. They are all rectangular in shape with expansion joints ranging between two inches to six inches. The question that is raised now is that it probably does not meet all present detailing requirements, such as the current ductility requirements. So it needs to be checked not only from the angle of force level requirement, but also detailing requirements. We are going ahead with that process now, and we are studying that building in detail. In fact, as I'm speaking, the building is being studied. As there are many more such buildings, which we had exempted. So, I'm asking whether it is time to look at those buildings and study them. We made a list of buildings starting from 1980 to 2002, and came up with approximately 140 buildings. But if we short-list just the '80s buildings located in high and very high seismic areas, maybe we have only 25 or 30 such buildings which we need to study.

DR. WOOD: Kris, I'm sorry, this building was exempt from consideration or it was evaluated in '82 and then the evaluation was not updated?

MR. BANGA: Yes, that is true that the evaluation was not updated. The result of 1982 study showed that this building passed all force-level requirements, so we exempted it from any further study. We have had two seismic studies programs. One we did in mid '70s and '80s, and the other program was started in 1998 complying with Executive Order 12941. The issue here is that the building was exempted in spite of the fact that it was done in '45, but was checked in '82 and found OK.

MR. SIEGEL: Exempted it from further study. Correct?

MR. BANGA: Yes, that is correct. As I said before, we exempted other buildings from further studying if they were constructed after 1978. And again, I'm repeating that that is because those buildings would meet the seismic requirements of H-18-8. But now with the latest development on Reno building, it's prompting us to ask you whether we are in line with accepting the study of buildings done in the '80s?

DR. MEJIA: Well, I have a further question. Are there many other buildings that were exempted from the 1998 study that are actually older than 1978 that bear checking?

MR. BANGA: Yes, there are few cases of such exempted buildings. There is another part of the exemption, and that is compliance of nonstructural elements in the structure. In a few instances current study indicated the structure complied with current seismic requirements, but nonstructural elements did not. In such cases we still have to go back and do the retrofit work.

DR. MEJIA: Right now, the question in front of us is related specifically to buildings designed or constructed in the '80s. And so, does the question apply to buildings designed or constructed before then, but that were actually, because of studies, exempted from the study program in 1998?

MR. BANGA: A few buildings did pass.

DR. WOOD: How long has the requirement been in H-18-8 that your calculated displacements during design have to be half what the code permits?

MR. BANGA: The stringent drift requirement has been in H-08 -8 right from the beginning, i.e. since 1975. However, when we made the major rewrite of H-18-8 in 1995, to bring VA seismic design requirements more in line with the modal codes, we made the story drift limitation to 50% of the values allowed by UBC, half the requirement

MR. POLAND: But that's because the forces were twice as high.

DR. WOOD: See, what I'm wondering is, we don't really have buildings designed to meet the provisions of UBC. We have buildings that are much stiffer, and that's what Kris has been talking about, about controlling drift. So I had forgotten that nuance yesterday when we were discussing it. My level of concern is less, I think, since what you designed for the higher standard.

MR. BANGA: Back on the Chris Poland's statement about the force level. Yes, the force level was higher and a comparison of the two drift requirements for ductile steel moment frames as an example indicates: H-08-8 limited drift as .0053 times the story height, and UBC at that time limited it to be .0063 times the story height.

MR. POLAND: You've also need to remember that the forces in H-08-8 were higher than UBC. But this is a little bit different issue than we talked about yesterday.

DR. MEJIA: Well, it may include some buildings that we weren't really thinking about yesterday.

MR. POLAND: Yes. And these are the buildings that passed the evaluation that the VA did in the '70s and early '80s, the old buildings that passed that were then exempted from the '98 study when they were trying to determine their essentially high-risk buildings. So then the question becomes do we want to go back and capture buildings that were designed in the '80s?

DR. MEJIA: Well, we were thinking that we would first of all address steel buildings, because we've learned something new about those buildings as a result of the 1994 Northridge earthquake experience, and therefore without the advantage of that knowledge, they were exempted from the 1998 study. So, perhaps instead of focusing only on buildings built in the 1980s we expand the focus to all buildings that were exempted from the 1998 study that are steel buildings in high-seismicity areas.

MR. POLAND: The only reason I'm pausing is I'm thinking about a concrete building that was done early, that's tall, like Reno, but instead of being in Reno, it's someplace else, and maybe it had the strength to meet the force requirements, but it wouldn't meet the detailing requirements and we don't really know if it has the ductility necessary to perform at the level we desire.

DR. MEJIA: But those requirements didn't change significantly, did they, between, say, 1978 and 1994? The main concern we had yesterday was related to the steel buildings because of the changes in knowledge that occurred in the early 1990s, because of lessons learned after the Northridge earthquake.

MR. POLAND: That's right. Actually it's a concrete building that I'm sitting here worrying about. It was checked in the late '70s and early '80s to this new VA code. The buildings that we were worried about are the older buildings that were studied in the '70s and '80s were studied for this code, so they were studied for the higher force levels. So the fact that they passed at those higher force levels means they don't need a lot of ductility because they were shown to be extra strong. It'll be interesting to see how the Reno building turns out.

DR. WOOD: I think some of our decisions may depend on those results.

MR. POLAND: I kind of like what Lelio is suggesting about the motion, and that is to just broaden it to include the class of buildings that we're worried about because they would not have been checked. The process used before did not recognize the weakness in brace frames and the welded moment frames. After the Reno study is done, maybe we should go back and think about whether we want to worry about other buildings.

MR. BANGA: Do you want to wait until then?

MR. POLAND: Yes, let's wait for another year and let the Reno study happen.

MR. BANGA: Yes, that might not be a bad idea.

DR. MEJIA: We could table it until next year.

MR. POLAND: You know that I'm not a real fan of going back and redoing seismic studies. Not until we get all the real bad buildings taken care of, so I think we do have the time to be patient here and make a deliberate decision. So you want to redraft your motion?

DR. MEJIA: Well, do we need a motion in the first place, just to do that?

MR. KOFFEL: There is no motion.

MR. POLAND: Okay, so what we're saying is that we'd like to think about this again next year, and we'd like to hear about how the Reno building turned out.

DR. MEJIA: I drafted a motion, and it will be ready for next year.

13. Fire Safety Issues

MR. KLEIN: I have two issues to discuss. The first is that VHA Directive 2005-007, Fire Code Reviews of Delegated Construction Projects, was issued during 2005. This requires that a fire protection engineering firm or fire protection expertise be part of the design and construction of selected projects as part of the AE team. This includes all delegated major and minor projects unless exempted by the network Director and any NRM projects where the scope of work is primarily fire protection. "Primarily" is defined as being greater than 50 percent of the total project cost. In addition, the directive requires an independent third party fire protection and life safety review of all major and minor projects and any NRM project where the scope of work is again primarily fire-protection or that includes significant renovation and construction where specific fire codes and standard requirements would be applicable.

Are there any questions regarding the Directive?

If not, the second item concerns our IDIQ contract for fire protection and life safety code reviews. This contract is currently coming to the end of its term, and we plan to reissue the contract with an expanded scope of work. The draft scope of work is still in review by legal authorities, but we are proposing that in addition to conducting project reviews at various phases, the IDIQ would be available to witness the acceptance testing of fire protection and life safety equipment and systems, assist VA personnel with on-site inspections, and develop Life Safety Code equivalency requests.

MR. POLAND: Any comments, questions?

DR. MEJIA: I think that seems like an excellent idea, David, and I want to commend you and the rest of the staff for being very proactive on that.

MR. KLEIN: Thank you.

MR. POLAND: Bill, are you content to follow that?

MR. KOFFEL: Yes.

DR. NICULESCU: I have a question. Was this not in effect before?

MR. KLEIN: The original contract, which has been in effect for several years, was designed to provide the code reviews. Some facilities found it convenient to request the IDIQ to perform other work, so we decided to include these tasks in the scope of work for the new contract.

MR. KNIGHT: One of the contracting issues related to this IDIQ contract is unless you have these items listed in the contract, then we are legally not allowed to contract for this task.

DR. NICULESCU: Oh, okay.

MR. KNIGHT: You have to list everything that you want the consultant to do as part of the IDQ/AE contract to allow them to address those other issues. So, it's an approach we've taken on our ID contract. We expanded the type of services that IDQ/AE can provide. General Counsel has supported the approach, and it's much more efficient and much better use of IDQ/AE firms.

MR. KLEIN: I should point out that facilities are free to choose any fire protection engineering firm they wish, but we provide this contract in case they want to use the default firm.

MR. KNIGHT: That's a national contract, is it not?

MR. KLEIN: Yes.

MR. KOFFEL: Would you want to consider expanding the scope further to include some minor design work, such as maybe replacement fire alarm systems or something like that? Because that would not fall under the IDIQ that facilities management have, is that correct?

MR. SIEGEL: No, they could do that.

MR. KNIGHT: Well, but the ones we have are typically for major projects, and not for minor projects.

MR. SIEGEL: Yes, but they could be used for minor projects.

MR. KNIGHT: That I don't know.

MR. KLEIN: I think that VA staff should consult on this, and we will address that one way or another.

MR. KNIGHT: How many IDQ/AEs in the past have you hired?

MR. KLEIN: There is only one under this contract.

MR. SIEGEL: Would you want the same firm that inspects be the same firm that designs?

MR. KLEIN: That would be not be allowed under the Directive.

MR. SIEGEL: It shouldn't be.

MR. KLEIN: Right.

MR. SIEGEL: So you'd need more than one firm.

MR. KNIGHT: Do you feel there's a need to have more than one IDQ A/E? I don't know whether that would be any value to have more than one IDQ/AE for these tasks.

MR. SIEGEL: But I think you'd have to have more than one, if you have one do the inspection and one do the design.

MR. KLEIN: Right.

MR. SIEGEL: You have to have two.

MR. KNIGHT: That's my question. Is it intended to have more than one?

DR. NICULESCU: The inspection and the design don't have to be done by IDQ whatever they are.

MR. SIEGEL: No.

DR. NICULESCU: They can be done by firms hired directly?

MR. SIEGEL: Yes, except that for such a small project it's very difficult to do, because of the time requirement for selection, which is one of the main reasons for having IDIQ firms.

DR. NICULESCU: Right.

MR. KOFFEL: Which actually brings up a separate question, somewhat unrelated to what David's indicated. When you use an IDIQ for design, and you use an IDIQ for your reviewer --

MR. SIEGEL: Different firms.

MR. KOFFEL: I understand it's different firms, but when do you select the reviewer as compared to the design firm?

MR. SIEGEL: The design firm usually before the reviewer.

MR. KOFFEL: Then that presents some difficulties for firms that are on multiple teams -

MR. SIEGEL: Well, perhaps.

MR. KOFFEL: -- in the sense that they may be on the design team and they may be on the same team that you choose for the third-party review, which then requires them to go out and get another party who's not previously part of their team. I was really questioning is there any reason why the two contracts can't be decided at the same time.

MR. KNIGHT: In the major program, the design team is a separate Brooks Act selection. So the IDQ/AE's, can only progress up to, I think, schematics.

MR. SIEGEL: Yes, but that's exactly the point. You would probably want the fire code review of designs in the schematic phase.

MR. KNIGHT: But I think they'd have to look at the contracts. Typically, the IDQ/AE's are not used for design. There's a separate firm selected under the Brooks Act for progress that does the design of major projects.

MR. SIEGEL: That is a differentiation of the word "design" that I don't feel is appropriate. Schematics are design. They may not be Preliminaries or Design Development, but they are design. So design is design. At what stage the design is, construction documents are design.

MR. KNIGHT: Well, I don't know. We'd have to look at the actual wording in the document, but I know on major projects, we select a firm to do the entire design and then we use our IDQ/AEs as peer review.

MR. KOFFEL: Well, I know for a fact that it has been an issue, and it has been issue on the IDIQ where the design was issued to one firm, the review was issued to a separate firm, and there were some of the same consultants doing the work. Well, they ended up not being able to do the work, but were part of the original team that was supposed to be doing the third-party review. And then that forced a change in one of two design team -- one of the two teams, either the design team or the review team.

MR. KNIGHT: Or the review team. Well, the review teams are much easier to contract with since they're IDQ contracts, it would be very easy to issue a separate task order to a separate IDQ.

MR. KOFFEL: Except -- you know, if you're talking -- let's talk fire protection right now. If you're talking about fire protection, that's just one aspect of that team. So you would be saying that the whole team -- that the IDIQ would then go to another team, and that's not necessarily advantageous to the other members of the team. The alternative is you find another fire protection engineer to do the review for that one project.

DR. NICULESCU: Isn't it possible to change fire protection engineers for a single project?

MR. KNIGHT: You'd have to look at the specific language in the IDQ/AE contract. Does it require a stipulated team up front and then use that team? I don't know.

MR. SIEGEL: I would imagine it would -- that master contract, so to speak, would allow for substitution with VA approval. You have to allow that because of work load, sickness, et cetera.

MR. KOFFEL: But, I mean, some of these are small business contracts and some of the small business firms have a little bit more difficulty than trying to fill in with an alternate consultant. And again, if you know about it ahead of time, if the two are awarded simultaneously, it can be addressed right up front rather than have somebody partway through the design, then they're -- now they're precluded from being part of the third-party review.

MR. KNIGHT: Well, the IDQ contracts are set for a five-year period, so they're hired in one process, Brooks Act process, and then they're under contract for five years. It's just a matter of when the contracts are issued and notification of Task Order is given. Again, getting back to the minor program, should there be more than one fire and safety IDQ/AE?

MR. KLEIN: It certainly would not hurt to have more than one. I can not think of any reason why we shouldn't have more than one as long as this is acceptable with the contracting officer.

MR. KOFFEL: I just brought up the design issue -- I'm aware of another federal agency that has a similar -- has similar IDIQs, and yes, they have multiple firms out there, but that they have expanded that to make those services available to the facility as well.

MR. POLAND: So is there an impromptu recommendation here you'd like to make?

MR. KOFFEL: No, I think I've just raised the issue, and they indicate that they would give that consideration.

14. Structural Advisory Committee Charter.

MR. SIEGEL: I have a copy of the new charter which was signed by the Secretary on April 14th, which I am happy to give you all. And as you're aware, this charter must be renewed every two years.

15. Physical Security Progress Status

MR. KNIGHT: We have discussed it some already today, but basically, VA has had a program in place since 2003 to conduct assessments of all of our critical facilities. That has been completed. We have conducted assessments of 140 separate sites, and of those, 49 were full assessments where we have a multidisciplinary team go out, and identify their vulnerabilities as well as provide the facility with recommendations identifying mitigations to address those vulnerabilities. The data has been put in the database, and there's a tracking module associated with that database that's being rolled out now that will allow the medical centers to go in and identify what they've done to address the vulnerabilities that were documented in the hard copy report that was provided to them. That will give us a record then of how VA is progressing in addressing the vulnerabilities identified in the assessment reports. The VA assessment process has been, in essence, adopted by FEMA in FEMA 426 and in FEMA 452, and VA is ahead of many agencies in actually having completed assessments and put in place a system that allows us to track implementation and programs that address those vulnerabilities.

MR. SIEGEL: It's interesting that when FEMA took our material to develop 426, one of the things they did besides enlarge it from the health care centric approach we took, they emphasized terrorism aspects and deemphasized our multi-hazard approach, which was interesting because FEMA always had a multi-hazard approach. However, now that they've issued 452, they are about to remake the documents more multi-hazard.

DR. NICULESCU: This was before and after Katrina?

MR. SIEGEL: Probably that was the impetus.

MR. KNIGHT: The preliminary information suggests that the VAMCs are making significant progress in addressing vulnerabilities. They tend to be some of the lower-cost ones because they're easily done, but nevertheless, they have all taken the effort very seriously. The directors were briefed in all cases, and generally the directors were very interested in the assessments and figuring out what they can do to address the issues. Funding is always a problem with VA. These monies for correcting the deficiencies have to come out of existing budgets or in association with other minor projects that are underway where physical security may be an element. But they have made progress in doing that, and we're very pleased of the progress. So program is moving well and has been very successful. The reports are protected. There are three copies of reports available. The database that holds the physical security information is protected in that only selected officials have access to the selected levels of the data. One medical center will not know what another medical center's situation is.

MR. SIEGEL: The three hard copies are located, as we've stated before, one we have locked up in our offices; one is locked up in VA's Office of Policy, Planning, and Preparedness; and the third one is at the institution with the Director. He is free to distribute it as he requires. Sometimes the material is kept at the Chief Engineer's office, sometimes parts of it might be given to the Safety Officer, et cetera. But they all realize it's "For-Official-Use-Only" information.

MR. KNIGHT: This assessment process also included all of our CARES projects. We meet with the design team that was selected to do that project, and they are part of the assessment process. Our consultants go out and meet with the design team on the project as well as the engineering staff, and others at the medical center and our own project management staff. They would then go over the physical security issues. So the project consultants have an early indication of where VA is headed and the kind of vulnerabilities that need be addressed. Of course, many of the vulnerabilities are site vulnerabilities, and may not be within the scope of the particular project. However, the design project is able to address vulnerabilities appropriately within the scope and funding is available. We include the project design teams as part of the review process when those AEs had been selected and projects were proceeding. That completes my update.

DR. NICULESCU: I have a minor detailed question. We discussed this at length last year, and I think there was some discussion of the distance that you wanted to hold people away from the facility.

MR. SIEGEL: Setback distance.

DR. NICULESCU: Setback. And I think at one point it was discussed as 100 feet and one point 150 feet. I wonder, was it ever resolved, and what do we do in urban areas?

MR. KNIGHT: An element of our Physical Security Strategies that was signed by the Secretary in May of this year identifies a 50-foot setback requirement as long as there is controlled safe access or the capability of controlling access into the site. It's basically three levels of control: the site access control; the building access control; and then within the building, critical areas access control. For urban centers, we'll have to deal with additional protections at the building level, glass resistance and other structural and building architectural issues, that would mitigate the inability to provide a 50-foot setback.

MR. SIEGEL: The Interagency Security Committee's initial standards called for a 100-foot setback, which meant that nothing could be constructed in Manhattan with their 200-foot north-south blocks. So obviously, that didn't work. I don't know whether they had any architects or landscape architects involved with the Interagency Security Committee when that decision was made. Certainly none that was familiar with Manhattan.

MR. KNIGHT: For example, in New Orleans, we are planning a replacement hospital. They have to replace the damaged, or flooded facility. Even though it's a new 28-acre site, in which we're going to build right now, the planning is to have a joint facility between the university and VA, both on the same site. With a million-and-a-half to million and three-quarters square footage of space, for the vast majority of the place, we can meet the 50-foot requirement, so it has been achievable on that urban site. It's going to be right downtown in New Orleans, a few blocks from our existing facility, right off Canal Street. It's certainly a problem in existing facilities. For new facilities, we can achieve the 50-foot setback. We've been including 5 percent monies in those projects' budgets to address the physical security issues. Our preliminary indications on the Las Vegas project that is completing schematics design indicate the 5-percent number is probably adequate. We have a great deal of land there, so there's no concern of setback.

DR. NICULESCU: Five percent wouldn't be adequate in most urban areas because you'd have to purchase extra land.

MR. KNIGHT: It's an issue that VA is dealing with, and when we're doing site evaluations, looking at new sites in Orlando, Denver, and New Orleans, all three new sites, setback and access control have been identified as requirements when looking for sites. So, that's somewhat in discussion. I think our standards will deal with that.

DR. NICULESCU: See, the thing I'm struggling with in my mind is, in New York we have lots of veterans, we need to provide them services. We can't afford 50-foot around every building. This is sort of changing the nature of veterans' hospitals. They have to be in outlying suburbs where the land is cheap enough, but then we have this intensity of people, veterans who need assistance in the center of the city, and where are they to go?

MR. SIEGEL: The classic example of this problem occurred in the State Department, where they were requiring a 400-foot setback. To get enough land in many parts of the world, that would mean they couldn't locate the new embassy downtown, they couldn't locate the embassy anywhere except in the, let's say, the west of town when the residential area was in the east of town, because they couldn't locate enough land in that area either. The staff of the embassy there had to drive through the urban core from the residential area and go through the urban core to get to the new embassy site, exposing the staff to hundreds of thousands of incidents a year. It's been a real problem, and now some of the newer embassies, when possible, are therefore including the housing within the embassy compound.

MR. KNIGHT: The strategies apply to mission critical facilities. The strategies have four levels as Lloyd mentioned. There's mission critical, and life-safety protected only, both new, and existing have different standards for each one. The 50-foot setback is not necessarily a requirement for an existing facility. So there are different standards for those four categories, and for critical buildings the 50-foot setback is a requirement.

DR. NICULESCU: So a clinic would not be a critical building.

MR. KNIGHT: Well, certainly not smaller clinics, but the debate is whether large clinics over 100,000 square feet, should be defined as a mission critical facility, because the goal here is to provide service in the times of an extreme event. Clinics are one of the assets in the community that provide service in an extreme event. So the question is whether they're mission critical or not. I would think for a new clinic right now, certainly we would have that requirement of 50-foot setback. There's a whole series of smaller clinics: the CBC, the doc-in-a-box type small clinics VA has been expanding for the last three or four years fairly rapidly. They provide a lot of services in number of those urban areas and whatnot. That's, in essence, where we're at right now with our 50-foot setback.

MR. SIEGEL: There is another problem that we're considering relating to the clinics, and that is many of our clinics are rented facilities designed to suit. Rented facilities are by and large covered by GSA's standards, which are really not standards for health care facilities.

MR. KNIGHT: There's an ISC standard for facilities. It's the document that we're complying with on leased buildings, the Interagency Security Criteria.

DR. NICULESCU: Do those leased buildings have a 50-foot setback requirement or not?

MR. SIEGEL: No. We are considering that problem too, because some of those get to be very, very large.

MR. KNIGHT: Now, about the new standards themselves, yes, we've produced the strategies document, we're underway with a contract to be completed, hopefully in

December of this year, to have a Physical Security Design Manual. That will outline more specific requirements: what type of fence, how strong a fence, bollards, how strong of bollards, progressive collapse, what the extent of that is, whether it's just for exterior columns or all columns or columns that are in the lobby area, protecting the façade of the building, at what level of blast do we protect it; what force levels do we think is appropriate for areas around the front entrance where there is potentially a blast issue; etc.

MR. POLAND: Will there be any consideration given what do when they decide to increase those requirements when you can't have the 50-foot setback?

MR. KNIGHT: Yes. So that's going to be put together into a physical security design manual and other of our manuals that will be impacted by it. It's going to probably include some specification development on enhanced access control systems and CCTV, of which we have I don't think appropriate specifications now. So there's an extensive effort to expand and, you know, bring those up to the current reality and technology.

DR. NICULESCU: We've been talking about high seismic zones and so on. Is there a high extreme event zone mapping and --

MR. SIEGEL: In a certain sense, yes, but not a map. The Department of Homeland Security issued a list of, let's say, 22 cities which are the most likely to be attacked; which was revised to ten (10). I'm sure Oklahoma City's not on one of them. So, what do you do? The other thing is NIBS' initial group of country-wide multidisciplinary experts who did the first report didn't see our facilities as a prime target. But we have received FBI warnings that certain of our hospitals were potentially targeted. However, a lot of our facilities are located near other obvious targets; that is probably a more likely scenario: problems caused by some nearby target located in our area.

MR. KNIGHT: The approach on VA's basic construction project, at least in a major program, which are defined as 7 million or over all facilities are going to be designed to adopt these standards when they are completed; all new, or major renovations are going to meet those requirements. Now, the issue of how you prioritize, we've identified a whole series of vulnerabilities for existing medical centers. We've been requesting funds, although we have not yet received any, and developing budget requests for future years for the medical centers to use to address physical security at their existing facilities. When that program is funded, we'd have to develop some sort of a prioritization methodology, i.e., possibly the DHS At-Risk Cities would be addressed first. We wouldn't want to put money in Mountain Home or in Iron Mountain, Michigan, as opposed to putting funding at high risk or high use locations. In the interim, medical centers are addressing their vulnerabilities, as I said, as part of an existing project, and using the smaller lower-cost ones for minor, small projects.

DR. NICULESCU: In this security thing, is there any discussion about the height of the building?

MR. KNIGHT: No. You had brought this up from last year. There was a motion, and while we didn't address that motion in the Strategy. The strategies were completed and it was beneficial for us to not change them, because of the critical thing was to get them through the VA process, get approval of the Undersecretary for Health, and at the Secretary as soon as possible.

MR. SIEGEL: The height is usually determined by the amount of land we have. In almost any area, we start out by asking usually for at least 60 acres. We sometimes end up with, as Kurt said, 27 acres in an area where there are going to be two hospitals. So, you know, you have no way to accomplish it except by going up. Even in some of the other areas, we usually end up getting great deal less acreage than we ask for, and we have little choice.

MR. KNIGHT: It's an issue in urban sites, because, VA typically doesn't like to build parking garages, we prefer to have surface parking, which really is a driving force behind the need for larger sites. We prefer not to have multistory seven- or eight- or ten-story buildings, we much prefer to have a four- or five-story building. But the issues that were discussed in last year's meeting about site selection will be addressed in a general way in our Physical Security Design Manual.

DR. NICULESCU: Well, actually, the site selection is, to some extent, covered by your sustainability thing, and if you, you know, think about it carefully -- one of the problems I'm struggling with is a very tall building in Brooklyn; the VA building surrounded by two- and three-story houses. Twenty, thirty, forty years after it was built -- I forget, it was in the '50s, it was 60 years after --

MR. SIEGEL: It was in design in 1955

DR. NICULESCU: You're not going to get anything by him. Okay, so it's 50 years after it was built. It's basically not sustainable, and that's a problem. Maybe at the time that it was designed it was thought that the surrounding area would all be very tall, but it's sort of -- it's completely out of whack.

MR. SIEGEL: I think it was designed in the days when the thin, tall slab was the cliché for Houston design, because I know the same firm designed many other similar hospital elsewhere.

MR. KNIGHT: The issue of sustainability that I mentioned briefly, and I'll only briefly mention here -- there's a Memorandum of Understanding for High-Performance Buildings, which addresses sustainability in Federal construction. That's a document that was signed in February of this year by VA. It addresses requirements for some of the sustainability issues, but it states that we must design buildings in an integrated design process that deals with sustainability issues. It has other more specific requirements, one of which is, as I mentioned earlier, the need for total building commissioning, which is a requirement of this document. This is a policy document

signed at a very high level of VA; it's not something that we decide whether we want to implement or not; the only decision is how quickly we can implement it. So it's only peripherally related to structural issues, but nevertheless we give a copy for information.

16. Report on Hurricane Studies

MR. KNIGHT: We began before Katrina a program to assess VA facilities that were at significant risk for hurricane damage. The initial effort was completed in August of last year, and was a pilot effort that looked at five VA facilities: Miami, New Orleans, Bay Pines, West Palm, and Biloxi. We evaluated specifically for emergency power.

DR. NICULESCU: But not Gulfport?

MR. KNIGHT: No, not Gulfport. Gulfport was planned to be closed; it was primarily long-term care, and its programs were being diminished. We didn't feel there was any point in studying it. It was not part of VA's future plans, and it certainly is not part of VA's plans at this point since it was destroyed by the hurricane. But we looked at water supplies and emergency power requirements. In other words, providing additional infrastructure that allows the facility to remain in operation after a hurricane hits. That pilot was completed, and fixes or recommendations were provided for each of those medical centers. It was accurate because it identified that Biloxi did not need a lot of help and Biloxi survived pretty well. New Orleans was identified as a very serious problem, and that unfortunately has proved to be the case.

DR. WOOD: So that you will completely abandon your existing facilities and just build new facilities in New Orleans?

MR. KNIGHT: Yes.

MR. SIEGEL: We may not completely abandon it. It's only a few blocks away from the new site, and we may be using the parking garage and on-site parking there because the other site is so tight. Also, at that facility there was a multistory parking garage and a nursing home on top. Once the facility was shut down, the nursing home area was redone for clinic space, and that's where a clinic is serving New Orleans as an interim place. That building may still be used, but I don't yet know for what, except it most certainly will be used for parking.

MR. KNIGHT: At the main building, the major mechanical equipment for New Orleans was in the basement, like chillers and boilers and electrical, et cetera.

DR. WOOD: Now, what are you doing in the new facility? I mean, you had mentioned that everything was lost. So where is it in the structure, is it in the structure?

MR. SIEGEL: It's in that same geographically depressed area in New Orleans. But the facilities will be located above the 100-year flood plain; I think about 10 feet above the existing level.

DR. WOOD: But the chillers and the boilers -- where are they located within the structure?

MR. KNIGHT: They're actually going to be located in a separate energy plant that will serve both facilities, LSU and VA.

DR. WOOD: And is that at grade or is it actually above ground?

MR. KNIGHT: It'll be high enough that it -- looked at how high we need to design these things to avoid a Katrina type event, of whatever they expect the levels --

MR. SIEGEL: The before Katrina Hurricane Study projected a new power plant for the existing site, but above grade, 15, 16 feet.

MR. KNIGHT: In fact, the entire new facility will be raised. There'll be a vacant space underneath both LSU and VA. Whether you use that space, whatever it will be. LSU may use it slightly different than VA, but that's under debate. Both projects are very early in design, but we do have 600 plus millions of dollars for New Orleans, so there is funding.

MR. SIEGEL: Rather than the 40 million we were projecting.

MR. KNIGHT: So there is funding, we have been down, discussed with our design consultants, discussed with LSU our physical security standards as well as the hurricane hardening standards. Hurricane hardening standards basically are full emergency power for the entire facility you can run the HVAC systems and the entire facility, basically.

MR. SIEGEL: When this was started, we were only talking about emergency power for HVAC, but what's the point of having the HVAC working if nothing else works? You really need emergency power for the whole thing, which is what we were designing for private sector clients.

MR. KNIGHT: That came out of the recommendations on our Pilot Study to full-use -- provide emergency power for hurricane at-risk facilities, also provide potable water storage tanks, industrial water storage tanks to run the cooling towers and other HVAC equipment to keep it in operation, and sewage storage tanks or some other method of addressing sewage. In Florida it's a big issue because it's all low, flat, you're pumping sewage into lift stations that are already off, because of no power, so you've got no place to put it, except to store it. And those recommendations were accepted by VHA in a presentation we made to VHA upper management. And also they approved a request that we look at the remaining at Hurricane-risk facilities. Now we're in the process of assessing an additional 16 facilities, including three large outpatient clinics that the VA owns including Manhattan and Brooklyn. And that process is underway and is to be completed in November of this year. But in reality, many of the medical centers in at-

risk areas are already proceeding ahead or requesting projects for more emergency power and some of these other issues.

MR. POLAND: Are you going to have emergency power to operate the whole facility?

MR. KNIGHT: Yes.

MR. POLAND: Are you thinking about doing cogeneration, then?

MR. KNIGHT: Well, it'll be different approaches. For example, in Biloxi, they had already had emergency power to run the facility because the power company wanted to build a plant, a peak shedding plant, that they would use just in times of high load, and VA gave them the land to do that and made an agreement that VA would have first rights in an emergency situation. So as a result of the hurricanes, we had almost the entire facility on emergency power, and they were able to continue functioning as a hospital.

MR. POLAND: Will we have emergency power to run the full facilities in seismic areas?

MR. KNIGHT: Yes, that would be the goal. Physical Security Strategies - one of them is to provide a higher level of emergency power; and one of the at-risk factors is seismic events. So the goal would be to address, when we get this physical security manual incorporated, seismic as well as other issues. We'll still have H-18-8.

MR. SIEGEL: It seems to me Title 24 should require that because if you've got to have the hospitals in operation after a seismic event, you've got to have emergency power to have it in operation.

MR. POLAND: I don't believe you have to be able to operate the entire hospital.

MR. KNIGHT: And there are some differences. Generally you need the HVAC in most facilities. I don't know, part of California's a milder climate, and maybe you could live for a few days.

MR. POLAND: I think it's a great idea. We are building these fabulous facilities that are supposed to withstand all the natural disasters, so why don't we provide them with emergency power?

MR. SIEGEL: As I was saying before, when I was in private practice in the '60s in New York, we used to recommend full emergency power to our private sector clients and most of them bought it.

DR. NICULESCU: That was before that period, if you remember, when we were cutting back on energy consumption, which I think was '80s, when we used to make the air conditioning so warm that it was useless. But one concern I have -- and I wanted to ask

you about -- you mentioned that there was an outer boundary and a building boundary and that some things were even more secure. I hope the power plant is on the list for most secure things --

MR. KNIGHT: Well, it certainly is an area to be secured and have access control. I don't know about the most secure areas, such as, pharmacy and other area in the hospital will have a higher level of control. But VA typically in the past, you've been able to walk in our boiler plants and energy plants at will. All the doors are propped open, and anybody could walk in and out of them. That's definitely a major issue that there should be -- improvements in our access control systems that we use and how we use them is part of our physical security manual. Part of the strategies is to develop specifications and actually look at some other approaches to procuring things, procuring things on a national level, so there's consistency and state-of-the-art access control and CCTV systems across VA. Right now, those are procured independently by the medical centers, and there's a whole range of systems out there, some effective, some less. The Office of Security and Law enforcement is intricately involved in this, because those types of systems are more under their purview than ours.

DR. NICULESCU: So I didn't quite understand, but what you're saying is that the use of emergency power for the entire facility is going to be increased and at least it includes buildings that are seismically vulnerable. Will it include buildings in places like New York, which basically aren't seismically vulnerable, but --

MR. SIEGEL: If it were a new facility, it certainly would.

MR. KNIGHT: Existing, we won't require that emergency power requirement. What we'll probably require for existing facilities is providing an access point where you could plug in, in essence, a trucked-in generator.

DR. NICULESCU: It's just that we've had several major problems in the Northeast in terms of outages, and what's happened is that some hospitals, even though they have emergency power, have not been able to function. Either their generator wasn't working or, you know, something went wrong.

MR. KNIGHT: VA facilities as they're now designed, the emergency power covers only a minimal part of the hospital, just life safety and in essence that just gives you time to evacuate the hospital if it's any extended outage.

MR. SIEGEL: One of the other things that we've been discussing is for how long; the study originally started out with four days because we had four days from the seismic program. But most of the facilities want at least seven days, and some as in Puerto Rico feel they need much longer than that because of their isolated location.

MR. KNIGHT: That's another area under discussion, and while they think they want seven days, they haven't fully dealt with the size of the water tanks, and the size of the fuel tanks, and how to rotate the fuel so you don't stagnate a lot of issues associated

with storage of materials. I think as we get further along in designs, they may decide that a lower level of days would be more appropriate. That is certainly an issue. LSU is supporting the, eight-day requirement as part of the New Orleans project.

MR. POLAND: You mean there's enough fuel for eight days of operation?

MR. KNIGHT: Fuel, water, and sewage.

MR. POLAND: Well, water and sewage I can understand, but fuel is another animal.

MR. SIEGEL: You can't run without it.

MR. KNIGHT: That's an issue.

MR. POLAND: So it has to be kept fresh.

MR. KNIGHT: Yes.

MR. POLAND: And if you're not using the emergency generator for cogeneration so it's being used all the time. How do you burn off that much fuel?

MR. KNIGHT: Right. Exactly right. And that's a major issue as well, as even the water storage tanks have to have some sort of a chlorination system for the water storage to make sure it's good. There are some other detailed issues. An issue in Las Vegas was the water storage tanks that were being designed to sit outside above the surface, but they were concerned about them heating up into the area where it would be a perfect growth place for Legionnaire's disease because if they get up into the 75 to 100 degrees, it's a perfect to grow Legionnaire's disease in the water. So there was a recent debate about whether we insulate the tanks, or whether it's more cost-effective to bury the tanks, or whether we still have to provide a chlorination system. A lot of those details have yet to be addressed, but we're going to our new standards.

MR. POLAND: So the details, then, related to physical security and progressive collapse and hurricane sustainability and all that will show up in new standards? Will we have some oversight or some responsibility to keep an eye on those?

MR. SIEGEL: We will most certainly send you copies for your comments.

MR. KNIGHT: We have a schedule for completion in December, and there are several interim points. I think by late October or early November, we'll have a version that we would feel appropriate for review by a number of people, including the Structural Advisory Committee.

MR. POLAND: Will the structural portions of it end up in H-18-8, or is there some other place for them?

MR. KNIGHT: I think we have to look at that. Just looking at revising H-18-8 to a much more limited document, with ASCE 7 being the primary. H-18-8, I think, will exist as a separate document, but I'm not sure how we're going to deal with the other structural issues.

MR. POLAND: ASCE 7, brought every things they did is they brought everything to one place, so it does deal with seismic and wind and snow. I suppose if we end up with progressive collapse and blast requirements, they'll end up in ASCE 7. So it seems like in the long haul that since we are referring ASCE in H18-8, any special requirements will be included.

MR. KNIGHT: That's a thing we have not yet decided, so I think as we develop these standards and we'll get some input from you all.

MR. SIEGEL: Ideally, should be in both places, but then you run the risk of contradictions.

MR. KNIGHT: Sometimes we'll reference it. Progressive collapse may be the major issue. There are some other issues, too, but the Physical Security Design Manual could require that it be done, but reference H-18-8 for the details of the technical issues. That is one approach.

MR. POLAND: That's something you'll let us know?

MR. SIEGEL: We'll certainly send you copies of the drafts.

MR. KNIGHT: We'll certainly keep you posted, and it brings up the issue that we discussed briefly yesterday, requesting the Committee to provide us any input as to whether ASCE 7 is the appropriate document or to assure there'd be additional requirements other than ASCE 7 for hurricane-prone areas, and the wind requirements. I know ASCE 7 has been updated in, 2005.

DR. WOOD: I think the big changes in the wind provisions were introduced in either '98 or '02.

MR. KNIGHT: But we would like to have some discussion or input from the committee. Our standards required ASCE 7 for wind-loading, but in seismic standards we had some additional requirements over and above ASCE 7. Do we need any similar thing for wind loading in hurricane-prone areas? As we look at these standards, Physical Security Standards would be very useful. If we could receive some input from you along those lines that when we provide you the drafts for review.

DR. MEJIA: I had a question related to that. Was retrofitting of the existing facilities considered to any significant extent or were there?

MR. KNIGHT: For structural, wind?

DR. MEJIA: Yeah, for structural. Were there other overriding factors that basically made it simple to go to a new facility?

MR. KNIGHT: We haven't really addressed that in any detail. Typically, most of our hurricane hardening effort has been in the utility areas. The consultant's work on the additional studies on sites in hurricane-prone areas has been expanded to address architectural and other issues. Are there additional standards changes necessary in other areas, other than emergency power and water storage? When we get the report from them in November, it should have some recommendations on what we should do in other areas like window, architectural, façade, etc.

MR. SIEGEL: You know, there's also the protection from tornadoes problem. Theoretically, you could have a tornado almost anywhere. And we've had them in D.C.

MR. KNIGHT: I think our initial approach is that we're going to just reference ASCE 7 for wind-loading. I think that's our approach right now, and we just would like to request the Committee provide us any input you have along those lines. Another good time to do it is when we send out the Physical Security Standards document out for peer review and notice.

MR. POLAND: One other thing that we talked about yesterday was have you survey your AEs, the design along the Gulf coast, and if they believe that ASCE 7-05 is adequate?

MR. KNIGHT: Yes, we will survey our consultants that are currently designing facilities in hurricane-prone areas to determine their thoughts on ASCE 7 and whether it's appropriate or whether additional requirements should be added.

DR. MEJIA: And are they adequate for retrofitting of existing facilities, although that issue didn't come into play in the decision to relocate or to build a new facility in New Orleans.

MR. KNIGHT: We did look into that in New Orleans, and we have been given money to build a new facility there.

DR. MEJIA: There were other factors, I guess, coming into play.

MR. SIEGEL: And we originally thought it was going to be in a different location, partially because of the agreement with Louisiana State.

MR. KNIGHT: The LSU Charity Hospital is one that got a lot of attention during Katrina. That was the one operated by LSU, and it was an old facility, and certainly in need for updating to current standards. They had planned to update, and they had already started design efforts for a new facility prior to Hurricane Katrina.

DR. NICULESCU: So where's your new location?

MR. KNIGHT: It's adjacent to LSU, about two blocks from VA. They were both relatively adjacent to each other.

MR. SIEGEL: Tulane University was also originally part of the consortium, but dropped out.

DR. WOOD: Yeah, they closed their med school, didn't they?

MR. KNIGHT: Tulane was not too badly damaged. They had some water on lower floors. Their hospital was relatively new. I think it was constructed in 2000 or so. It was damaged and there was water in the first floor, but it they didn't lose any of their utilities, etc. It's right in the same area also Tulane University Hospital is within a four or five block radius of this whole complex that was going to be with LSU, VA and Tulane.

DR. NICULESCU: But did I understand you to say that the lower floors would not have hospital-type activities in them, so you would somehow raise the hospital activities above the expected water level?

MR. KNIGHT: Correct. It's undecided. There may be some berming or some fill built-in and to raise some of it and they are going to probably raise the hospital up. Those details are not really ironed out. The reality is they're going to move the first floor above any projected flood in the future, whether the levees fail or not. That's VA's concern. To be quite honest with you, LSU probably is going to allow parking in that area, as that's obviously one of the uses that you could do with it. VA may put water tanks there. This is a joint venture between LSU and VA and it's going to be shared medical services as well as utility services. We've presented our physical security standards to LSU, and they're looking at them to see how best they can conform or meet our physical security strategies in addition to their needs and funding.

MR. SIEGEL: Are there any other items people would like us to discuss?

MR. POLAND: Are there any other items anyone would like to discuss? We have a couple of new things that we've talked about along the way. Is there anything else that we want to deal with?

MR. KNIGHT: I'd just like to say that we have quite an aggressive program of things to complete for next year. It's good that there are obviously a number of issues we've got to deal with, and we certainly expect to make progress.

MR. POLAND: Okay. As far as the date of our next meeting, we did some thinking before the meeting and we selected June 14th and 15th. If that works for you in 2007, I believe that's a Thursday and Friday.

Then I want to say thanks to Susan. She's leaving us. Appreciate 11 years of good service and great questions and a wonderful perspective -- just like this interchange we've just had. We're going to miss that.

DR. NICULESCU: It's been my pleasure.

MR. POLAND: So we'll have a suitable replacement, I assume?

MR. SIEGEL: Not a replacement, someone who follows. She's irreplaceable.

MR. POLAND: A suitable person to follow Susan. And of course we need somebody that's expert in fire and security as Susan is because that's becoming very much part of our world, and we need that.

MR. SIEGEL: Let me check and see if I can get one of the staff members who knows the date of next year's AIA Convention right.

MR. KNIGHT: Well, this group's been excellent, and a great deal of progress has been made. It takes a little while to understand VA processes H-18-8 and other issues.

MR. BANGA: I'd like to recognize a few people here. Mr. Richard Kuchnicki, Executive Vice President of the International Code Council (ICC); Ms. Nancy McNabb, Director, Government Affairs at NFPA; and Mr. John Biechman, Vice President, Government Affairs at NFPA, who was with us yesterday at the workshop.

MR. POLAND: We are glad to have you all here. Let the minutes show that the next meeting will be on June 14 and 15, 2007. Since we have no other business to deal with, we will adjourn the meeting.

The meeting was adjourned at 12:20 p.m.