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CIVIL DEFENSE

1893

1 May 1953

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Lieutenant General Clarence R. Huebner, USA (Ret), Director, Executive Department, New York State Civil Defense Commission, was born on 24 November 1888, in Bushton, Kansas. He was graduated from the following schools and colleges; Business College, Grand Island, Nebraska, 1909; Infantry School, Advanced Course, 1923; honor graduate, Command and General Staff School, 1925; Army War College, 1929. General Huebner served as an enlisted man in the 18th Infantry, U. S. Army, 1910 to 1916; advanced through the grades to lieutenant general in March 1947. During World War I, he served as captain, major, and lieutenant colonel, AEF. From 1940 to 1942 General Huebner served as a member of the War Department General Staff Corps. In January, 1942, he became director of Training, Services of Supply until he became commanding general, 1st Infantry Division in 1944, and later commander-in-chief, European Command and commanding general, U. S. Army, Europe in 1947. From May 1949 until his retirement in 1950 General Huebner was acting military governor in Germany and acting commander, U. S. Armed Forces in Europe. Among the decorations he has received are the Distinguished Service Cross with oak leaf cluster, Distinguished Service Medal with two oak leaf clusters, Silver Star, Legion of Merit, Bronze Star Medal, Purple Heart with oak leaf cluster, Victory medal with five battle clasps, and the French Legion of Honor. General Huebner has held his present position since early 1951.

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COLONEL VAN WAY: Colonel Barnes, gentlemen of the Industrial College, General Saltzman, honored guests: During our studies of Economic Mobilization to date, I think we have had it impressed upon all of us that we are concerned with being able to achieve during a period of mobilization an entirely effective productive capacity. I think it is inevitable that we realize that enemy action against our industrial centers can be very well-nigh disastrous. It seems, therefore, that we should address ourselves to the problem not only of the probability of enemy action against our home shores but of the kind of attacks we may expect, the amount of warning we may have and what we can do as citizens in communities and in governmental organizations to minimize the effects of such attacks.

It appears that we are in a period of indecision in civil defense from a national point of view at least. Some localities are doing exceptionally fine jobs under very difficult circumstances. There have been good studies made. The East River Project, with which you are familiar, is one of them and promises some improvement in our concepts of civil defense.

Our speaker this morning is well-qualified to talk to you in both of these areas. As Director of Civil Defense in the state of New York, General Huebner is responsible for one of the most effective organizations that we have in this country for civil defense. As a great citizen and as a military leader, he has established himself as a national citizen of broad outlook. He commanded the 1st Infantry Division during World War II; later he was commander-in-chief, European command; finally he commanded the Army of Occupation before returning to this country.

Today's speaker has appeared on this platform before. It is with a great deal of pleasure that I introduce to you General C. R. Huebner, USA, retired.

GENERAL HUEBNER: General Saltzman, Colonel Van Way, and friends: It is always nice to come back to the old Army War College. My first trip here was in 1928-1929. That was probably one of the most important years of my life because it was at that time I met my contemporaries and I met a group of people who had been taught to think. That has stood me in good stead ever since that time.

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Now we of the military occupy a unique position in the United States because we have gone through a system of training that has made it possible for us to make good, sound decisions and within a given set of circumstances we will nearly always find a sound answer. This is true in civil defense as well as in the military because civil defense is actually another form of the military. In other words if we can't organize our civilian communities to live through a modern war and win, regardless of how good our Army, Navy, Air Force, and Marine Corps are, we will go down to defeat.

One of the things that has caused me to stay in Civil Defense is that I saw Germany at the end of the war. I saw a defeated nation; it is not nice to contemplate. I saw generals and colonels, rich people and poor people, all at the end of their rope; God forbid that anything like that will ever come to this country. But it will unless we organize for the next war--a total war; we must include our populations.

Now the Governor of the state of New York foresaw all of this and he and his legislature enacted into law a very positive and very strong civil defense law. And he placed the responsibility where it belonged; he placed the responsibility on the elected and appointed officials of the state. He appointed a council, of which he is chairman and in which the lawmaking body is made up of representatives of the various groups of citizens, both business and labor. They are the final word. They are the people who give the Governor the final advice on what should be done. It is a small group of 15 or 20 people. It meets on call of the Governor.

Then, in order to make his civil defense effective and to be sure that it was integrated, the law sets up a commission. The Civil Defense Commission consists of the heads of the various departments of the state, plus two target city civil defense directors--both of whom are appointed by the Governor--and is headed up by a chairman who is the spokesman for the commission to the Governor.

There are about 20 people in this commission and they meet once a month. It is a really functioning body and it has lots of power. The chairman hires his own executive director. At the moment it happens to be me. I have a staff, including those on loan from the other agencies of the Department, of about 25 executives--you would call it your general staff plus the special staff--and about 50 administrative personnel. We are responsible for the operation of civil defense from the state viewpoint in the state of New York.

We have a considerable amount of money to spend but we do not operate. All the operation is done in the various divisions of the State Government. For instance, if we want to buy anything, we go to the Department of Purchase and place our order and it is bought by the state purchasing

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agency. If we have a matter of health, we go to the Health Department. At the moment the Health Department is in the throes of receiving, packing for distribution, and storing some 8 or 9 million dollars worth of medical supplies. It is a big job. But of course the whole state organization is thrown into this job and it is not nearly so big as it would be if it were set up as a separate agency. These supplies are being stored in the various state institutions, most of them with the Department of Correction and the Department of Health. This saves a lot of money, too.

So in general that is the way civil defense works in the state of New York. I find myself as the coordinator. I appear before the commission on the third Wednesday of every month and I give it a report of what we have done in the month before. At that time I take up with the commission anything that needs its decision. This works out very well and keeps the commissioners very much interested in civil defense.

Money is appropriated to us in two ways. One is direct to the commission to be distributed among the various departments; the other is direct to the departments themselves. Where something is just for an expansion of an organization, it goes direct to the department; where something is for over-all use, it comes to the commission and is parcelled out.

Now in order to break down the state and make it manageable--there being 11 target cities in the state--it was necessary to hit upon some kind of reasonable organization and we have done it in this way.

I will run over this, starting in the West, Niagara Falls and Buffalo. There are three counties in the Niagara support area and the counties in the Buffalo support area. Down to Broome County, we have Binghamton, Johnson City, Endicott--the tri-city group; this being a rural population, we gave them a bigger support area than we would ordinarily. We do that to get more fire equipment. Rochester is one of our largest cities and has a rather large support area for somewhat the same reason--fire equipment. There is a lot of fire equipment in an adjacent county. While Watertown is quite a way from other industrial areas, there is a considerable amount of equipment there. Therefore the Watertown equipment could be used for backup of near-by counties that send fire equipment to support other areas. Then we come to Utica and then to Schenectady, which is a big industrial city. Albany has adjacent counties west of the Hudson and Troy has those east of the Hudson.

Then we come to New York City. The people of that city have come to the conclusion they can't save themselves. They take a lot of support. They have seven counties which are direct support areas for New York City--three counties east of the river and four counties west of the

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river. Long Island has over a million people on it and there is not a city in the place. So Nassau County has been organized into a civil defense entity and it is supported by Suffolk County which goes out to Montauk Point. That is the organization that we have in the state.

Each of the civil defense directors of the target cities has been empowered to act as my deputy. Of course, I can't shift my responsibility to them but I can give them my authority and that is the way we have the thing organized.

Now one of the problems that we have in New York State that I don't think many of the states have is the power of conscription. So we will have civil defense whether or not it will be organized or unorganized. Now there is a quirk in the law because the state does not conscript. Only the county officials can conscript. So for that reason, I have not gone to a regional organization as some of the states--one is California--have, in which they superimpose a state employee on top of a region. By appointing a director of the local entity and giving him over-all authority, he can take care of his own conscription and requisitioning in his own entity and can call on the other counties to do theirs. It is working very well. It has the added advantage that he will be the one who conducts the fight anyway. Therefore, he learns because by doing things we learn things.

The Air Force got itself in trouble. While the military may not know it, the Air Force is in very bad trouble because radar is not entirely quickly reliable and under 4,000 feet it doesn't do a good job at all. So the 26 border states in the United States have been alerted and are now on a 24-hour sky watch operation, that is ground observation posts, and I would like to take just a little time to show you how New York State is organized for this very important duty.

Now you will find that New York State is protected by two divisions, the 32d Division, with its headquarters in Syracuse, and the 26th Division, with its headquarters at Roslyn, Long Island. We have only one filter center in the state that operates with the 26th Air Division. However, the 32d Air Division, which is at Syracuse, has three filter centers: one at Buffalo, one at Syracuse, and one at Albany. They are the nerve centers of the air defense of the state of New York.

One of the things that the Government does owe the people is an opportunity or a chance to take cover. It can't be shirked. It is the job of the Government. The Air Force has inaugurated and established what is known as a key air raid warning point. Just recently the responsibility for the operation of those points has been placed on FCDA. It is the people from FCDA in all air division headquarters who run this business. We have a key point in each one of our target cities, some-16 of them, and in addition in a few other places where the distances are so

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great and it would take too long to notify the people of a yellow, red, or white alert. These points are activated from the division headquarters in Syracuse and in Roslyn, and we can alert the whole state as far as key points are concerned in a minute and a half. It is just that fast. They all have hot lines and it never misses. I have done it several times myself. So insofar as that is concerned, we are in good shape. We can alert the key points in a very short time.

In order to alert the whole state, however, we must send out from these key points to the counties. At Niagara Falls, one of the key points, the center is responsible for alerting the two adjacent counties. Why? Because they are in the support area of Niagara Falls. In Buffalo we have the same thing. Big Erie County with its key point alerts each of the adjacent counties. Test after test has shown that we can have our warnings spread over the state into the counties in just five minutes. That is the longest we have ever been in any of our warning exercises.

It is a state responsibility to get the information from a key point out to the counties. From the counties on, it is a county responsibility, and they use various ways. It takes longer to alert some of the remote counties such as St. Lawrence County, which is a large county, than it does the lower counties, one of these is Suffolk County. But on the whole we are convinced that if we get as much as 15 minutes of warning we will have all of our target cities alerted and their people under cover, that we will have all of the larger cities in the state that have county seats in them alerted, and will probably have the bulk of the smaller communities notified in time so that they can take cover.

There is no need of my going into why this is necessary because you people certainly know the ills of the atomic bomb and how to avoid them.

Now in order to back up the Air Force and take care of this low-flying airplane, we have nearly 600 ground observation posts in the state. There are a few things that are very interesting in this. St. Lawrence County, the biggest in the state, has 31 observation posts. It is mountainous country, thinly settled; it brings about great hardship to those people up there. Our greatest problem was to sell them on the idea that they were needed. They said, "General, we are not going to get bombed." "But," I said, "How about the cities down here? How about New York City?" They said, "Well, maybe it would do them some good if they did get bombed." After you show these people that there is a need, they respond very nicely.

The effort to show the people brought about quite a job for the Air Force and Civil Defense. This is the way we have done it. We go to each one of these counties which have anywhere from 15 to 20 town supervisors and we bring them to Syracuse or to Roslyn. We have been very frank

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about it. We show them just exactly what the whole air defense is. We don't tell them how many planes we have, where the planes are; we don't tell them where the radar stations are; but we show them how they work. Invariably when they go back home they become supporters of what we are doing, while prior to this they were just as skeptical as they could be. We have had quite a problem in getting shelters for these people. You must remember it is quite costly. But we have completed about 75 percent of our shelters in the state. The state is at present operating just under 50-percent efficiency. Just as I left yesterday morning to come down here, I got the report and, I think, it showed that 46 percent of the observation posts in the state are manned. We have a long way to go.

In the problem that we had at Schenectady the other day, the Russian planes bombed us without warning. It was entirely feasible that they could have penetrated and reached Schenectady without either the Air Force or the ground observers seeing them on account of the lack of manning those posts.

Well, so much of this; it is the only prohibitive part of civil defense. If this works and the Air Force and the antiaircraft artillery shoot down the bombers, then we won't have to pick up the pieces. So anything that we do along this line is just good insurance and we are trying to convince our people of this.

I will now go to a method of operation that we have devised in the state of New York. Our law requires that each city and support area be exercised once a year so we have a problem once a month. About two months prior to the time we expect to hold the exercise, we give the target cities a problem. We drop a theoretical bomb and we assess the casualties and the destruction; we give them that complete. Then they have two months to prepare this map problem.

On exercise time we spend Thursday afternoon and Thursday evening listening to an exposition of their solutions of the various problems. On Friday morning we have a critique with each service. In other words my staff and their staff broken down by service go over bit by bit just how they solved this problem, work out such changes as must be made in the standing operating procedures (SOP), discuss the things that were difficult, and maybe make the changes that were necessary because of faulty thinking or lack of personnel, or this, that, or the other.

Then on Friday afternoon we assemble again as a whole and the State staff gives a critique which lasts about three and a half hours. On Saturday morning we have what is known as "public participation." We generally have the red alert about 8:30 in the morning which lasts about 15 minutes. Now the purpose of that is: (1) Is the city covered with

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its sirens? Can their people hear? and (2) Are the people trained in what they must do? Do they seek cover? Is traffic stopped and do the occupants of the vehicles seek cover?

If that is satisfactory, nothing happens. If it is not, I, as director, assess the casualties right then and there. In some of our cities I have raised the casualties as much as 15 percent simply because the people did not take cover. You can avoid many of the effects of the Atomic bomb by just getting behind something. You certainly won't get burned. If you get as much as two feet of concrete between you and the bomb, you will escape the bulk of radiation, and whether the place falls in on you from the blast or not depends on how well you have taken cover. So there is so much people can do for themselves during this period.

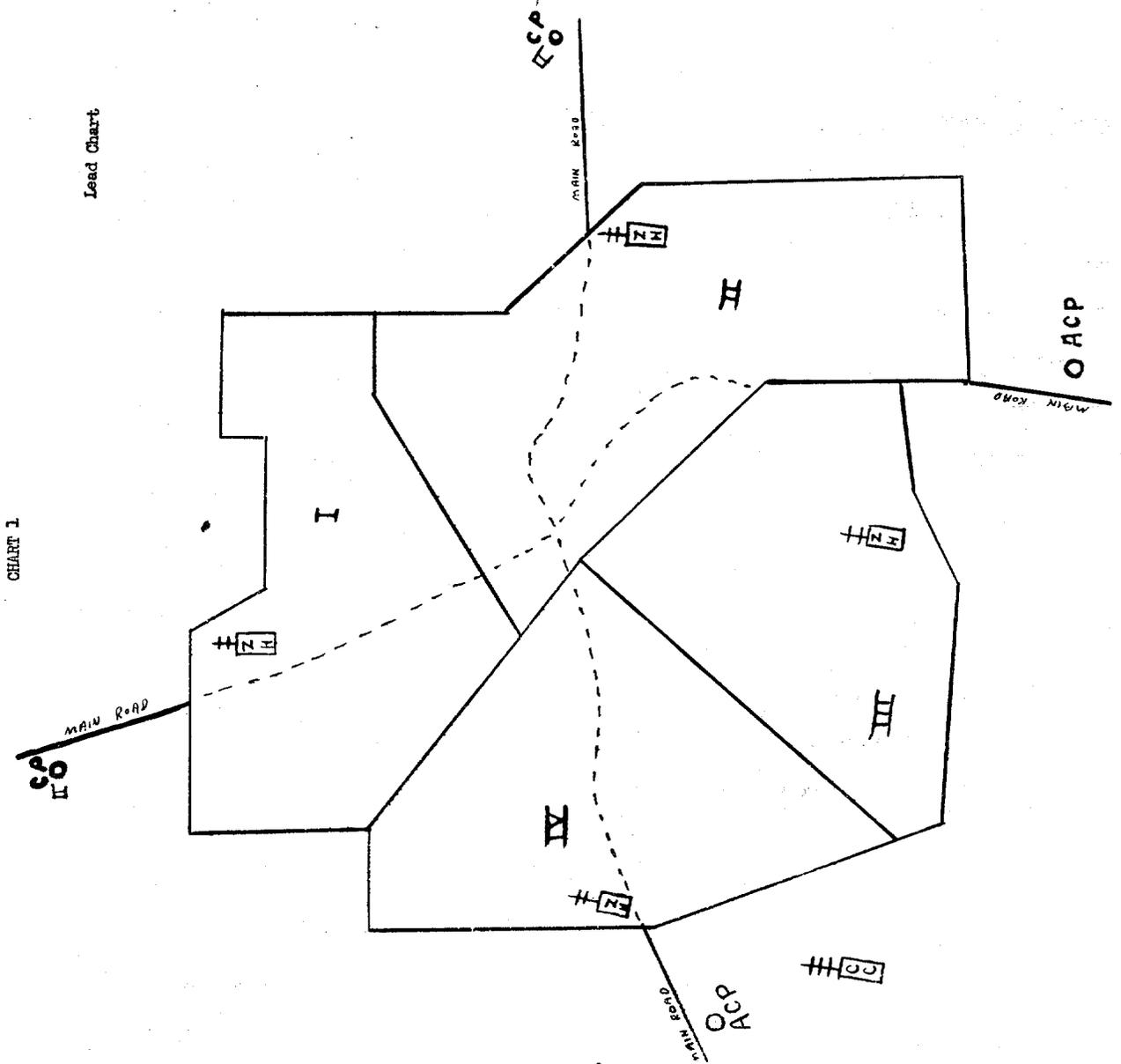
We only spend 15 minutes on it--that is all. We figure from a state viewpoint, if we have warned them and they can hear the sirens, they have been taught what to do and if they get killed, I don't have to sleep with it. It is just that simple.

Then we go into our public participation with the various services and we set up a sample--what you in the military would know as the County Fair. In other words we take as many of the problems that fire would have, take a segment of that, set it up and perform it. Then we bring all the firemen in each of these support areas in to see it. After the demonstrations are over, they get together by service all the people who participated and they are given a complete breakdown of what was expected. Now I think I can take a short time and go through service by service how we do this thing because I think you will see that it has military aspects all the way through.

Chart 1, page 8.--This chart is very simple. It is just an outline of a city and it is divided into four segments which cover the command. We call them zones; it has a control center. This is the city control center where our civil defense director sits, and in each of the zones we have a headquarters which commands all the civil defense workers in this zone headquarters. These are vast installations of communications which are there in peacetime and we hope they won't be destroyed. However, each of the cities has one or two mobile organizations so if the bomb should come tomorrow and take the zone control, we could switch one of the portable outfits out there with its people to take them out of that area. If we should be so unfortunate as to lose city control centers, several cities have set up alternate control centers. However, since one of these control centers is very expensive--it costs a lot of money to put communications in there--people hesitate to put up more than one. So I feel this way about it, that if and when the emergency becomes so great that we think we are going to war, then if we have trained well here, with enough people, we can quickly install communications at another place, probably on the opposite side. We think it will work all right.

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Chart 2, page 10.--Now for the purposes of this discussion, we have dropped a theoretical bomb and we put it down almost in the center of the city. (Indicating), this is the area of complete or mass destruction; this is the area of heavy destruction; this is the area of medium destruction; this is the area of light destruction. That is the way we give the problem to our cities and we give them pretty much what happened in this area. If you will notice, in this particular problem we do not have any of our installations destroyed. However, if the support counties are going to be of any advantage to us at all, they must come to our aid and we have permanently established on the outskirts of each one of our cities assembly points which are known as "aid check points," one for each leading road. The help coming in from the surrounding counties passes through these aid check points. Many of these units have been preassigned and are known as automatic aid. They know to which zone they are going. When they reach the aid check point, however, they check in to see whether or not their mission has been changed. If it hasn't been changed, then they report right in to their zone commander and are deployed in this zone for action at one of three places.

Chart 3, page 11.--This chart illustrates one of the most difficult things that we had to solve. When you get a mile, a mile and a half, or a two-mile column of aid--fire engines, ambulances, trucks, buses, and what not--deployed on a road, it is practically impossible to control them. So we have set up in each one of the zone areas a place that is known as an "assembly point." It is a place that is picked where we can run trucks off the road, and set up communications so we can handle them and dispatch them into their various jobs. It took us a long time to come to this. In Schenectady the other day it worked out very well and I am sure the theory is a sound one and will work satisfactorily all the way through.

Chart 4, page 12.--This is fire--fire is probably the most important, outside the medical service. We all know there are two types of fire, one from the effects of the bomb itself; the other is secondary. In the fire situation, the fire chief must immediately determine what he is going to do and how he is going to deploy his fire equipment. In each of our areas we have at least 200 fire pumps. In New York City we have as many as 1,000. Niagara Falls, which is the weakest of our support areas, has a little over 200. If you can imagine, just like that (snapping fingers) a fire chief has to deploy this equipment around a fire which is burning in here (indicating center of chart), which he may not be able even to get into because roads haven't been opened up. He has to decide whether his preassignments have been or haven't been correct. If they haven't been correct, if the bomb has done something to him he didn't expect, then he must get orders out to the "aid check points" to get the equipment where he does want it to go.

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CHART 2

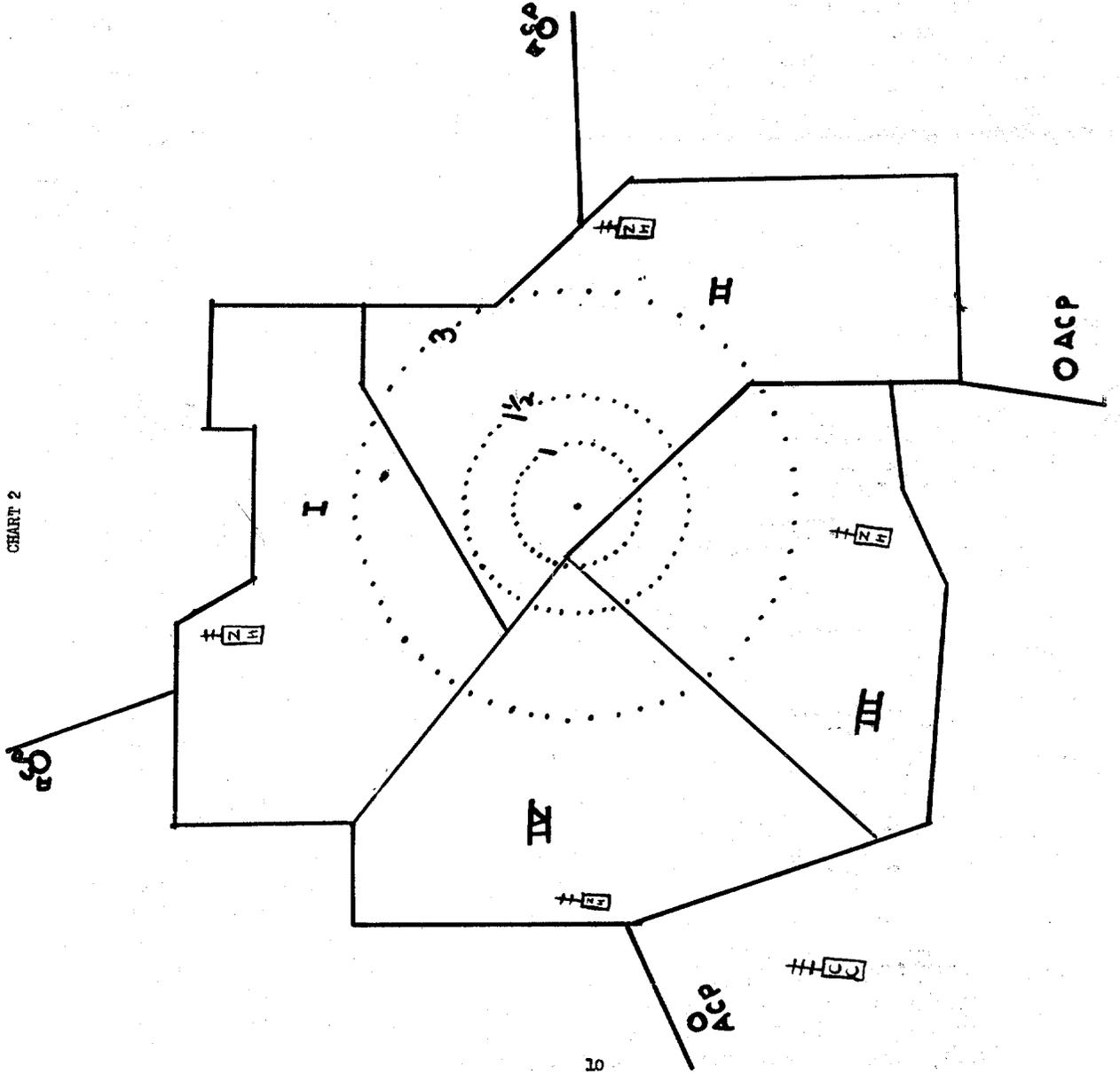
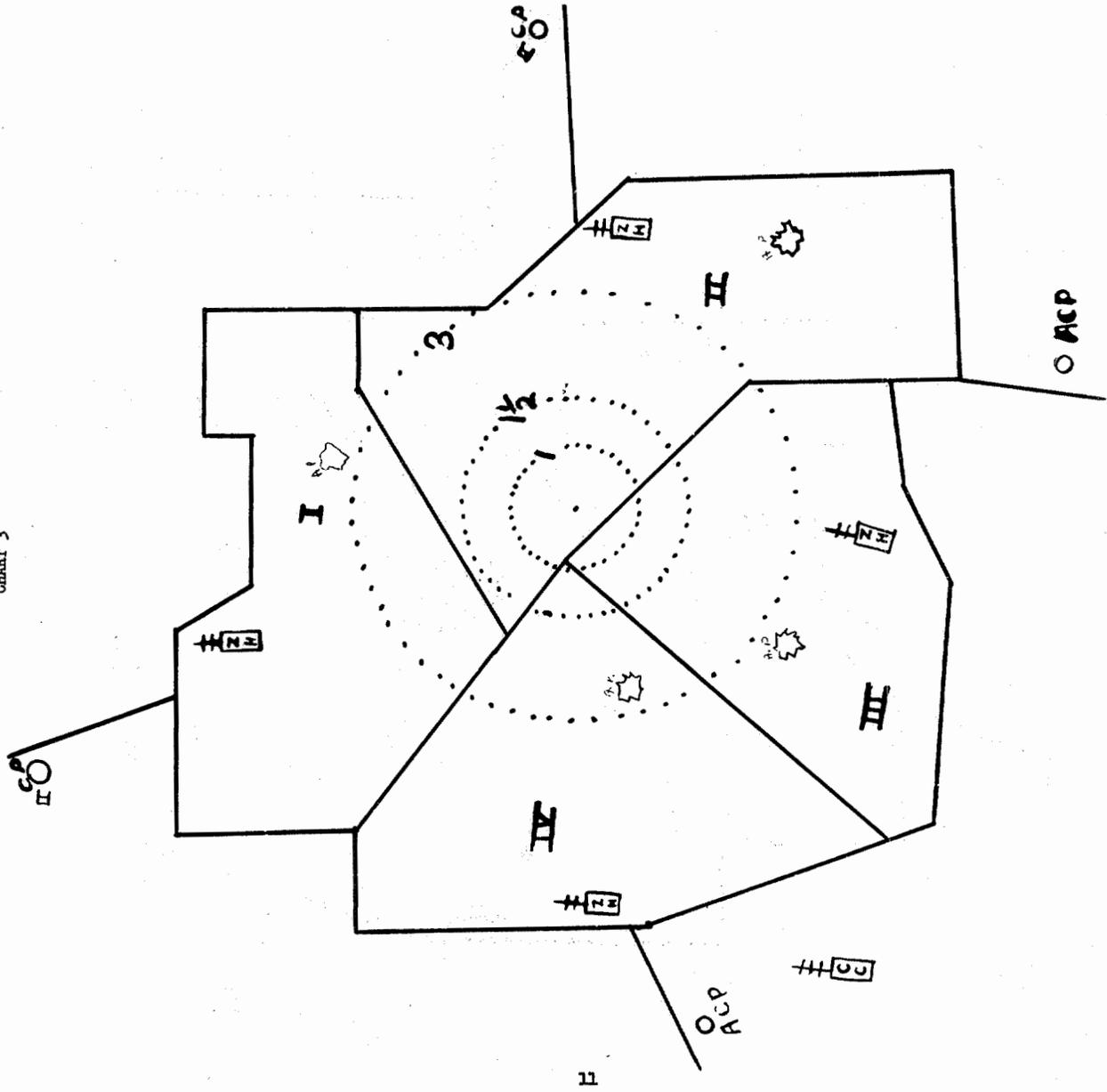
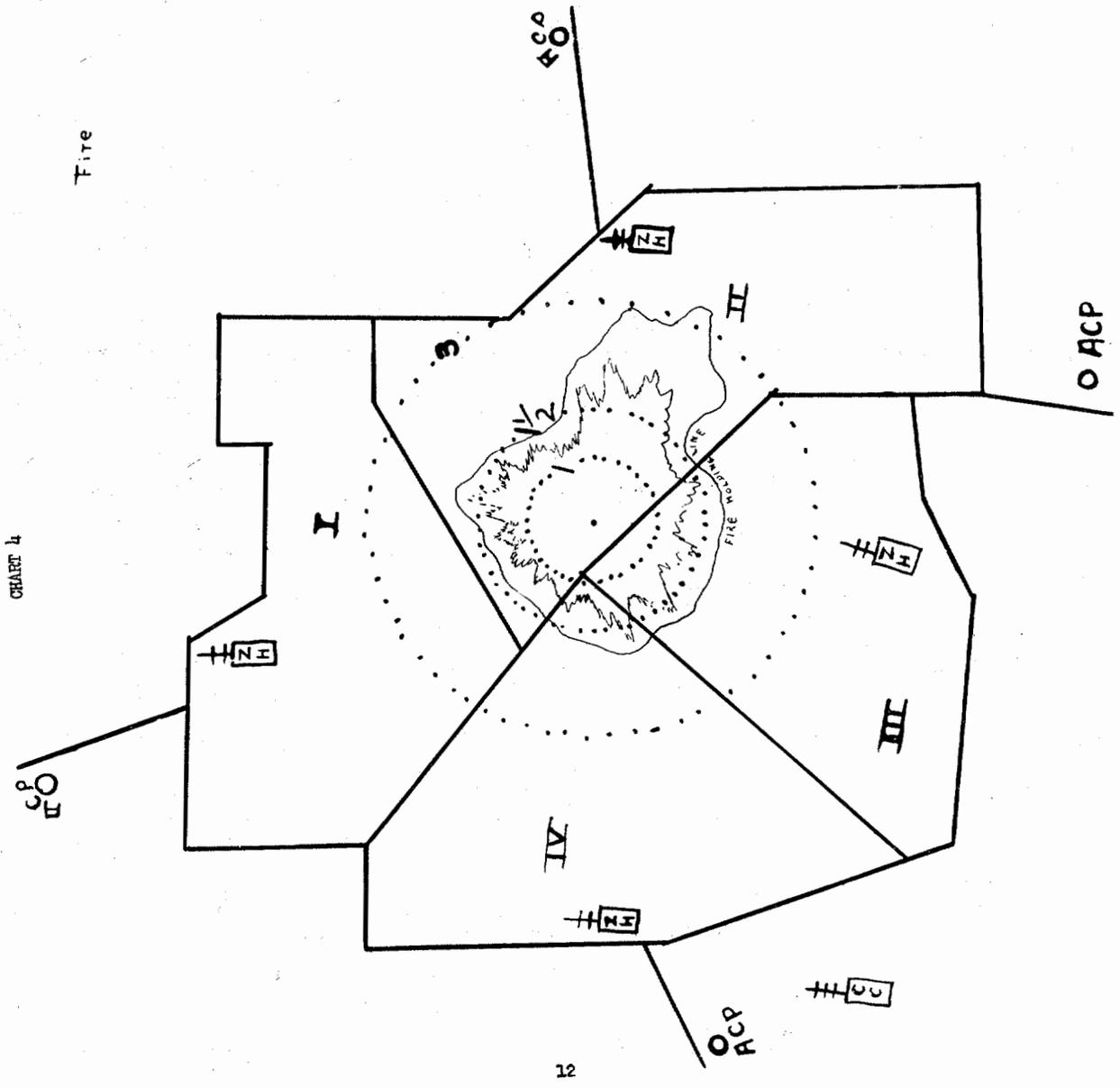


CHART 3



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The first thing he does is find out where the fire is. He should know his city so well that in a very few moments he can decide where he is going to put his firebreaks. Now where he puts his firebreaks, of course, is influenced by water and by the opening up of streets. I will cover those two later. But for the purposes of this situation, with a strong wind blowing in this direction, we assume that this is where the fire chief has decided he will contain the fires. There will be practically no fires put out. There are three or four different types of fire fighting techniques and they are all in the containment field.

First, there is the cooling off. In here (indicating) there would be a terrific cooling off period because that is on the lee side of the wind and it will be moving very fast. If you don't cool off in here, you probably won't control that fire.

Then you have the wet-down. In other words with flying embers and secondaries bobbing up all over the place, you must wet down and you must also be able to destroy or demolish buildings to assist in making artificial firebreaks. So he has quite a job on that. On this side of the fire, it is more or less a backfire job. You may even fire a backfire just as is done in a forest fire. So you can see from this, it is no easy matter for the fireman and civil defense director sitting here in this control center to decide how the fireman is going to fight this fire.

In addition to this he has many spot fires because, depending entirely on the size of the bomb, there will be much destruction and in this area certainly there will be many secondary fires. If they are not controlled, they soon become running fires and then he is in trouble with another containment just like the one before. So he must not only deploy his equipment around this area but he must hold a nice reserve to take care of unforeseen things that he hasn't thought of.

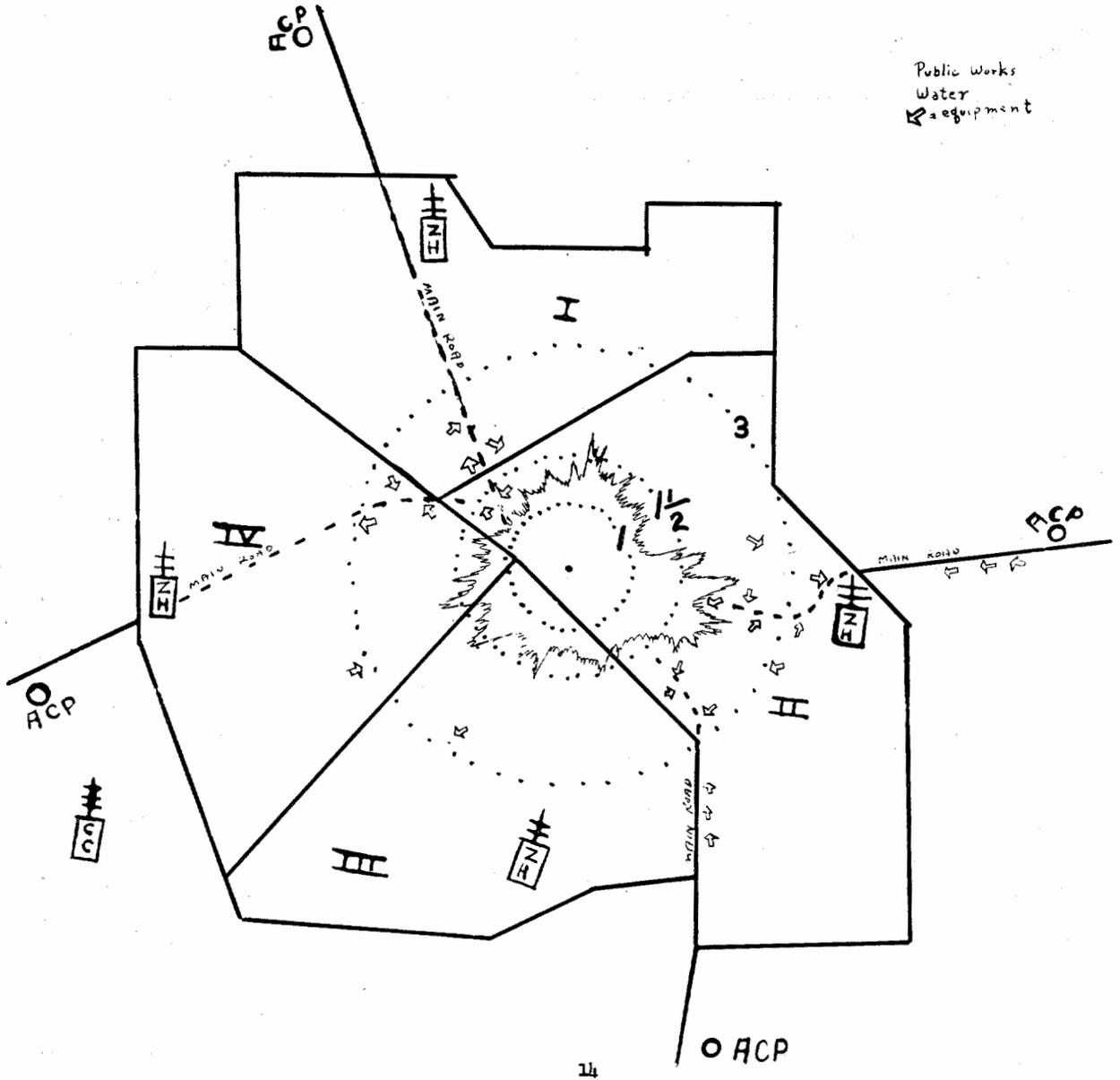
Chart 5, page 14.--This chart is not very good but I think I can illustrate what I want to bring out. Public works and water work so closely with fire that in consultation with each other they decide which roads they will open up first so that equipment can get into the perimeter of the fire. We can't establish an effective fire line if we can't get the equipment on it. So if the public works can't get the roads open, the fire lines will have to be established farther back. It is a terrific job.

Water plays such an important part, but so many of our cities were not built for things like that. For instance, Rochester, New York, the whole northwestern part of the city, gets its water through a 36-inch main which is taken up over the top of the railroad track. Well, if it is even in the area of medium destruction, you are apt to have that main destroyed or broken. Then this area would have to be abandoned. There is no need to put fire equipment in there because there is nothing with

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CHART 5



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which to put the fire out unless water can be relayed into the area from static sources. The thing to remember is that it takes five pumpers per mile to get 750 gallons of water per minute a mile.

The Federal Civil Defense Administration has stockpiled some 8-inch pipe and we are just now in the throes of working out details of how we would run this pipe from the static reservoirs of rivers and streams so we can get it in there in time, because if it is not in time, it is of no value.

So with the street clear and with the water taken care of, the fire chief decides where he is going to establish his fire-fighting line. It is very much the same as it is in forest fires. The technique is almost exactly like it.

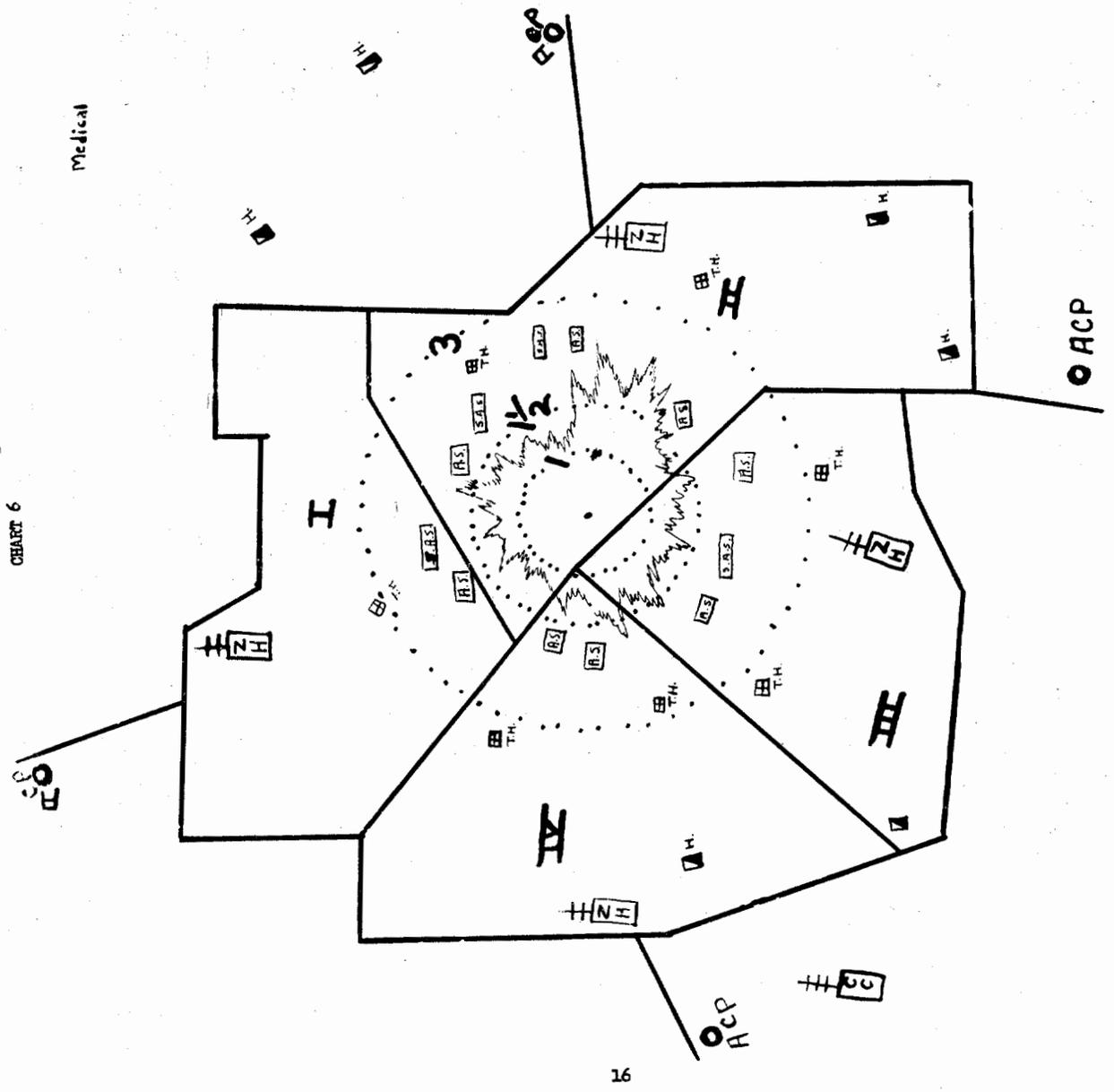
Chart 6, page 16.--This is medical. This is the next important phase of civil defense because if we can't care for the people who have been hurt, if we can't save their lives, then too many of them are going to be lost. We have handled that in this way. As for fixed installations we know where the permanent hospitals are. We have selected the buildings where we think we can put temporary hospitals. We have also selected what we choose to call secondary aid stations. So here is a temporary hospital; another one over here; and we have stockpiled in the state considerable equipment. We have amassed about 40 auxiliary hospitals. We have not yet worked out the details of how we are going to man them. We are just now buying them and determining where we are going to station them.

We will utilize schoolhouses or big buildings. Our hospital is built around the MASH unit of the Army, except we think we can raise its capacity to a 200-bed unit--40 or 50 beds in the recovery unit and about 150 beds in the holding unit. They can be moved in and we should have them in position in three or four hours after attack. Then we put in a secondary aid station. These are permanent installations (pointing) that have been picked out throughout the city and have been stockpiled. That is our base of operation.

If we lose any of these, we just can't count on them; but from these secondary aid stations we put out our aid station personnel and we can put out as many aid stations as we need or as we have personnel for. The medics have a very hard time getting their men and equipment where they want them and in sufficient volume. We have a "supply and assignment point" especially designed for the medics in each zone. We have only enough medicines in our cities in New York State for about four hours of operation. So within four hours the state supply must be rolling in or it won't be effective.

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All medical units and supplies come in through the "aid checking points," and instead of going to the assembly area that we have for other units, they continue on to the Supply and Assignment Unit of the zone. The secondary aid station is one of the largest services that we have and it is one of the most difficult to organize. I can state, though, we are making some success.

We have another problem. If we can't have enough temporary or fixed hospitals, we may have to turn secondary aid stations into hospitals with just whatever we have. In order to do that, we have purchased a great number of cots--several million dollars worth--and they are stock-piled and are available. So much for the medicos.

Chart 7, page 18.--Panic is one of our great problems and I am convinced, after having seen an explosion out in Las Vegas, that we are going to have panic in one form or another. It may be controlled to a certain extent, but the people will leave this area (pointing). They will leave to get away from the fire; they will leave because they are frightened; they will leave because their houses are down; and only those who can't get away are going to stay, of that I am convinced. Where will they go? They will go into open spaces. A study of this city will indicate where they will probably have cover.

I have indicated here the places that might be preassigned. (Pointing), this is a big schoolhouse that might be assigned to welfare. This, we will say, is a church. This area over here has no public building and we will just find the people there in the open prairie and we will have to go in and organize them. Over here is a pool hall or theater, something like that, where we can set up our headquarters.

What does the welfare man have to do? He must organize this mass of people, get hot food into them, and evacuate them. They must be gotten into housing because in New York State for six months of the year it is impossible to live in the open for very long. So he has a terrific job. As soon as he can, he sends his people out, under control, to the support areas where a survey has already been made of housing. We have housing for 2 million people available for use. We actually worked out the details of moving 600,000 out of New York City into their support area.

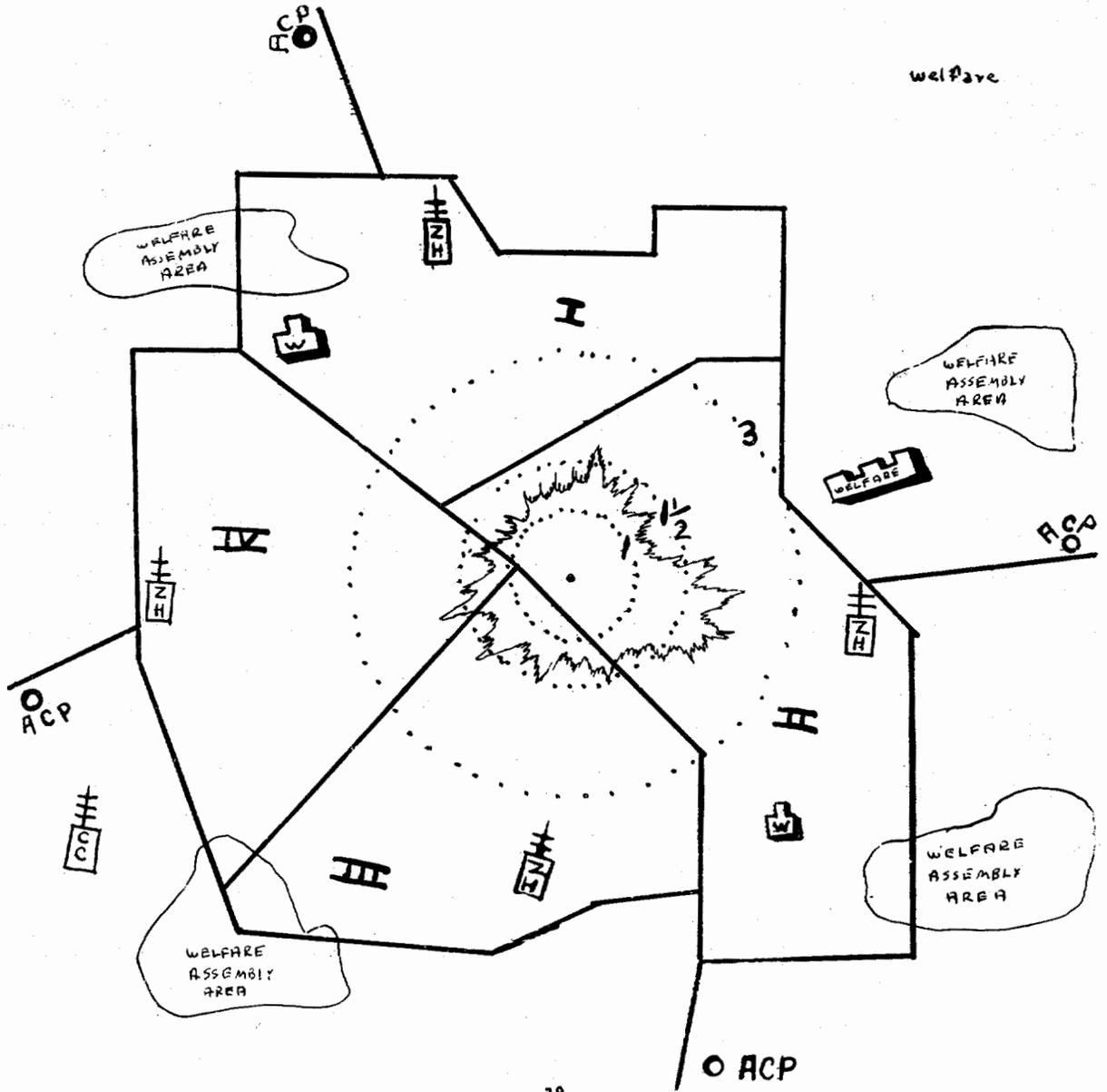
You talk about your logistics job--you all are interested in logistics --you figure that one out.

The problem is too big to handle as a whole. What are we going to do? Are we going to let these people down? We broke the problem down into various segments so as to make it manageable and we came up with a very good solution.

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CHART 7



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I forgot to tell you that schools are giving us one of our biggest headaches. If the bomb comes during the school day, we have developed special techniques. Schools are a welfare job.

Chart 8, page 20.--This is a police problem. Most of the police work can be preassigned. If you know your city, know your people and the number of policemen you have available, you can pretty well determine where the police problems are going to occur, so you assign accordingly. You hold a small reserve at each of the zone headquarters so you can send the reserves where needed.

This is where the military comes in. If soldiers are made available to the civil defense director, it is quite probable that one of the first things he will use them for is policing. There is a tremendous area for probable looting in here so I think it behooves the military to look into riot control, policing, and things of that nature. They do it well. They are uniformed; they are organized; and they have their own communications. So we are teaching our civil defense directors that the first thing to do if the military people come in is to put them on policing jobs.

Chart 9, page 21.--Communications is a stopper. There never was an infantry division or armored division that could fight for any time at all without communications. We in the Infantry are usually tied to the telephone. When it is out, we have a hard time fighting with radio. In nearly all of our cities, the telephone centrals are located pretty well in the middle of town and when they are destroyed, communications are destroyed.

We expect the telephones to go out. To overcome that most of the cities have installed underground lines connecting all zone control centers and city control centers. This is true in most of the cities of the state of New York.

In addition to that we must get word out of the city. We have to get in contact with the rest of the world. I don't believe any of us would have nerve enough to ask the Bell Telephone Company to do what it did for us. The big toll cable from New York to Chicago so happens to parallel eight of our great cities. The telephone people have interrupted that cable on each side of each one of our cities and established what is known as a pole restoration point. They have taken off 20 pairs on each side of the cable and put connectors in there so they work in peacetime; but, in 10 minutes, by unlocking a couple of control boxes and throwing a few switches--just that fast--we have four outside lines and can talk any place in the United States. And by laying land lines to other places, we can have 16 more as fast as we can get those land lines in. So we have provided for outside communications in the state of New York with the outside world. Come bomb or no bomb, it is there. And the telephone company did this on its own. I would never have had nerve enough to ask the company to do it. Its people realized what the problem was and they have accomplished that.

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CHART 8

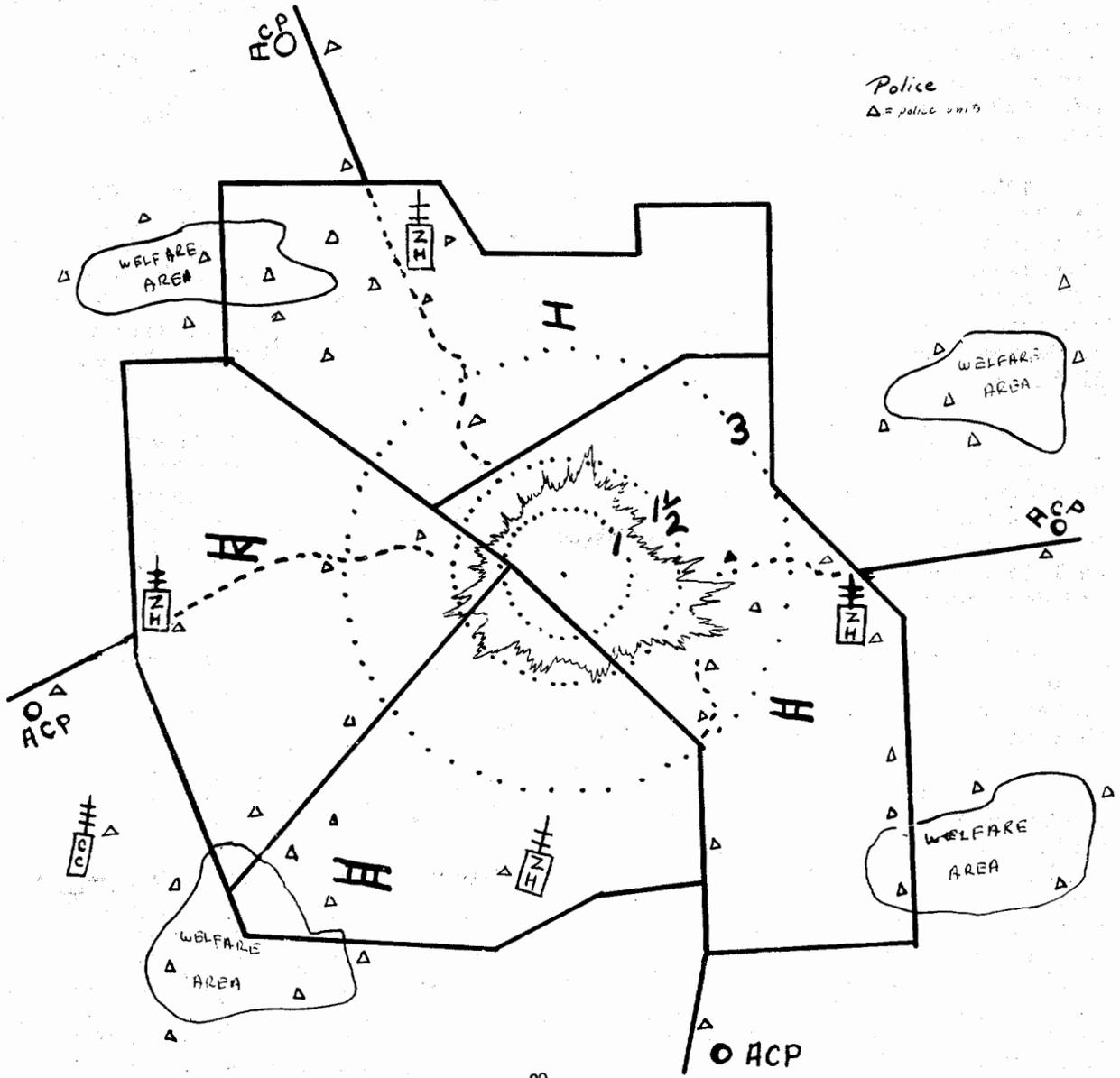
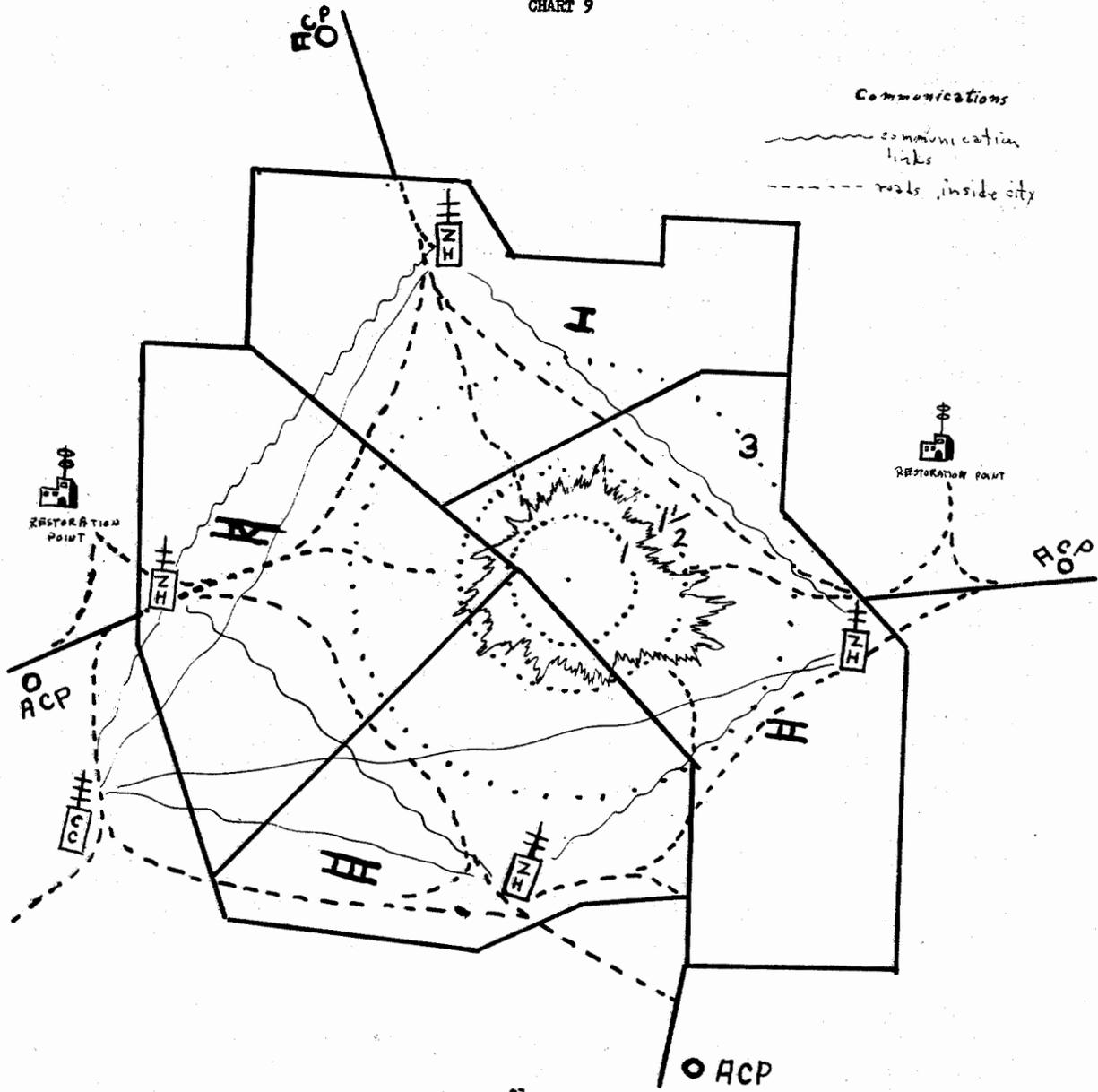


CHART 9



We have found we can hardly control the deployed forces without some form of communications. We have come up with our old Army ground system of telephones and are stockpiling around each of our target cities some 12 to 16 portable switchboards with 20 to 40 telephone sets and the land lines necessary to service them. So again in the fighting of fire around here, hospital, welfare center, control points, the communications officer has at his disposal this land line set which is designed especially for civil defense.

It works. It takes training, but we have found in the test exercises we have had up to now that we can deploy telephone communications faster than we can deploy the people who are going to work with them; of course, we back this whole thing up with radio.

Chart 10, page 23.--Transportation is probably one of the toughest jobs that we have. While we have a lot of transportation in this country, it is difficult to control. We operate under two theories: If you can predetermine what transportation you have, you preassign it. We establish in each zone a motor pool. Those vehicles that operate in this pool to some extent can be preassigned so come a bomb, they can go in and do the work. In addition to that these assembly places are for reserves in motor transportation that we bring in from the counties.

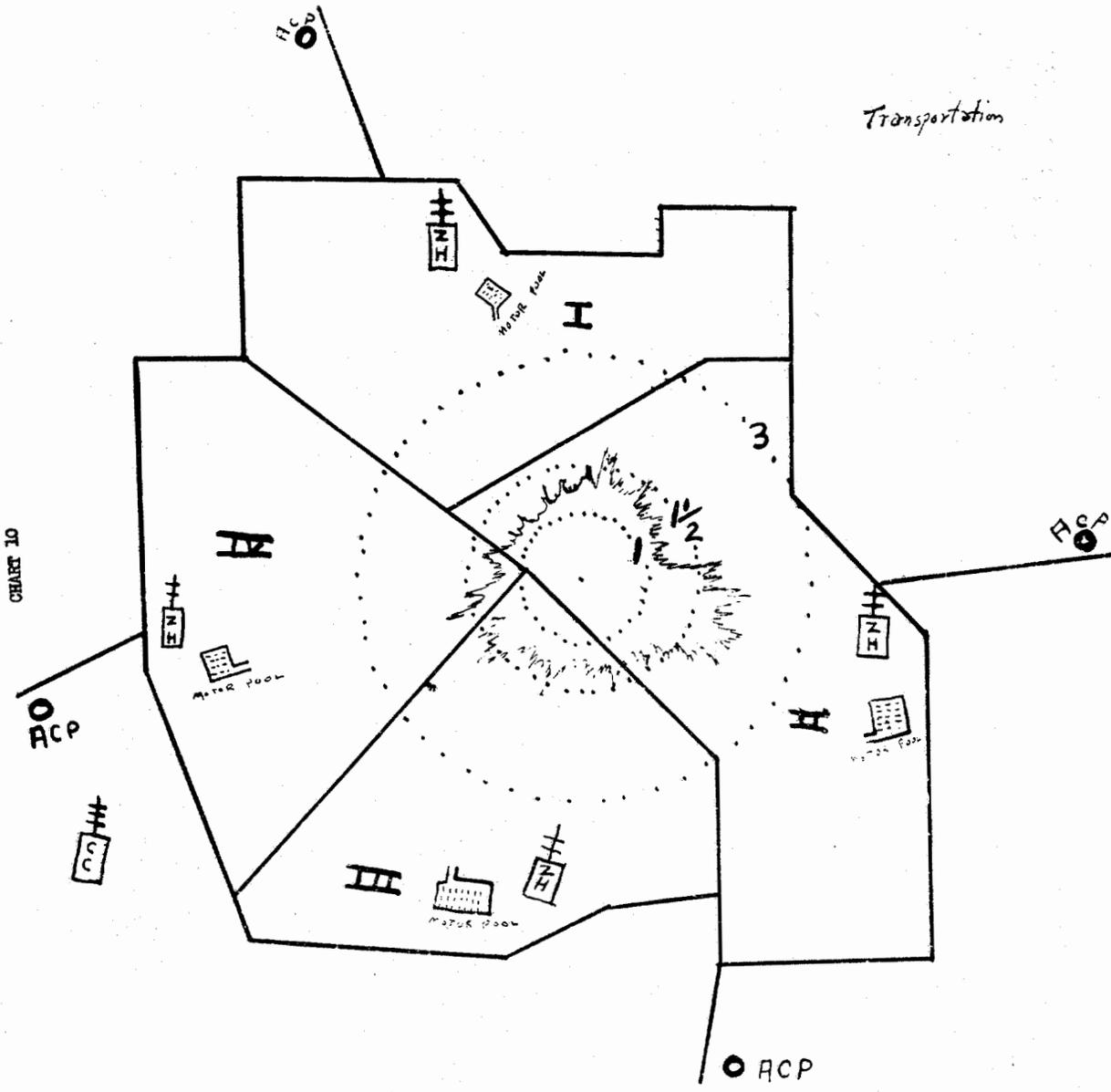
Connected with this, we have two other things that are vitally involved with transportation. One is food. We are in very bad shape in our state. I think this is probably going to come to you as a great surprise--we are in horrible shape in this country. If you disturb even for a little bit the normal flow of food, there will be people in this country that will almost starve; that is shocking but true. So we have appointed food officers in every county in the state. They are all under the control of the Department of Agriculture of the state of New York headed by Commissioner Dumont and he is in close touch with Federal Agriculture.

Strange as it may seem, 10 percent of the flour used in the eastern part of the United States is milled in Buffalo and one bomb will knock out every one of those plants except one. You disturb the flow of flour 10 percent and see what machinery has to be put to work to restore the flow of this food.

We have only one theory--pull food out from the bottom. Go to the retail outlets first; then to the wholesale outlets for the area that has been destroyed. Don't disturb anything going somewhere else. It is quite a job. You would be surprised how much food, even in New York, comes in by motor transport. It starts days and sometimes weeks before it gets there. The bomb comes down and this stuff is on the road. What are you going to do with it? It has to be assembled; it has to be put under control. That is part of this motor transport job.

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Transportation



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Every bit of this has to be paid for. We have designed some requisitions which you people in the military know so well--certainly those who were in foreign countries--and have set up throughout this whole hierarchy of command purchase officers with authority to confiscate and pay for food.

Chart 11 page 25.--Here is something that I am afraid none of us knows much about. I think every time they let off a new bomb in Las Vegas, we get a new problem--that is, radiation. We do know that with the bomb we get a certain amount of radiation. From a falling bomb there is a certain amount of fall-out. From 2,000 feet the normal bomb radiation fall-out is negligible and residual radiation after an hour or so doesn't amount to much. But every time they fire a bomb out there, we get a new story. I don't know what the answer is. We do know this, however, we can't take anything for granted.

We have set up monitoring teams and are training them in the technique of monitoring, search, setting up communications, things of that nature, getting information and putting the information out to the using forces. In this particular problem, the wind being in this direction (pointing) we assumed that the radiation in here is very severe; that the fallout down here is heavy; out here it is moderate; and on over here it is nil.

That causes us to do two things. Our searchers have to go in from all angles of the city, get their readings and communicate their reading back to the control centers, so maps can be made up. They watch the flight of the cloud so we can tell here where the hot spots are.

The equipment to do this is so expensive that we are buying only enough so we can train our crews on what to do. Later on, we are going to have to spend millions of dollars to take care of this equipment.

There are a few other things I will just touch on quickly. The only people exempted from the draft in New York State are the chaplains. Therefore, we have to get chaplains to volunteer or we won't have them. They have a big job to do and are doing very nicely. We are distributing them to aid stations, hospitals, and welfare centers. Later on, we will take up the matter of burial. There is a group in New York that has been trying to require by law religious burial. We have fought it off so far. I don't think there is anyone in America so remiss as to insist that we should have burial in the United States without religious ceremonies. We are trying to design a grave that can be put in quickly and that we can keep track of and know what people are in them. At the moment it looks as if a bulldozer would dig the graves with probably 1,000 in each grave. If we disinter, we will disinter the whole number in the same manner that they went in. It is quite a problem. The chaplains have got to organize the religious service to take care of that. I don't worry about that too much because I think we are well along the way.

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The next thing we are interested in is aircraft, Air Force auxiliary, known as CAP. They are invaluable to civil defense and they have to be placed at the disposal of the Civil Defense Agency. They can fly for us postbombing, providing we have precleared them through the air division that controls that area. They will let us prebomb clear eight planes. After that no plane can take to the air without permission from the 26th or 32d Air Division Commander. We handle it just like any other flight.

CAP has assigned to us many Air Force frequencies. We can have all the radios in the world and if they don't have frequencies they are of no use to us. They are almost invaluable to us. CAP is short of equipment. We are trying to supplement them with amateurs sets so we can utilize their frequencies to the greatest extent. CAP also has fine transportation. You would be surprised at the fine ambulances it has. We have incorporated these into the medical service.

CAP has a cadet corps of youngsters 16 to 18 years of age. They have an advantage in doing this because when they enlist at 18 they become immediately privates first class in the Air Force. So there is a great incentive to work. We find in many of our cities strong, organized, well-disciplined boys between the ages of 16 and 18 and they are invaluable to us. We use them in the control centers; we use them as messengers; we use them in the aid stations. Wherever we can find a place for them, they fit in well because they can be controlled.

Now I come to a subject that is very dear to you people--that is, plant protection. You are studying the mobilization requirements of our military to fight a war. I can tell you right now that you are going to be defeated--you will not be able to produce, unless you can incorporate your thinking into civil defense. It is not enough to just have a contract with a firm in Schenectady to turn out this, that, or the other. Every man, woman, and child in the state of New York is subject to the conscription laws of the state and they apply equally to all of them; every bit and piece of property in the state of New York during that period of emergency is subject to confiscation. So if a plant manager says "I am on defense work this doesn't apply to us," I assure you he will either cooperate or go to jail and there won't be anybody there to aid him.

So what do we do about it? Each plant--and there are 1,530 of them in the state of New York--is being organized for civil defense. It is to set up its own shelters; it sets up its own medical staff, food, welfare, and so on, so that if anything happens to the plant its people can take care of themselves, because we are not going to send any doctors over for just a few people. They have accomplished wonders.

Here is where they get into trouble. Most of the factory managers think plant protection ends at the factory gate and it really just begins

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there because there is no plant that can function without people. The people must live, so the factories must see to it that their people are well protected with civil defense. They are just becoming aware of the fact that they have to integrate their industry into local civil defense.

Now the civil defense director who will deliberately retard recovery even one little bit just doesn't exist. He wants to help. So if he has to requisition personnel, he doesn't want to go into a factory and just take them. What he wants to do is to get people who can be well spared. We have machines in the state of New York which would be put out of business if they had to shut down for two weeks and it would be foolish to requisition their operators. So in each of the factories we have the management in civil defense and they are working out rosters so that if we do have to requisition, we will know who will go first.

We are also working the thing out so that for many of our plants, such as General Electric in Schenectady with 46,000 employes, we can set up on the outskirts of that plant aid stations, secondary aid stations, and hospitals because a bomb may come there and that may be in the area of heavy destruction and many casualties.

In order to encourage industry to get into civil defense, we have designed a flag and pennant and as fast as these companies can qualify-- you would be surprised at how they are working to do it--we have a ceremony and give them this flag and pennant to fly, something like the "E" flag which was given during World War II. And they like it.

You who sit here this morning may think "What have I got to do with civil defense?" You have families. You live. Who is going to pull you out of your basement if the house has fallen in on you but civil defense? Who is going to take care of that little family of yours if you are over in Korea? There is no single person in the United States who is not in civil defense up to his neck.

I say this to you for this reason: You probably have right here some of the best brains in the country. We are trying to draw up these plans which are as complicated as any military plans you ever saw. You may not be here to execute these plans but you can lend yourself to help us prepare ours. Standing operating procedure people know better than any people in the world what to do so you can help us get a good sound basis of civil defense plans and with some chance of the operation working.

Every one of you knows that when you take a division into action for the first time, before it has been blooded, you can't expect much of anything, but if that division has been well trained, if its SOP's are correct, if its orders have been issued down the line so the last

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soldier knows what he is going to do, you can go into battle with a great degree of assurance that you will do all right. If you haven't done that, you know what happens--you get panic and indecision, and the enemy takes advantage of your lack of training; the first thing you know you have been destroyed. It is the same thing in civil defense and you people can help us a lot.

Now to show you how we control our people, I have prepared some charts to show you the control we have set up over people. It is known as the "warden service." It is a very simple service and it is a service where the operators stay at home. We will take this segment, this zone here of this city and we will divide it into districts. The basis of our warden service is on the multiples of 10--10 beats to a post, 10 posts to a district, and as many districts as you need in a zone. The chief warden is at the control center with a zone warden at each of the zone control centers, a warden headquarters for each district, and a small headquarters for each post.

These are the people who are going to be there when the bomb comes down. The first one who is still living should get information to you. Within the posts is the first place where reports are collected. Your areas of destruction don't go by lines as we have set them but by what actually happened on the ground. It is the warden who knows what happened. So with this organization complete all over the city, with a warden on every beat and with post and district headquarters completely organized, we can control our people and know what is going on.

An example is a post at Freeport, Long Island--there are 10 beats. Each beat consists of about 100 to 125 people. The warden should be someone who lives on that beat and who is highly respected, whose people have confidence in him. There are many things he should do prebomb. He should make a map of his beat. He should know exactly where the houses are. He should know where the fire hydrants are. He should know if trees are apt to blow over and block a street. He should know if there are any people seriously ill so if he has to evacuate the area they can be moved. He should know where the shelter is for each one of these houses because if it is in an area of heavy destruction, that information is most important. In the problem in Schenectady, 95 percent of the homes were theoretically destroyed. If rescue workers must go in to get trapped people out, he must direct them.

He must know what the conditions are in each area as to first aid; how many people in the area have had first aid training and know what to do. All this is prebomb. Come postbomb, it means rubble. He looks around and makes a report. What does he report? He reports the actual condition of his houses. What has happened to them? Are they all down? How many people were trapped in cellars? How many in serious need of medication? What is the condition of the street? Can you get in? Can you get in or must bulldozers go in? What is the fire situation?

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When he has done that, his reports should go to the post commander who consolidates them. The post warden doesn't wait to make a telephone report but sends them by messenger on to the district. The district collects them and gets them to the evaluating service at zone headquarters.

This is where you are (pointing). You live in an area just like this. If you don't have a warden service in that area, you are taking chances with your family that you have no right to take. If necessary to abandon this area, and fire radiation and destruction can bring about these conditions, and there is no one there to lead your family--you may not be there--then what? So many things are essential that we must have a warden service above all else. Without it, there is indeed no civil defense.

In closing let me say that civil defense is so vital to us in America that I can truthfully stand before you today and say that I am firm in my conviction that if we went to war with Russia tomorrow, it would defeat us. We wouldn't have a chance to win. Each one of you can look into this thing and see that it is so. If we can't get our ground observation corps operating so these planes can't get in, we will not only not have the advantage of prewarning but we will be subjected to sneak attacks.

You know what the condition of the antiaircraft artillery is over the United States. You also know the condition of the Air Force. And you know the capabilities of the Russian fliers. We can circumvent this whole thing if we can get our country organized. It is not all bad. Much good comes out of this. It is a better community; the people get to know one another. It brings about a cohesion that you can't get in any other way. New York State can have the best civil defense in the world but if our Nation is defeated, we go down the drain with the rest of you.

Wherever you go--and you spread yourselves over the United States-- I hope you will lend yourselves and your spare time to pushing this thing, to helping, advising, and even to getting down with the old paper and pencil and help draw up these SOP's that are so important. You know you are not going to get much prethinking postbomb. The thinking must be done prebomb.

Thank you very much.

QUESTION: General, coming to the question of production, taking Schenectady, for instance, suppose we have partial destruction of a number of defense industries in an area and somebody has to decide which one to help and which one to let go. What device or procedure is there for saying, for instance, in Schenectady that such and such a plant of GE will be supported by transportation, people, and so on but the depot will not?

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GENERAL HUEBNER: You have hit on one of the most difficult of all problems and for my money it is going to take good Federal organization to decide what we will put our effort on, to recover first. We must be guided in the states along those lines by our Federal Government. I can give you an illustration.

In Sidney, New York, in the Scintilla plant of Bendix, 50 percent of the coils used in jet engine magnetos are manufactured. Sidney is now on one full shift, a second shift about 50 percent, and a third shift about 25 percent. That company in its civil defense plan knows where the rest of these coils are made.

Now Sidney is a small place of only 4,300 people, but it draws these skilled workmen from a radius of 50 miles. So the chances of losing all those workmen are quite remote. If you were caught in the daytime and they should drop a bomb on such a small place, it would be destroyed but a great many skilled technicians would not be hurt.

So the corporation representatives are working out in their civil defense plan the places to which, if the facility is destroyed, they will send their people; a plan to double and triple shifts in available facilities to get production going faster if they are not hit; and if some other industry that makes those same coils is hit, it will be capable of receiving those workers from other places to boost their production by either three complete shifts or by enlarging the plant just as fast as they can even on a temporary basis. They plan to include housing, feeding, medication, and the whole thing. But it has to be worked out with the local civil defense director because he at that time commands all the resources in the county. Therefore, it must be integrated in the county organization.

I suppose on a Federal level maybe some of you in this group will have an awful lot to say as to whether the General Electric works at Schenectady will be the one you will build up if they have been damaged least or whether you will gather up those skilled workers in Schenectady and move them to Pittsburg, California, or some other place. It is not a local proposition at all, and I am sure the leadership has to come from the military services because production at that time is of a military necessity and things you don't need will have to go by the board.

QUESTION: There is no one set up to answer that?

GENERAL HUEBNER: Only in the industry itself. We in New York State are encouraging plants to look at the over-all needs. IBM has started to draw up plans for this. In our theoretical problem for the Binghamton area, based on light destruction of the IBM area with only glass destruction in the factory, there was a loss of 2,000 workers--they weren't all killed but they were all homeless; their houses were destroyed. I wrote

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a letter to Tom Watson and told him just what had happened at Binghamton and I asked him from a company viewpoint to review what the effect was locally, what effect it would have on his company and what the over-all national effect was. He has started those studies, and, so far as IBM is concerned, I think if they haven't accomplished this now, in the very near future they will know exactly what to do about it. He has also started a study of irreplaceable machinery and has made provisions to see that it is duplicated and set up in places where it can't be destroyed.

Plant protection is a great big thing and it reaches into every segment of the Government.

QUESTION: General, it seems to me that in some instances, particularly in New York City, the problem would cross state lines. In the absence of aggressiveness on the Federal level, what arrangements do you make for that?

GENERAL HUEBNER: That is an important question. We have anticipated that; we have compacts with New Jersey and Connecticut and we train together. We can send workers into Connecticut or New Jersey and they can send workers over to us. We have arrangements for setting up compacts with every state in the Union because we are convinced that we will have to utilize medical personnel which should arrive in the area within 24 hours. We will have to go away down into the Southern States to pick up the necessary people because at the end of 24 or 36 hours all the personnel we have in our area will be so worn out from working in the first-aid phase that the recovery phase can't be taken on. We must have help. So for that reason we are setting up compacts with every state in the Union. Unfortunately, some states have laws that will not permit it. However, I think there are not very many and I think those states will soon change their laws.

COLONEL VAN WAY: General Huebner, I think time has caught up with us. On behalf of the Commandant, the students, and the faculty, I appreciate your willingness to come down here from your duties to give us this very enlightening and challenging talk this morning. I am sure it will stay with us for a long time. Thank you very much.

(10 July 1953--350)S/rrb

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