PLENARY SESSION—Panel Discussion: Planning Context for MIS

Relationship of the MIS to the Planning Process and the RTP

Dan Lamers, North Central Texas Council of Governments

I want to talk about some of the details we get into when we try to fit major investment studies into the planning process and the relationship of those major investment studies to the regional transportation plan. You will see that in the Dallas–Fort Worth area, it is part of one big process so that you can't separate the regional transportation plan from the major investment studies. They are all part of the same planning process.

Before you can consider this relationship, you have to look at the overall staged transportation planning process, which has three parts. First, the regional transportation plan looks at issues from a system level, not maximizing the benefits in any particular corridor but fitting everything together at the system level. (See Figure 1.)

Figure 1

OVERVIEW OF STAGED PLANNING PROCESS

	Number of Alternatives	Public Involvement	Project Detail
Regional Transportation Plan	Many, especially regarding various modes	General, system level (conducted by MPO)	System level, focus on mode & capacity (not on specific locations)
Major Investment Study	Fewer (especially modes), with more emphasis on location concerns (alignments, stations)	More extensive, corridor level (conducted by transportation provider)	Feasibility level, focus on community, mobility, cost, & fatal flaw environmental impacts
Environmental Assessment/Environmental Impact Statement	Locally Preferred Alternative—1, possibly 2 alternatives with concentration on design & environment	Most extensive, project level (conducted by transportation provider)	Engineering level, additional detail on engineering, cost, & environmental impacts

Next, the major investment study focuses on the corridor level and gets into more detail on the specific issues around any particular corridor.

Third, the environmental process analyzes the impacts of the decisions made at the system, corridor, and project levels. This is an integrated decision-making process that goes from system level down to project development without duplicating efforts. Some factors we think are important in this three-fold process are analysis of alternatives, a public involvement process, and information detail needed for public involvement at the project, corridor, and system levels. The level of detail increases as you work from the system to the corridor and then to the project level.

The number of alternatives considered at each level is in reverse proportion. At the system level, you look at more alternatives, particularly modal alternatives where you are trying to decide from a system level what types of modes seem to work better in various corridors. Those of you familiar with transportation modeling or travel demand forecasting know that when you are talking particularly about transit alternatives, you really have to do that at the system level. You cannot really isolate system-wide decisions at the corridor level, because they have such far-reaching impacts.

We use system planning to look at the various modal alternatives. These are then refined by major investment studies at the corridor level, where we may start looking at some various options around a particular mode.

The major investment studies thus fit into the middle of the whole planning process. The MIS does two things: It refines the information provided by the existing regional transportation plan, and it provides information to modify that plan. It also provides the necessary information to further define specific projects to be included in a transportation improvement program and eventually implement it with specific projects.

MIS is not a stand-alone item. It is very much in the middle of the planning process. It is not the beginning or the end but a way to get from the system level to the project level.

Two things should be kept in mind when you talk about major investment studies. One is that it is a design concept that primarily serves as a conformity place holder to ensure that when you get through with the whole process, you don't end up with something that violates your conformity requirements. You want to make sure at least in your regional transportation plan that you have a conformity place holder so that when you do the major investment study you do not have to totally reevaluate the conformity requirements.

The second is the financial implications. It is one of the most important evaluations included in major investment studies. Your regional transportation plan should have a financial placeholder so that when you finish the major investment study you are not interrupted in implementing the strategies because of lack of funding.

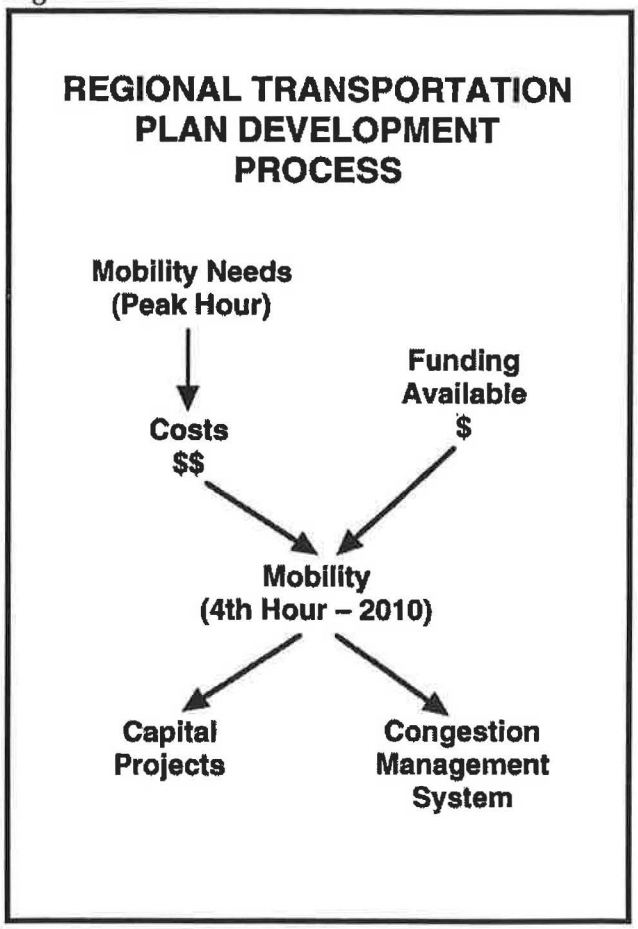
Currently in the Dallas–Fort Worth area, we have different planning horizons, depending on where we are in that process. We have our Mobility 2010 Plan Update, which is our regional transportation plan. This plan was developed in 1993, and it has a year 2010 planning horizon. All our major investment studies now have a 2020 planning horizon.

That will do two things: The 2010 plan is our current plan, so the results of the MIS will have to provide information to update the current plan at the 2010 planning horizon. It will also reach out further into the future and have a 2020 planning horizon in order to provide information to a subsequent regional transportation plan. The MIS is, therefore, not a static type of a study but contains two future time lines.

Before you can really talk about our major investment studies, you have to understand our regional financial constraint process. There have been two ways to set financial constraints. One is what I call the traditional way, where funding is based on needs. You determine what your level of service target is for your urban area, you identify a slate of projects that meets that level of service, and then you add up how much money it takes to construct those projects and try to find the money.

Ours is a little different. Under the financially constrained methodology, you determine how much money you have to spend. Then you determine what level of service you can afford to provide to the region. Next, you identify the projects required to meet that level of service. Finally, you add up what the dollar amount of those projects is, and if it exceeds the assumed amount of resources you established at the beginning, you redefine your LOS and reevaluate your list of proposed projects. Thus you try to get a balance between your predicted resources and the eventual projects to be programmed. (See Figure 2.)

Figure 2



You start out by identifying what you need from a peak-hour or a needs standpoint. For example, what do I need to satisfy level of service C in the peak hour? You add up the costs, you look at the funding available. They don't match. You then pick a different hour of the day when you think you can satisfy your desired LOS.

In our regional transportation plan, the way we deal with financial constraint is to choose level of service D. We will pick an hour of the day when we can afford to satisfy level of service D and then leave the congestion management system to try to pick up the congestion for the other hours.

In our case, we settled on the fourth hour. We believe that we have enough funding available to meet level of service D for the fourth-highest hour of the day. What this does is spread money across the region and prevent policy-makers from being pushed into a decision of having to pick and choose projects, taking them on and off the plan. It spreads the money across the region so that all corridors and all areas get some relief, but not for its peak hour. In that way we found that it can stretch the money a little bit farther.

In a major investment study, because of these different planning horizons, you have a different problem. Remember, there are two things you want to do with a major investment study. One is to provide information to the plan that you are currently working under and the other is to provide information to a future plan that you haven't yet developed. Therefore, the MIS recommendations have to be flexible enough to do both.

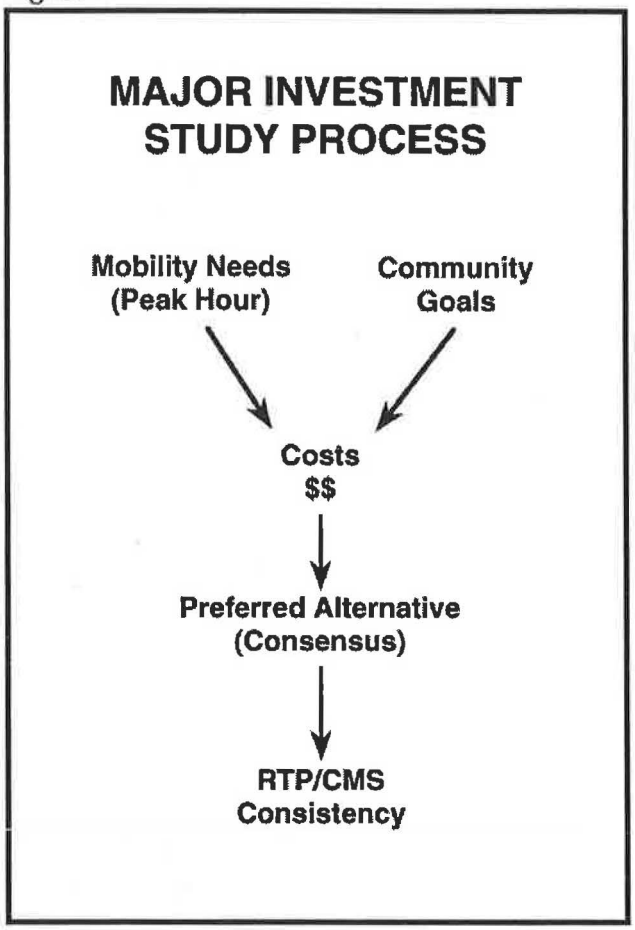
So we feel the best way to do that is to look at the peak-hour needs. What are the problems in the corridor? To answer that question you must look at the community's goals while keeping in mind the system planning process. The more detailed you get in the system planning process, the more you start looking at public involvement, the more you start looking at community goals or corridor goals.

In a major investment study, you need to identify technical requirements and community desires and how both relate to costs. Often, when you start adding what the community wants on top of what technically you need, you end up with a project that far exceeds available resources. (See Figure 3.)

This is how we develop a preferred alternative. It is a true consensus process. It does not represent what we used to call a "technically preferred alternative." It is what we now call the "locally preferred alternative." It has some technical merit to it, but you may have had to give up a little bit of what is best technically in order to achieve consensus from the local community.

The next step is to try to fit that consensus alternative into your regional transportation plan and your congestion management system. Two options are available for doing this: One is that you simply amend your regional transportation plan. You make the case that you have gone through the major investment study process, and you have identified a strategic set of projects that are consistent with the regional goals.

Figure 3



That, of course, means you have to update your financial plan. More often than not, you end up with a project that is more costly than the placeholder you set in your regional transportation plan. Redoing the financial plan puts elected officials in a tough situation, because they have to figure out what to take off the plan in order to meet the financial constraints. That is not a very popular idea, so we try to use a different approach, which is staged construction.

In staged construction, you define the locally preferred alternative for a year past what your original plan was and maybe even beyond the planning horizon you think your future plan will encompass. You stage the development of the locally preferred alternative in order to achieve two things. One is to fit it into the financial placeholder you had in your original plan so you do not violate the financial implications of your original plan.

The second thing is to divide the locally preferred alternative into stages in a way that the first or second stage can fit within the financial placeholder you already

have. This may require you to amend the design concept in your original plan a little. Depending on the magnitude of that change, you may have to go back into conformity and redo your conformity analysis, but that may be easier than having to find more money.

The major investment study and the regional transportation plan are inextricably linked in a way that makes them almost seamless. You have allowed the community to achieve what it wanted— and that is to eventually construct a project that meets its needs—and you have satisfied your financial constraints by staging development in a way that meets the needs of elected officials and of your financial constraints.

This is an integrated process where one piece cannot stand alone. Major investment studies and regional transportation plans are linked together, and you just cannot separate them. If you try to do so, I think you end up with a lot of problems.

MIS: Key Planning Context Issues

Neil J. Pederson, Maryland State Highway Administration

I am going to use somewhat the same format as in my earlier presentation. Therefore, once again, I will pose 15 questions. Let me run through these very quickly, and then we will discuss each briefly.

1. How do major investment studies relate to the long-range plan process?
2. How do major investment studies relate to congestion management systems?
3. What is the relationship of major investment studies to conformity?
4. How do we integrate land use issues into major investment studies?
5. What changes have occurred in the MPO planning process as a result of MIS requirements?
6. Have we been able to successfully integrate MIS and NEPA requirements?
7. Can environmental issues be adequately addressed to make corridor-level decisions?
8. How have environmental agencies reacted to MIS requirements?
9. How do we get other agencies involved that do not have adequate staff resources and the desire to become involved?
10. How do we effectively engage the public in the MIS process?
11. Have we created duplicative processes?
12. What has been the experience with retrofit projects to date?
13. Are we missing an opportunity to use major investment studies as means to enable corridor preservation actions? It is a little bit off the subject, but it is important.
14. What requirements are being imposed that do not make sense?
15. What changes should be made to MIS, NEPA/404, metropolitan planning, the congestion management system, conformity, or public involvement requirements to address problems experienced to date?

1. How do major investment studies relate to the long-range plan process?

Beginning with the relationship to the long-range plan process, major investment studies should come out of the long-range plan process—theoretically, at least. It would be interesting to know how many truly did come out of the long-range plan process and how many were projects already identified that we are now trying to retrofit with a new requirement.

What we have discovered in both of our major metropolitan areas is that we use MIS as a basis for identifying the mode and design concepts for major improvements to be included in the long-range plan. Where it is not obvious what the major concept is, we show it in the long-range plan as a study corridor. That may be the most effective way of keeping some of the bias out of the long-range plan in terms of what the solution is going to be until the MIS has actually taken place.

Because it costs so much to make amendments to the long-range plan, particularly in terms of conformity requirements, we may be in such a position that we have no choice but to make certain assumptions in the long-range plan, particularly each time we to do a new conformity analysis.

A major point is that after considering the long-range plan, financial constraint discourages completion of an MIS when funding has not been identified. Yet, project development needs to be well along in order to secure funding. Our experience with our General Assembly has been that we really cannot raise the revenues we need until projects are well into the project development process. Elected officials in our State are elected for four-year terms, and they are not about to vote for something that is a long time out in the future, particularly if they have to raise revenues for it. They