

Specific Types of Joint Development and Multiple Use

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A LITTLE more than 5 percent of the physical land area of the United States contains almost 50 percent of the population. That, in a way, is a definition of the complexity of our surface urban transportation problem. We have to provide surface facilities to cater to the work needs, the social needs, and to all kinds of transportation needs for 50 percent of the population in that little area. The situation in the year 2000 is not going to improve at all because by then over 60 percent of the population in the United States will be residing in 8 percent of the land area.

One of the problems in our cities especially is the limitation of public dollars. Everyone is competing for public funds (for legitimate purposes) for housing, schools, parks, and whatnot. One of the basic

Editor's Note: These remarks were taken from Mr. Levin's presentation, which was primarily visual, with many slides and illustrations. All references to the slides have been deleted. The reader is referred to the following publications in which many of these illustrations are included:

A Report on the Status of Multiple Use and Joint Development. Environmental Development Division. Office of Right-of-Way and Location. Bureau of Public Roads, Sept. 30, 1968. 103 pp.

Joint Project Concept: Integrated Transportation Corridors. Barton-Aschman Associates, Chicago, Illinois, January 1968. 129 pp. (Prepared for the U.S. Department of Housing and Urban Development.)

Multiple Use of Lands Within Highway Rights-of-Way. NCHRP Report 53, 1968. 68 pp.

A Book About Space. Bureau of Public Roads, Federal Highway Administration, U.S. Department of Transportation, 1968. 53 pp.



Scenic overlooks are appropriate multiple uses for sections of highway traversing particularly scenic areas. The Rockefeller Lookout on the Palisades Interstate Parkway, located in the New Jersey Palisades area, affords a fine view of the Hudson River Valley. (Source: NCHRP Report 53.)

concepts, of course, of joint development is that the same public dollar will be made to do double or triple duty. The concept is that if we engage in joint development or multiple use we will be able to construct two or three or four different types of uses together at a lower aggregate than if we did them individually. Not only is the public dollar getting increasingly limited but space is also becoming limited. Invariably, in the urban area, as we construct one use, we push out or preempt some other use from being constructed.

Joint development and multiple use make possible new dimensions in urban drama and provide not only a transportation corridor — eventually a multimodal transportation corridor — but permit uses alongside it never before tolerated so close to transportation. Under the joint development concept we see nothing wrong now if all uses are planned jointly and appropriately in relation to each other. For example, you may have an elevated transportation corridor, an express highway like the Interstates combined with high-rise residential uses

with swimming pools. The swimming pool areas could extend under the expressway itself. Using the expressway as a separator, you could have a lower structure kind of development — a little shopping plaza. The advantage of the highway structure as against earth fill is that it does not constitute an interruption of surface accessibility. The people living in the high-rises can easily walk to the shopping plaza with a maximum of safety and facility. The whole project can be designed within an aesthetically pleasing block-wide area.

Another example of multiple use is a multimodal corridor. You may have a transportation terminal facility that is elevated, with a heliport on the top and buses and rail transit under the structures. Still another possibility is a school with the playground and other kinds of facilities extending right into the highway rights-of-way, under the highway structures in a way we have never permitted before.

What happens if a vehicle should unfortunately careen off the highway and go through the sidetrails? Presumably, the engineers are designing our railings so that they will contain the vehicles traveling at speeds that are common to urban areas. Up until now, I have not heard of any fatality or casualty precipitated by this kind of joint development or multiple use. It is hoped that such accidents will not occur. We would like to build the transportation system as part of a total urban environment. The presumption is that the kind of multiple use is compatible with the area traversed. There has to be a basic compatibility of the uses that are contemplated over, under, or alongside the transportation corridors.

New highway rights-of-way take presently taxed land off the tax rolls. Multiple use at least compensates in part (and perhaps, in many cases, overcompensates) for tax losses by restoring some taxable base.

Joint development and multiple use do not necessarily involve the use of air rights. When they do, we have to be very discreet about what kind of uses we encourage. There are such things as noise and pollution and other environmental problems we must work on.

Another characteristic of multiple use with our urban freeway and other transportation development is the economy of space. When we have to relocate people we can generally put them into higher density structures in about one-third of the space that they formerly occupied because the land values are high enough to justify this. At the same time we can leave open space for other kinds of uses, such as parks or playground facilities. A block-wide width in the average city is 350 or 400 feet.

Normally, we probably would take about 25 to 35 percent of a block-wide width for our three-dimensional tunnel for a highway purpose. The remainder could be used for other purposes. We have found that the cost of that simple 25 to 35 percent of a block-wide width is greatly out of proportion to the area. We have to pay approximately 65 to 75 percent or more of the total cost of a block-wide width for that



Fort Hamilton Playground constructed in conjunction with the Verrazano-Narrows Bridge, New York City. (Source: Triborough Bridge & Tunnel Authority, New York City.)

narrow corridor. The reason is quite obvious. We have to pay for the actual land physically taken and the buildings on the land, and damages to the remainder. The net result is that we have to pay for 25 or 30 percent of the area about 65 or 75 percent of the cost. However, highway departments or other public agencies can take the entire block-wide width, obtain the needed right-of-way, and control the remaining 70 to 75 percent of the area for only about 25 to 35 percent added cost. The remaining low cost land is an important economic phenomenon because many types of uses, public and private, that formerly might have been marginal or even submarginal could be economically constructed.

Parking is a traditional understructure use. In some cases, however, we might want to question whether parking is the highest and best kind of use in comparison to other uses that contribute to the neighborhood and the environment and making the city a better place in which to live. To the extent that we do think that parking continues to be a good use, we want to make sure that the parking use is not a

blighting one and that it is orderly and has a reasonable amount of amenities and landscaping. Frequently, a highway section in an urban area has been denounced by architects and others when the highway is not at fault, but the parking has had a blighting effect.

When a facility really begins to be clogged up, many people condemn the highway or freeway, and say that we ought to eliminate further development of such facilities. But when you build a new hospital or new school that operates at capacity within a couple of months, nobody says that hospitals or schools should no longer be built—they say we should build another school or another hospital.

Every freeway facility has a designed capacity, and all elements of it have predetermined capacity limitations. As long as we operate within these capacity and design limitations, we are all right, but when we try to exceed them we are in trouble.