

## Express Highways

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When I was a small boy here in Baltimore, there remained on street corners here and there about the town some tall wooden pumps with long iron handles. They were the last vestiges of a past pre-plumbing period of the town's economy. My parents remembered, but I do not, when those pumps and others like them were the source of water for all household uses by most of the population.

When I was a boy there were gutters in Baltimore, and they were gutters. They were wide and deep, and after rains they flowed full and overflowing to the middle of the street. I thought how nice it would be if we had everywhere the tall stepping stones that I saw in a few places, last survivors of a numerous family of stepping stones, migrant from London, perhaps, a century before.

On washdays our gutters ran with a quieter flow of beautiful iridescent blue water, in which cigar-box boats of shallow draft, with matchstick masts and paper sails could be navigated by boys imbued with a maritime tradition of clipper-ship days not too long past.

Also, there were wells in Baltimore, when I was a boy. At least we called them wells. They were in the backyards, privily enclosed within small houses, which in turn were sequestered, perhaps, beneath arbors of grapes. Or was it morning glories?

There were cobblestones, too, in Baltimore in those days. Nearly all the streets were paved with them; and those cobblestoned streets were accepted by their users as one accepts any natural fact - the weather, for instance. But small boys preferred to use the cable slot - wherever there was one - as a track for their "bikes"; and teamsters deemed the street car rails a better place for their wheels, nor were easily persuaded to change their minds, not even by the most insistent clanging of the motorman's bell.

Residential streets bore a very light vehicular traffic when I was a boy. They were boyhood's principal playground. It was easy to dig holes for marble games (hoodles, we called them) in the spaces between the cobbles; and the protuberances of the stones afforded at no expense such sporting obstacles as today you can have only at a nickel a throw on complicated devices of pins and bells and electric lights located in the corners of drug stores.

Street danger loomed only with the excited cry of "Runaway Horse!" Or the clamorous sounding of the fire engine bell. On such occasions boyish wisdom suggested retirement to the curb, there to hold one's arms outstretched in fancied, but wholly safe and ineffectual obstruction of the horse's mad career; or to shout in partisan glee after the friendly firemen, "Whoeee Nine!" Or whatever might be the number of one's own particular engine company. If, by chance, the engine passing, one's eye alit upon a strange boy, "What number do you go for, boy?" And woe betide the luckless wight if he gave the wrong response; for, at the ominous cry of "Hang him out!" he would be chased with sticks and stones, and all one's gang in full pursuit clear out of the neighborhood and even to the very proximity of opposition in strength, in whatever benighted region the stranger might call his home. So was manifest the small boy's perception of differences between neighborhoods, then smaller, more stable, and more sharply defined, perhaps, than now.

That was the Baltimore of the Nineties as it impressed itself upon the consciousness of one small Baltimorean.

All changed now; but the changes, as I recall and as many here will doubtless remember, were not without some stiff opposition in their evolving.

The town pumps in my day were largely functionless survivals of an earlier period which knew no running water in the house. I do not know at what cost of communal misgiving that change may have been wrought.

I do distinctly recall that it took a deal of exhorting by Mr. Mencken, in his column in The Sun, to "swat the fly and vote for the sewer loan," to win favor for a sewerage project long overdue. And notwithstanding the precipitous decline of the typhoid death rate that accompanied the extension of the drains, I recall no little muttering over the expense as, first one neighborhood, and then another, was called upon to connect at individual expense with the mains and laterals the city provided. And, when the connections had at last been made, it was, I am sure, somebody's aunt from the country who packed up and went straight back home immediately upon a certain discovery, vowing never to return until they put that thing back in the yard where it belonged.

Nor was the great street-smoothing project launched, despite the favor of a growing family of autocar owners, without much more than murmurs of dissent from horse lovers, wagoners and draymen, who feared for the safety of their horses' limbs on the slippery asphalt.

Modestly triumphant over its forces of reaction, never quite sure that all that it was doing was "really needed", and in doubt always as to how it was ever going to pay for it all, the city changed itself in two or three decades after "the Fire" from a Victorian

Village to what in prospect had appeared to be the form of a modern metropolis - to just about the city as we now know it.

And now: What's the matter with us? We have everything, haven't we? Water, sewers, streets, an excellent system of public education, parks, recreational areas, everything. Yes; and blighted areas, and traffic congestion, and a parking problem, and decentralization, whatever that may be. Well, maybe some of the last are not so good. But what can we do about it?

And, some of us being of that cast of mind which inclines to the belief that whatever is, is right, and can't be helped if it is wrong, are prone to give the same answer as the cop, up for examination for promotion to sergeant.

The question was: What is rabies, and what can be done about it? Without any hesitation at all the cop wrote: Rabies is Jewish priests and you can't do nothing about it.

You can't do nothing about it. Somebody says we ought to have an Expressway. Well, I'm against that. What's an expressway, anyhow? It's a ditch, that's all it is. I'm against it.

And, faintly down the corridor of time, if you listen very closely, you'll hear reechoed that same protest, I'm against it.

My horse'll break his legs on those asphalt streets. I'm against it.

Strayer report? What's that? Oh, some so-called educational expert from New York trying to tell us how to run our schools. The little red school house is good enough for me. I'm for the 3 R's. I'm against it.

New Philadelphia Road? What for? Muskrat Trail, I call it. It'll sink out of sight in the mud of those rivers before it's a year old. I'm against it.

Bath Street viaduct? Howard Street extension? What for? In the name of all that's holy, what for? I'm against it.

Have you driven the Old Philadelphia Road lately? If you haven't, let me recommend that you do it. Drive out to Aberdeen by the old road and come back by the Muskrat Trail.

Start your wheels on the Bath Street Viaduct at St. Paul and see whether you can say Jack Robinson before you get to Gay Street.

Drive out Howard and, when you pass Dolphin and roll under Mt. Royal, say "I'm" and crossing the bridge over the railroad say "against", and when you hit North Avenue say "it", because then you really will be against it. Right up against it. Up against the end of an expressway that is too short.

New Philadelphia Road; Ritchie Highway; Edmondson Avenue Extension. All almost expressways, but not quite. No traffic lights on an expressway. Bath Street Viaduct, or let's be modern, call it Orleans Street Viaduct; Howard Street Extension. Expressways both, but much too short.

Well, yes. But some of those are out in the country. That's different. Yes, different; out where they aren't needed half as much as in the city. And the two that are in the city were built to open up notorious bottlenecks. They are a good bit of help to city drivers. But now they're talking about an expressway through the city for outsiders. Can't see what good that'll do us. Looks to me like just a race track, maybe for Bureaucrats from Washington, so they can get quick up to Wall Street, and take it over. They don't even want to give us a second glance. Why not build them a by-pass? How about the Harbor Bridge?

Well, that does it. Puts the whole question very neatly. Or does it? Let's see.

What is an expressway, anyhow - an expressway in a city? It is a modern arterial street.

And what is an arterial street? Well, every city has them. Baltimore has them; always has had them. They were the first streets we had. The town grew up around them. Before the town grew up around them, they were there as country roads, as turnpikes. Name them.

Pennsylvania Avenue, Hookstown Pike. Greenmount Avenue, York Road. Harford Avenue, the Harford Turnpike. Gay Street, Belair Road. Fayette Street, Old Philadelphia Road. Hanover Street, Old Annapolis Road. Columbia Avenue, now Washington Boulevard, Washington Road. Edmondson Avenue, Old Frederick Road.

Yes, Baltimore has them. These are arterial streets, always have been. The trouble is, they are bad streets. With some exceptions they're the worst streets we have. They are old arteries - clogged. But they are arteries - always have been.

When the town was young they brought the rich merchants from their lordly estates to their counting houses in town. They brought the farmers in from the rich countryside to the markets, which invariably were located near their inward ends.

When the horse cars came, and after them the cable cars and the trolleys, where did they lay the first rails? Why, right on those same arteries.

And what did the horse cars and cable and trolley cars provide? Why, nothing other than arterial transportation.

You didn't always have a car in which to go to town. When you didn't, you walked from your home to the nearest street car line, most likely on one of those same arterial streets. And where did the street car take you? Why down one of those streets to town - to Baltimore Street. And, on Baltimore Street, what did you have? Congestion. Congestion of street cars. They were end to end. Look up the old pictures. Do you remember, they used to have fenders - cowcatchers we called them - on the front of the street cars to pick up the pedestrians. They finally had to take those cowcatchers off - so they could get more street cars end-to-end on Baltimore Street.

Well, the street cars are still running on those old arterial streets and on some others of later development, and most of you are now trying to get to town daily in your automobiles over those same streets. Altogether you make up a traffic stream that is just too much for those old arteries. The arteries are clogged, and when the arteries clog, the body dies!

You are going to have to do something about it. And the answer is: Expressways.

Notice that I say Expressways - not an Expressway - not a throughway for Washington-to-Philadelphia travelers, but modern arterial expressways for Baltimoreans.

Now, let me admit it. All I know about cities and their traffic problems is what I have learned by coming into them from the outside. For more years than I like to confess I have been concerned with the building of rural roads.

Back in the early days we used to say the cities are all right. Their streets are perfect - all smooth and nice, and wide. It's out in the country where the mud is. So let's build good roads out in the country - from one city to the next one - from the farms to the market towns. We're helping the intercity traveler; we're getting the farmer out of the mud. The cities are all right. They don't need any better roads. So don't spend a nickel inside the cities. At least don't go any further in than the point where the houses average 200 feet apart or less. That's what the original Federal Aid Road Act said, and that's what we did.

We built the roads between the cities and the roads to the market towns. And, whatever you may now think about them, the people thought they were very good, when they were built. And they are still good enough to keep a traffic moving pretty well that amounts to close on to 200 billion vehicle-miles annually.

But when we had built the roads right up to the cities, we began to hear some murmurs. They were mere murmurs at first, but they rose rapidly to loud complaint - a complaint about city streets.

Travelers told us that they were getting along all right on the rural roads, but they were up against it when they hit the cities. They had a hard time getting through. They said we had taken them out of country mud only to dump them into city muddle.

Well, we thought we could do something about that fairly easily. We would just build by-passes around the cities. So we built some by-passes.

But the by-passes didn't seem to get the traffic - a little, but not much. So we made some studies to find out why the traffic wasn't using the by-passes. Origin-destination surveys we called them. Their purpose was to find out where the traffic on the rural roads near the city lines was coming from and where it was going. And what we found was that nearly all the traffic was either headed for the city or coming out of it. Very little outbound was coming from points beyond the city, and as little inbound was going beyond the city. And only that little could profitably use our by-passes.

Now mind you, we still had our thoughts centered on our own rural road traffic. We wanted to help that traffic to get where it was going, and apparently it was going mainly into the nearest cities. So we began to wonder why not, after all, build the roads into the cities. Amend the Federal-aid law; change all the State laws that prohibited building Federal-aid and State highways into cities and let the roads go in. So that was done. And State and Federal highway engineers found out for the first time what was in the cities.

We found that when a main rural highway enters a city it connects with one of those arterial streets we have been talking about. We found, generally, that the largest single fraction of the traffic we delivered from the rural highway wanted to go straight along that arterial street to the business section. Portions of it wanted to branch off at various points to reach, somehow, the several residential sections of the city. But however much branched off, much more traffic came into the arterial street on the way to the city center. And the traffic pattern was on this wise. If the rural road delivered 5,000 vehicles a day at the city line, the net result of that and other traffic entering and leaving the arterial street was a steadily increasing traffic volume on the street as it approached the city center. From 5,000 vehicles a day at the city line the traffic on the street would mount to 10,000 to 20,000 to 30,000 near the center of the city. And if the volume didn't rise above 30,000 it was generally because the street simply wouldn't take any more. Some of the traffic that would have used the street was simply crowded off on to other streets - not by preference, but by necessity.

Moreover, we found that, as we entered the city, various impediments to the movement of traffic increased. We no longer had a clear, open road. In the first place, every few hundred feet there were cross streets and cross traffic, for which the arterial street

traffic either had to slow down or stop, or else. At some of the cross streets the cross traffic was so heavy that the city authorities had been forced to the use of traffic lights. And the nearer we came to the center of the city - the traffic volume all the while increasing - the more frequent the traffic lights became. And, here let me interject that we have learned by long experience that whatever stops traffic tends to congest traffic. And, goodness knows, the traffic we were following into the city was perfectly capable of congesting itself without the aid of traffic lights. It was parking and unparking, and turning in and turning out, turning right and turning left, weaving and twisting, stopping suddenly and starting slowly. And, all the time, it was becoming heavier and heavier, while, often, the street was becoming narrower and narrower as it passed inward from one historic stratum of its original layout to an older and yet older stratum on the way to the city center, site of the earliest ancestor village.

Something like that was about what the rural road builders, myself among them, found when they began coming into the cities from the outside. They found, most importantly, that what would be needed to get the rural road traffic into the cities where it wanted to go wouldn't be a circumstance compared with what was needed to get the traffic of the cities themselves along the same routes to where it wanted to go. They found that whoever would build roads into cities would find before he had gone in very far that he was working for a traffic almost completely urban in its origin and destination; and that whatever solutions they or any one else might offer for improvement of the ways of cities would have to take account mainly of the transportation requirements of the cities themselves.

Approaching the problem in that way - from the standpoint of a city's own transportation needs - just plain common sense, applied to a knowledge of street traffic volumes present and to come, tells us that the city needs, and needs badly, some free-flowing arterial streets. Just which streets will best repay improvement, or along what lines new facilities should be provided are matters that must have particular study in every city.

However, in most cities it is a safe bet that the lines that will be found to be most serviceable will be lines that connect at the city perimeter with the principal rural highways, and lines that converge radially inward from these perimetral connections toward the city center - the downtown business section.

Toward the city center, I say; not into it, or through it. Remember the street cars end-to-end on Baltimore Street. We don't want to route automobiles by way of new free-flowing arterial streets in such a way as to produce anything like that situation. Yet, to a very considerable extent that is precisely what the present streets of cities do. The origin-destination studies show that anywhere from  $3/8$  to  $1/2$  (in Baltimore it is the lower figure) of the traffic that

now moves through streets of the downtown sections of cities is a traffic that has neither origin nor destination in the downtown section but is only passing through it to get from other origins to other destinations.

To rid the business section of this superfluous traffic, a free-flowing belt highway around the section is required. For maximum utility such a belt highway must be located around the fringe of the central business section - not too far out, not too far in. At this same belt highway the radial arterials should terminate. When the radials reach this belt they have done all they can for their traffic. Their business-section traffic is about to scatter toward its ultimate destinations in the central section. Their traffic bound for cross-city destinations should be conducted around the center. The belt then becomes both a distributing and a by-pass facility. But, if it is to accomplish these purposes, it must, like the radial arterials, be a truly free-flowing route, a route to be preferred over ordinary streets of the central district or its fringe for the superior facility it affords.

What we have pictured so far, as you will see, looks very much like the hub and the spokes of a wheel. We can now complete the picture by adding a rim. The rim is an outer by-pass around the city, intended for the convenience of external traffic that would benefit by avoiding the city altogether, and for the highway connection of outer city and suburban areas. If necessary, you may add one or more intermediate belt lines between the rim and the hubs. And there, you have the type-picture of a system of arterial highways for almost any large city.

The whole system is needed. The radials must be as numerous as the determined need requires, and follow the lines indicated as best by specific study. The belt lines, inner and outer, and intermediate, if required, are likewise essential. No part or parts of the system can possibly serve all the intended purposes. Eventually, you must have the whole; and the whole must consist, eventually, of truly free-flowing arteries. Until you have free flow, you have only partial benefit.

Well, free flow means no intersections; it means physical separation of the traffic moving in opposite directions; it means avoidance of all lateral interference and friction with the main traffic stream; it means controlled access; it means a complete separation of the highway from any bordering development, business or residential. It means highways depressed below, or elevated above cross streets. It means Expressways.

Now, one thing is sure, no city can hope to create a whole system of such expressways in a year or so. And another thing, equally sure, is that the time when the creation should have begun is past, in every large American City. It is overdue in Baltimore. But the sooner you get at it, the sooner you'll be through.



There are at least two ways to get at it. Either you start now and build successively each route or parts of each route seriatim, to full expressway characteristics; or you can upbuild all, or a number of the routes simultaneously in various stages of approach to full expressway characteristics.

Whichever method you prefer, whether one or the other or a combination of both, you should have before you right from the start a general plan of the ultimate objective. You should know what you are building toward. That way only can you be reasonably assured of a sound incremental development. You'll still have to worry about the proper priority of each section of the plan, but you will at least have the prospect that the whole plan will eventually mature in good shape.

If there were such a plan in Baltimore, substantially agreed upon and publicly sanctioned, the perennial argument over Throughway or Harbor Bridge might at least recognize that these two facilities are both parts, and parts only, of a total system. It might at least be recognized that they are not alternative solutions to the same end, but facilities of distinctly different purpose, the one being a combination of two radials and part of the downtown belt, and the other a part of the outer belt, both parts of the whole needed system.

I am not unaware that Mr. Smith, your Chief Engineer, and the Commission on City Plan have given very careful study to the development of such a plan. The city is to be congratulated upon having now in its possession very necessary data in regard to the traffic movements to be accommodated by any such plan, data developed by the origin-destination survey recently conducted jointly by the City, the State Roads Commission and the Public Roads Administration.

A thoroughly sound over-all plan for an expressway system for Baltimore is well thought out, I believe, in the minds of your officials and civic leaders. It has not yet been presented for official adoption, and city-wide sanction. As one citizen, I believe that all of us would be better able to appraise the worth of particular proposals as they are made if we could see how they fit, each and severally, into a whole plan agreed upon as sound.

The particular proposals are sure to be advanced. One, of high importance, now advanced, is the proposal to build the expressway connection from the Washington road at the southwest city line to a point near the center of the city. This proposal contemplates the employment of funds available from a Federal authorization which may lapse next June 30, unless specifically allotted to the project by that date. We are satisfied that this proposal is thoroughly sound, and will approve it. We - and here I am speaking for the Public Roads Administration - are expecting an early disclosure of where we go from there.

Indeed, I do not see how we can proceed far with the development of an Expressway System in Baltimore - with all that such a purpose entails of essential adjustment of the expressway plans to so many other elements of the city's planning, with all that it entails of future expenditure to reap the full benefit of present investment, - I do not see how we can proceed with confidence far with the development of individual expressways without having the whole system plan before us in its broad outlines.

Nor do I see, as a citizen, how the City - its recognized capital needs so numerous and varied - can long proceed with safety in the planning of such various and mutually impinging plans without a very carefully thought-out program of all its future undertakings of the various kinds. I am not so much interested in expressways as to want good expressways at the cost of bad schools, or an inadequate development of any other of the city's facilities or functions. I am sure that the rehabilitation of blighted areas must have a large place in the further undertakings of the City, and I should not like to see a blighted area rehabilitated athwart the path of a future expressway without taking full account of the expressway to come, in its best location and appropriate dimensions.

So, while I am for expressways, and for a beginning, now, of their systematic development, I would like to have that systematic development as consonant with other needed developments as possible. Above all, I would like to see a well considered financial plan that would give assurance that in a reasonable future period we can have our expressways and all the other new things we want and need, with prudent maintenance of the things we already have, and all within a fairly well defined limit of total cost, and annual expenditure, to be met with reasonable certainty by a taxing program that the people are likely to approve.

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