

Transport Central

STREETCAR OPERATIONS IN THE UNITED STATES AND CANADA

BOSTON -- Massachusetts Bay Transportation Authority

Cleveland Circle-North Station*	Mattapan-Ashmont*
Boston College-Government Center*	Riverside*
Huntington-Arborway*	Watertown*

CLEVELAND -- City of Shaker Heights Department of Transportation

Shaker Boulevard*	Van Aken Boulevard*
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EL PASO -- El Paso City Lines

El Paso-Juarez

FORT WORTH -- Leonard's Department Store

Leonard's Subway*

NEW ORLEANS -- New Orleans Public Service

St. Charles*

NEWARK -- Public Service Coordinated Transport

7 City Subway*

PHILADELPHIA -- Philadelphia Transportation Company

6 Ogontz	23 11th/12th-Germantown	53 Wayne-Erie
10 Lancaster*	34 Baltimore*	56 Erie-Torresdale
11 Woodland*	36 Elmwood*	60 Allegheny
13 Chester*	47 8th/9th-Olney	62 Yeadon
15 Girard	50 4th/5th-Lawndale	

PHILADELPHIA -- Philadelphia Suburban Transportation Company

Sharon Hill*	Media*
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PITTSBURGH -- Port Authority Transit

35 Library*	42/38 Mt. Lebanon*	49 Beltzhoover
36 Drake*	42 Dormont*	53 Carrick*
37 Castle Shannon*	44 Knoxville*	

SAN FRANCISCO -- San Francisco Municipal Railway

J Church*	L Taraval*	N Judah*
K Ingleside*	M Ocean*	

TORONTO -- Toronto Transit Commission

Bathurst	Long Branch
Carlton	Rogers Road
Dundas	St. Clair
King	Earlscourt
Kingston Road	Queen*

* Includes limited-tram operation (subway or other private way)

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RAPID TRANSIT FOR THE SMALLER CITIES

COLUMN ONE

Ken V. Hayes, Jr.

Today, as more and more publicity and study is being given to traffic jams in large cities, the plight of the small ones tends to be forgotten. The traffic dilemma is generally even more severe in the small cities than the large ones, since traffic is usually heavier in proportion to size and street capacity and yet such smaller cities are usually left out of serious thinking in terms of rapid transit. This is not an oversight but an economic fact of life.

When we talk of modern rapid transit—especially in cities which are not subsidiaries to larger ones—we cannot talk in terms of any sizeable construction expenditure, even more so if the transit system is presently privately owned. Small transit companies cannot afford to make either the initial expenditure for such a system, or to pay for the operation of it, once built, out of fare box revenues. Today, even the larger cities are finding it difficult to stay solvent, including the ones using systems built around 1900 at much lower cost. Proposals for new systems seem automatically to talk in terms of red ink. The financial condition of most small transit companies prohibits large-scale expenditures, even were the credit available to them. There is a way out, however, which accrues as a benefit from a past and declining transport mode—the railroads—and from comparatively recent developments in the urban transit field such as federal mass transit assistance legislation.

Before proceeding further, some basic definitions must be laid down as a frame of reference. A small city is defined as an incorporated area of over 150,000 population, with the upper limit set, for the sake of this discussion, at 1.5 million persons. People living outside the city limits are not included in the above figures, but may be considered as an additional benefit to the chances of success of proposed systems. The city must also have a recognizable core or downtown area. Of course, each of these factors may be adjusted as necessity or special cases dictate. For instance, a city with high transit patronage in relation to total population may be considered for rapid transit even if its total population is less than 150,000. Rapid transit consists basically of a grade-separated, rail passenger transport system which runs very frequently but not over long distances for any one route, with a relatively high patronage per run. In our case, it will generally be recognized that such a system will not consist of more than 20 miles of route (40 miles of two-way track, each 20 miles long).

The small city may be quite different in form than the large city. The base for a rapid transit system for such cities is already in existence in most cities and is the core of the proposal: railroad rights of way. In smaller cities usually only one or two railroads serve the city, but they may both come relatively close to the core. This condi-

tion arises in many cases because the city was built around the railroad, or that the railroad came to the town early in its growth and located near the town center. The program for the development of rapid transit in such cities must proceed slowly and follow a carefully planned step-by-step approach. Each step in the development must be evaluated before the next is begun. The stages are defined as follows:

Stage I: Planning and analysis of demand and costs.

Stage II: Building a short initial system through the densest areas with the most promise, using leased equipment and doing little improvement work on the physical plant.

Stage III: Leasing the right of way over a long term, applying for a DOT loan or grant, grade separating the right of way and electrifying the initial system; equipment now will be purchased, rather than leased.

Stage IV: Gradual extension, station by station, of existing lines, and improvement thereof, as well as expansion onto other routes. Also, if necessary, a downtown subway of short length, in case the present lines are slightly removed from the actual core.

Stage one is completely a research and development project, consisting of the engineering details of the proposed system, the cost of the various stages, political and civil reaction gathering, patronage studies and the estimated financial results of the venture for each of the stages following. This stage can usually be completed at a minimum of expense and can save a lot of time, effort and money if it is not bypassed. Approximately \$10,000 to \$25,000 should be allocated to this phase, depending upon the detail desired and the size of the system.

Stage two is an operational experiment. The transit operator would choose the most promising route in both length and direction. In making this choice will incur less experimental investment (and the least possible loss). However, there is a point at which cutbacks will increase the chance of failure. This is the point where the system will no longer be useful to any large groups of persons. Balance must be sought; this will be a matter of evaluating the specific situation.

What comprises this system (if at this stage it could be so titled)? There is a length of double track railway line (usually at ground level and not grade separated). It must extend from a point near the downtown center (or as reasonably proximate thereto) out through a densely populated secondary area to the inside edge of the "suburban area". This latter station is necessary to attract the commuters who own and bring the most cars downtown every day, and this station should therefore have parking facilities. Stations, both in number and distance between, are variable depending on the length of the line, the density of the population and the local travel characteristics. Actual structures for the system, at least initially, will probably be prefabricated and portable. The platforms are elevated to the loading height of the cars, and this height depends upon model selection. The object of the initial project is to determine probable patronage with the least expensive system, yet retaining as many of the characteristics of a rapid transit system in the modern sense as possible. All stations can be replaced with more permanent and architecturally handsome structures once the economic feasibility of the project has been determined.

Equipment and rolling stock will represent no actual initial investment if the operator should lease such equipment from the manufacturer or leasing agency for the Stage II period. This equipment will consist of self-propelled railcars, such as the type produced by the Budd Company. If the right-of-way and equipment are leased, the only real

expenditures are for station and signalling equipment. Extensive advertising and public relations must be carried out so that the best possible reaction may be developed.

After a reasonable period has passed, say six months to two years, the financial outlook can be calculated. Naturally, cash expenses will be higher than normal due to the large proportion of rental payments. However, enough time has passed so that a trend of patronage should begin to appear, as well as similar trends in maintenance expenses, operating expenses and the like. Of course, specific evaluation of the results ultimately rests with the individual management, but there are some guidelines. There should be no operating loss, but on the other hand it is not too necessary that there be any operating profit either. A break even operation at this time is a good indicator. Of course, no operating income means that the final income, after depreciation and non-operating taxes and expenses, will be in the red, but this is not necessarily a relevant factor at this time. It is unlikely that loan credit will be available for the financing of Stage II, because what bank will loan money in large enough amounts on an unproven venture? After the second stage is a proven success, the company should have no trouble securing additional funds.

Stage III consists of a long-term lease (or lease-purchase agreement if available) for a period of say 99 or 999 years (or in the case of a lease-purchase 25 to 40 years) for the initial system, with options for future extensions along the line and a special clause for purchase in case of abandonment by the owner. The extension options assure an equitable lease rate in case of unexpected monetary success. Another course of action which would be useful at this time would be the application by the operator (through a city or other governmental agency on the local level) for a loan or grant from the Urban Mass Transportation Administration of the Department of Transportation for any or all of three purposes: purchase of equipment, electrification of the lines, and/or purchase of the right-of-way, and constructing changes thereon. Electrification is of the first order in these three, so that the operator may utilize less expensive equipment (such as PCC streetcars and rapid transit equipment sold off by other systems). A DOT grant would also be beneficial in that it reduces the investment capital necessary for the venture and thus also lowers the financial risk. A DOT loan, on the other hand, would lower the cost of capital to the concern and, while not as beneficial as a grant, is of better use than an initial attempt at private financing.

One might wonder, since the equipment is already leased, why the operator could not continue utilizing diesel self-propelled coaches. This is not feasible for several reasons. First, diesel equipment makes the use of any tunnels of any length impossible or at least uncomfortable, without an elaborate and costly ventilating system. Second, the noise factor is higher with diesel equipment, as well as the greater problem with fumes along the right-of-way (something both area residents and air pollution officials view with jaundiced eyes). Lastly is the problem of operating multiple unit trains of any length. It is difficult to control 7 sets of diesel engines in a 7-car train, and one diesel and six trailers is not practical for a stop and go operation. An additional impetus toward conversion is the possibility of purchase of older but renovatable electrically-powered equipment at much lower cost (a used PCC car costs \$2,000, compared to the \$125,000+ cost of a new subway car), and creating lower expenses by buying instead of leasing. Another project which should be undertaken during this stage is grade separation, which has important speed and safety considerations.

--TO BE CONCLUDED NEXT WEEK

NEWS WEEK

HIGH-SPEED HOLD-UP -- Senator Gordon Allott (R-Colo), who chaired the Appropriations Subcommittee's investigation into delays in the Northeast Corridor project this week charged that the project has fallen so far behind schedule that no one is able to estimate, even privately, just when service between Washington and New York on the Penn Central can begin.

In a strongly-worded letter to Transportation Secretary Boyd, Allott said "we have nothing to show but a fleet of cars that won't run and a flock of potential passengers who no longer take the project seriously." Allott said he had verified the existence of two new problems with the cars which were not evident when the Subcommittee held its last hearing June 4th. "In the matter of electronic reliability and maintainability", wrote Allott, "test runs with the Metroliners have been aborted because the cars could not operate under their own power due to short circuits and other problems. These were not cars...which were being tested for the first time, but rather cars which had already been operated for some time and over considerable distance, and on which corrections and adjustments had already been made."

Allott continued, "Moreover, I have verified the fact that a new problem has arisen concerning the pantograph/catenary relationship which may either require further alterations in wiring of the cars or which may cause the Penn Central to make numerous and extremely expensive alterations in its substation equipment. This is a problem which was apparently not even foreseen in the preliminary work on these cars."

Allott said he and his committee have been told that European and Japanese electrified rail equipment is inferior to the Metroliners and that the U. S. built equipment is vastly more sophisticated. "As a layman, I am not prepared to debate the merits of such a proposition, but I do make this observation—theirs run and ours do not." He said U. S. failure to solve problems which rail operations in other nations have encountered and solved, "is attracting increasing and adverse attention around the world." The Senator called on DOT to hire a staff composed of "necessary personnel capable of properly handling the question."

STAND-OFF -- Hearings on the broadened "SP Passenger Service Case" opened September 18 with railroad management (SP and the AAR) finding Examiner Messer's recommendations illegal to enforce under present laws, and the operating unions and "users" (NARP, City of Chicago and the California PUC) supporting the standards, even stating that they do not go far enough. Hearings will continue again at a future date...Meanwhile, hearings on the petition to discontinue SP's Sunset (#1-2, New Orleans-Los Angeles) have begun with the California, New Mexico, Arizona and Louisiana state commissions accusing the carrier of tactics driving away much of the patronage. When asked by the ICC examiner what alternatives to total discontinuance might be offered, SP countered with tri-weekly service (or none at all except during the summer), or total discontinuance of the Houston-El Paso segment (the biggest loser).

SLIM PICKINGS -- Penn Central has been told to run #65-66, Chicago-Cincinnati, for another year (to 9/11/69)...PC also plans to discontinue travel agents' 10% commission on ticket sales effective October 1....B&O has discontinued the 5 Double Bedroom/Pullman Lounge/Observation on its Capitol Limited....CB&Q and NP have reinstated the rough Slumbercoach service Chicago-Seattle on the Blackhawk/Mainstreeter....GN has rerouted the Western Star via Grand Forks and discontinued #3-4, the Dakotan, Fargo-Minot via Grand Forks....UP has abolished its Department of Tours and placed up for sale 75 cars, including 5 diners, 5 club-lounges and 39 coaches....That injunction delaying the discontinuance of the Hummingbird (L&N 6-7, New Orleans-Cincinnati) was filed by the Tennessee PSC on behalf of a group seeking ICC reconsideration of a decision permitting C&E

to discontinue their portion of the Georgian which was consolidated in part with the Hummingbird (unless extended, the injunction was to expire September 23)...Penn Central's new \$29 million Alfred E. Perlman electronic freight classification facility was dedicated at Selkirk, N. Y., September 25 in honor of the first president of the merged company.

FLIGHT FACTS -- Chicago's downtown Meigs Field facility is getting a new white runway surface. A new synthetic aggregate, composed of a double baked silica sand and limestone conglomerate, will be laid, providing the best traction and braking surface yet found for airport pavements. A unique feature of the new pavement is that it will continue to turn whiter through weathering, providing improved visibility under adverse flight conditions. The new material, known as Synapol, was discovered in Sweden and developed in Denmark for various paving uses.... The major airlines have reluctantly agreed to FAA plans for reducing the number of flights in New York, Chicago and Washington (TC-09/06/68). As expected, private plane owners vigorously objected to the proposals.

ONCE OVER QUICKLY -- The Southern Pacific Railroad has confirmed that the British Insulated Calendars Construction Company of London has been engaged to study the cost, design and installation of a catenary type electrification system on SP's mainline between Colton (California) and Yuma....Ingemar Backstrom, the Chief Director of the Swedish National Railways, says work is underway to increase the speed on the electrified Stockholm-Göteborg line from around 110 kmph to 160 kmph by 1970....C. D. Palmer, former president of Pittsburgh Railways, and now a director of Port Authority Transit (PAT) in that city, calls plans to pave streetcar private right-of-way in the South Hills district for use by buses an "economic crime". Palmer said the plan is unrealistic and unfeasible, and that the car lines could be upgraded into a semi-rapid transit system for a fraction of the cost of paving. That, says Palmer, "would be a real solution".

HEADLINE HOPPING -- Look for a real flap over Greyhound's quiet maneuvering for passage of the controversial bill permitting vehicles of increased width to operate on Interstate highways....HUD grants to improve urban transit exceeded \$134 million in fiscal 1968....HUD and DOT have reached agreement on coordinating their urban transit responsibilities....West Suburban Transit (Lombard, Ill.) exec and TC reader Jim Penning hastens to clarify our item relative to the "dispossession" of United Motor Coach and WSTL suburban services from Chicago's Greyhound Terminal; WSTL's busy pair of Joliet routes will continue to operate from the facility for an indefinite period....Hope is dimming for a solution to the transit crisis in Paducah, Kentucky. American Transit operates the property, and has announced it will terminate all services on September 30....AC Transit of Oakland turned a profit for the second year in a row (the fiscal year ending June 30, 1968)....A rapid transit system for Edmonton is expected to be a reality by 1971. Two routes are proposed....Add Philadelphia to the list of exact fare properties. PTC began the system September 22; scrip is offered....More than 100 miles of new bus routes have been added by the Southern California Rapid Transit District....GE will power the new Budd Long Island Rail Road cars.

LAST WORDS -- An organization has been formed to raise money to purchase the College Park (Maryland) Airport, the nation's oldest, which is in danger of being sold for industrial development. The field began operations in 1908, and the Wright Brothers began training military pilots at the field the following year....Britain's Ministry of Housing and Local Government is studying a proposal to build a monorail between the center of London and Heathrow Airport, as an alternative to providing a railroad link along the same route.