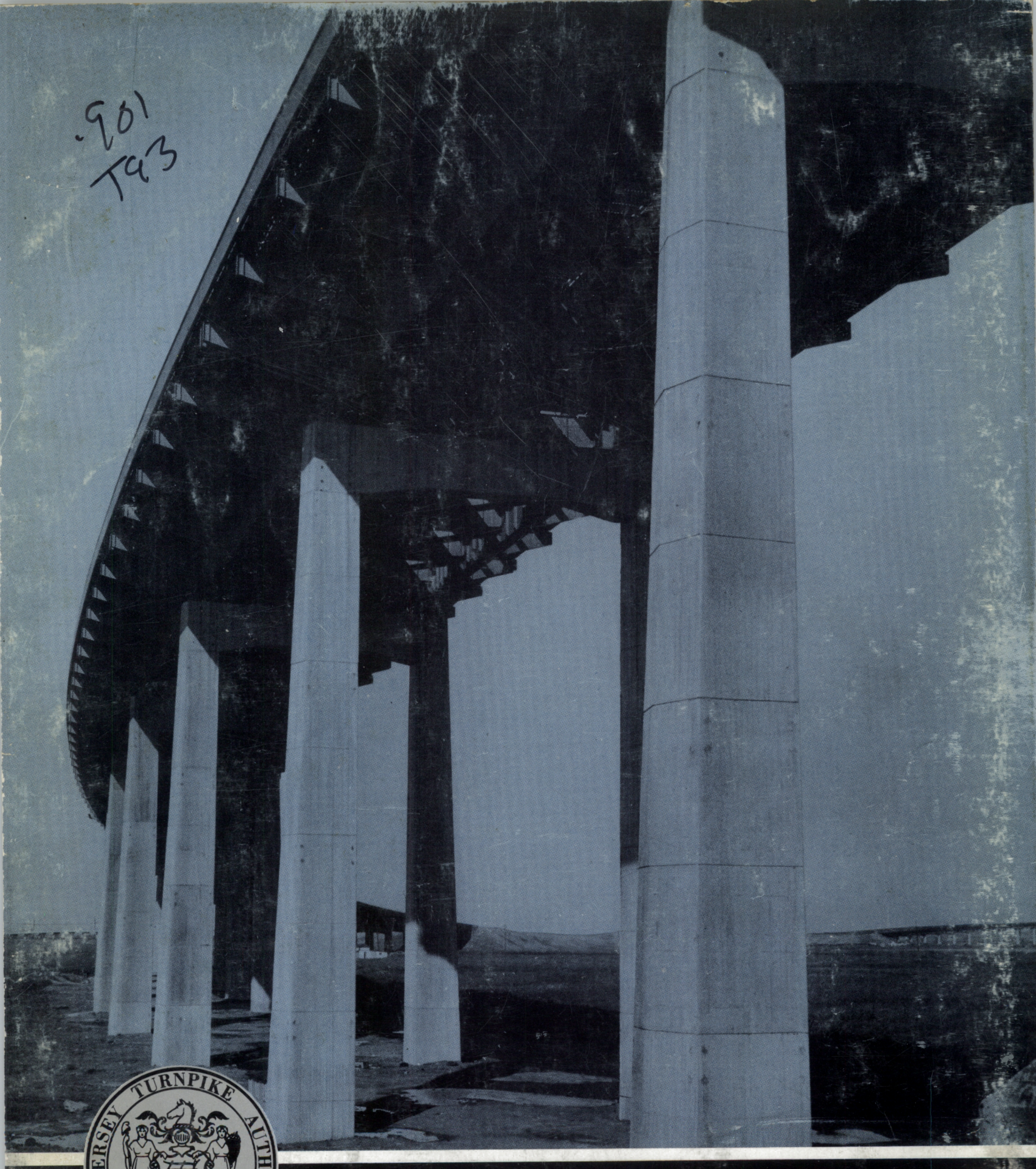

Annual Report 1951

The New Jersey Turnpike Authority

The New Jersey Turnpike Authority

THIRD ANNUAL REPORT 1951

PAUL L. TROAST, *Chairman*

GEORGE F. SMITH, *Vice-Chairman*

MAXWELL LESTER, JR., *Treasurer*

PAUL L. TROAST, CHAIRMAN
GEORGE F. SMITH, VICE-CHAIRMAN
MAXWELL LESTER, JR., TREASURER

NEW JERSEY TURNPIKE AUTHORITY

TRENTON, N. J.

The Honorable Alfred E. Driscoll, Governor, and the

Members of the Legislature of the State of New Jersey:

Pursuant to the statutes, the New Jersey Turnpike Authority submits herewith its Third Annual Report which now records the accomplishments of the Authority for the thirty-three months' period since its organization on March 31, 1949.

Once again we express our indebtedness to the Governor, the members of the Legislature, the many officials and employees of the State, and Counties and Municipalities for the liberal support and encouragement they have given us throughout the year.

The press, and other agencies for the dissemination of public information, have accorded us a full measure of cooperation for which we are appreciative.

Our report of a year ago emphasized the size of the task which we had set for ourselves in 1951. That task has now been accomplished. Motor vehicles are rolling along the 118 mile length of the Turnpike. Only the delivery of strategic materials delayed the final nine miles in the most northerly section.

Here recorded are the dates on which sections were opened to traffic:

November 5, 1951 - The 53 mile section from Deepwater to Bordentown.

November 30, 1951 - An additional 40 mile section from Bordentown to Woodbridge.

December 12, 1951 - A further 16 mile section from Woodbridge to Raymond Boulevard in Newark.

January 15, 1952 - Final nine miles to George Washington Bridge at Route 6.

Our exacting schedule contemplated completion of the Turnpike in November, 1951. That would involve a period of 21 1/2 months from the date of our financing in mid-February, 1950, to the completion of construction. With the opening of the northernmost section January 15, the record shows that the task of building the Turnpike has consumed a period of 23 months. During that period, we acquired title or right of entry to 3,558 parcels of real estate; relocated utilities to an extent measured by expenditures totalling $8,000,000; designed and constructed 118 miles of highway, including 263 bridges and other structures; developed all toll facilities; equipped and assembled all operation and maintenance staffs; and made the road available, sectionally, to traffic with the result that more than 1,000,000 vehicles, paying upwards of $750,000 in tolls, traveled the Turnpike prior to the opening of the final link.

Much remains to be done before we can present the New Jersey Turnpike as the complete, modern highway we planned it to be. In some areas, portions of the pavement fail to conform to the rigid specifications laid down by the Authority. Steps have been taken to correct these deficiencies. We have also acted to widen and improve the pavement at interchange ramps. Permanent lighting is only now beginning to replace the temporary facilities at interchanges and concession areas. A continuing study will be made of all signs both on the Turnpike and on feeder roads.

Because of delays in delivery of critical materials, we are operating at present with temporary and insufficient restaurant and service station facilities. Despite these limitations, the seven functioning service stations are approaching sales totals of 200,000 gallons each week. Five temporary snack bars are currently doing a weekly gross business in excess of $20,000.

Temporary buildings are also in use to house the large amount of equipment assembled for maintenance purposes. That condition is being remedied as quickly as possible. Three permanent maintenance buildings are in the construction stage. Structural steel for the remaining three is now on hand.

Landscaping is already in progress in the concession and interchange areas. Some work along those lines will be done in the Spring on the Turnpike proper, but it will be held to a minimum. The natural beauty of the areas opened up by the Turnpike requires little in the way of man-made aid to present its scenic qualities. The rolling, green, countryside of New Jersey's farm lands will be visible in this area for the first time through the medium of the Turnpike and the Authority intends to make certain that neither billboards, nor other unsightly collateral construction will cut off the view. It is our determination that the Turnpike must not be regarded as completed until all possible measures will have been taken in the interests of the safety, comfort and convenience of the users of the road.

Toll rates were established in accordance with the recommendation of our traffic and revenue experts at the time the project was financed. These will be studied as the traffic pattern unfolds and as we deal with actual performance rather than predictions.

It will always be our prime objective to build for the Turnpike an exceptional safety record. Although the road was designed to be safe at 75 miles an hour, we have set a maximum speed limit of 60 miles an hour, with a provision for posting areas at lower speeds. More than 1,000,000 vehicles traveled the Turnpike to December 31, 1951 and there was but one fatal accident. Investigation of this regrettable accident indicates that it resulted from human failure entirely disassociated from design, maintenance or policing.

Traffic to date indicates that the New Jersey Turnpike will be the heaviest traveled toll road in existence. No definite comparison can be made with traffic estimates as we have not yet had any extended experience with the whole of the Turnpike opened to Traffic. Statistics in this report indicate that the number of vehicles handled is 51% over preliminary estimates and that the gross income is 21% above that estimated. The discrepancy between these figures is largely due to the opening of the Turnpike in sections rather than as a whole, with the resultant lower average revenue per vehicle.

It is interesting to observe that on Sunday, January 20th, a few days after the full 118 miles of Turnpike were placed in operation, 59,590 vehicles used the facility. These vehicles paid $49,941 in tolls. While the figure contains some "curiosity traffic," which is likely to continue for several months, it is apparent that traffic will be in excess of that estimated by the engineers. The traffic and revenue studies project an average daily use of the Turnpike by 23,000 vehicles in 1952. This figure is weighted by heavy summer traffic with which we have as yet had no experience.

In providing a new artery and in relieving other State highways, there seems to be little doubt that the Turnpike serves a very important State need, and that it will be both self-supporting and self-liquidating.

In our last report we stated that the inflationary spiral brought about by the Korean and world situations would make for increased costs. These have now been determined and financed. The overall cost of the

Turnpike and all of its facilities will approximate $255,000,000.

The Legislature authorized three extensions to the Turnpike at its last session and two of these were approved by our bondholders within the terms of the bond resolution. The two last-named are the interconnections with the Pennsylvania Turnpike and the New York State Thruway. The third project involves a direct connection with the Hudson County peninsula and the Holland Tunnel by way of a new bridge across Newark Bay and an express highway on the peninsula. Progress is being made on each of the extensions and a more detailed report is being filed herewith. All seem to be necessary additions to the Turnpike.

During December of this year we were directed by the Governor to study a further extension of the Turnpike into Essex County. Our Engineers are engaged in making the preliminary studies of this project.

It is increasingly evident that the Turnpike Authority has another challenging year ahead, both in the realm of operations and in the field of planning and construction. Operations will continue to require more of our time as well as that of our staff. The total organization numbered only 10 up to the time of our financing in early 1950, 82 at the turn of 1950 and 98 as we approached the operating stage. With the addition of our toll collection and maintenance staffs the total of officers and employees as of December 31 was 337, of which 133 were toll collectors and 106 were in the maintenance division.

We extend our thanks and commendation to our loyal staff, the engineering firms, legal and financial advisors, appraisers, title companies, contractors and the thousands of workmen in the construction industry for all they have done to aid in carrying out this record accomplishment in so short a time.

One who contributed much during a two-year period as Executive Director, General W. W. Wanamaker, resigned at the close of the year to assume a very important post in private industry. His record of accomplishment was outstanding in the construction of the Turnpike.

We have just concluded a rather remarkable year. Construction proceeded at an ever-accelerating pace and the Turnpike was placed on a revenue producing basis. We look forward to 1952 and its new challenges. The completion of construction, continuing studies of extensions and the every-day business of operations and maintenance will tax our staff to the utmost. We are confident that all of these challenges will be met.

Respectfully submitted,

NEW JERSEY TURNPIKE AUTHORITY

Paul L. Troast, Chairman

George F. Smith, Vice Chairman

Maxwell Lester Jr

Maxwell Lester, Jr., Treasurer

January 31, 1952

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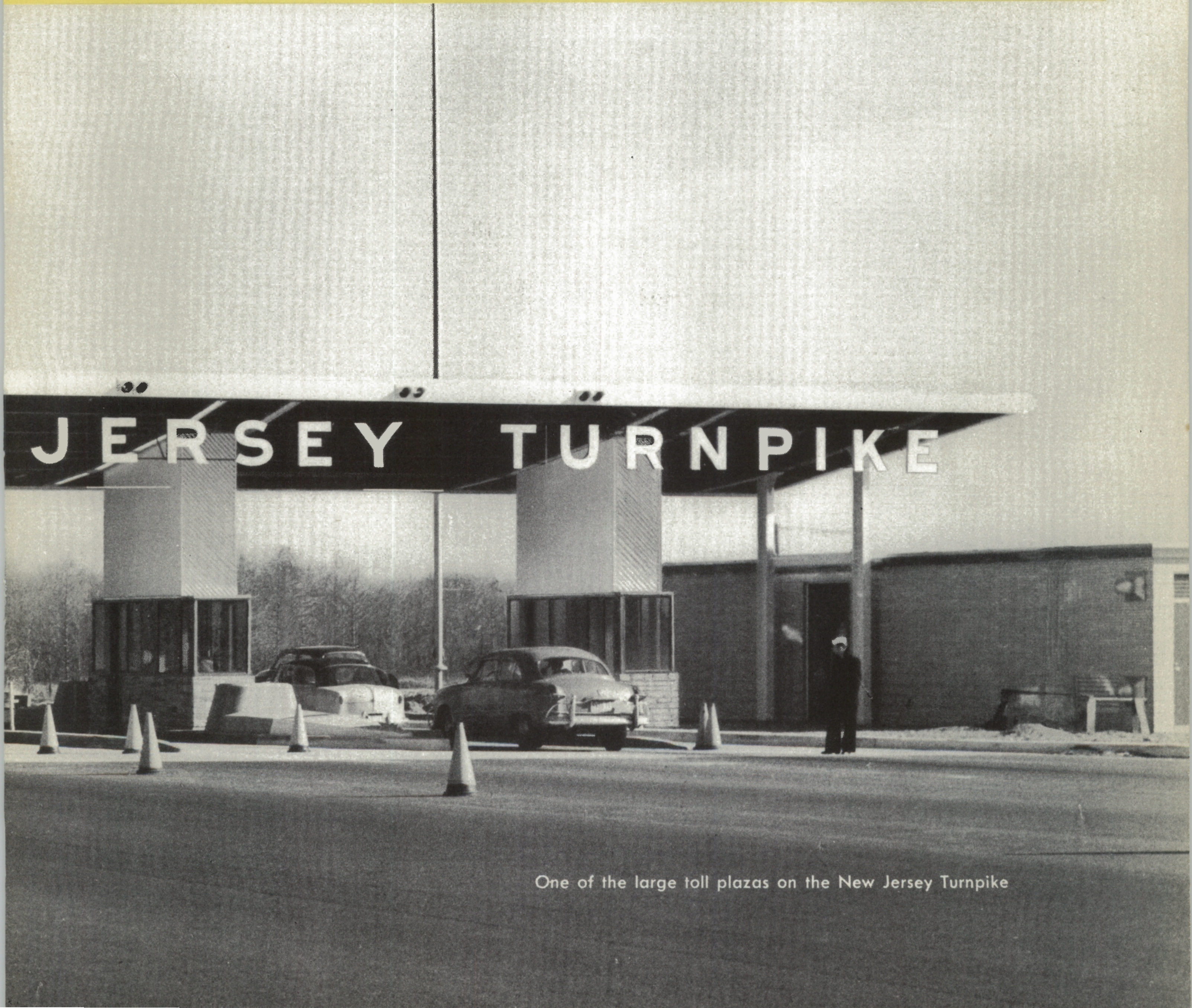


One of the large toll plazas on the New Jersey Turnpike

Introduction

SINCE THE ISSUANCE on January 24, 1951 of the Authority's annual report for 1950, the program of construction and other operations set up for 1951 has been accomplished. This has been done in spite of the difficulties caused by the Korean war and the consequent restrictions imposed on critical materials such as steel, copper and others. Actually, a section of slightly less than half of the full 118 miles of the Turnpike was opened to traffic several weeks before the scheduled date and, on January 15, 1952, all of the 118 miles of the Turnpike were placed on a revenue-producing basis.

The Authority's report for 1950 set forth in detail the manner in which the New Jersey Turnpike is being financed with private risk capital, and indicated that, in view of higher prices for materials because of the Korean war, the increased costs of real estate in an inflationary market, and other factors, additional funds would be needed to complete the project. This financing was concluded in October, 1951.

The report for 1950 also explained the features of roadway design, the architectural treatment of bridges and overpasses, the safety features and the type of pavement to be used on the Turnpike.

The status of the acquisition of land for the right-of-way was reviewed as was the relocation of utilities which crossed the right-of-way or interfered with construction. Plans in connection with the construction of concession buildings were described as well as those for the administration and operation of the Turnpike.

As was the case in 1950, the bondholders were kept currently informed of progress during 1951 by quarterly reports prepared as of March 31 and June 30. The interim report for September 30, 1951, was included in an official statement, dated October 17, 1951, in connection with the sale of Turnpike Revenue Bonds (1951 issue). This official statement was distributed to holders of New Jersey Turnpike Bonds.

The quarterly reports, as of each respective date, listed the number and amount of contracts awarded, reviewed the progress of design and construction, the acquisition of real estate and the status of other operations during the periods covered by the reports.

This, the third annual report of the Authority, details the activities of the Authority during 1951 and projects the plans of the Authority for 1952.

Activities of the Commissioners

THE ACTIVITIES of the Commissioners of the Authority during the past year were concentrated on the opening of the Turnpike to traffic on schedule and its transition from a construction to an operating status. In the attainment of these objectives, they devoted their efforts ceaselessly to the project. As in 1950, they spent a large portion of their time to the direction of the work. The policy, which was initiated in 1949, of holding meetings each week was continued throughout 1951. These activities were supplemented by personal inspection trips on the Turnpike as construction progressed and after it was opened and there was almost daily contact with the Authority's staff, its engineers and contractors.

In 1951 the Authority held 50 meetings, bringing to 142 the number since organization of the Authority on March 31, 1949. The minutes in 1951 covered 1400 pages and 4000 documents compared with 1,000 and 3,300 respectively in 1950.

Each of the Authority meetings consumed a full day's time. A comprehensive agenda was prepared in advance by the office of the Executive Director. The agenda contained exhibits, charts and reports of progress to afford opportunity for full study by the members prior to the date of the meeting. The meetings were attended by members of the Authority staff and the Consulting Engineer.

At many of these Authority meetings the consulting engineers for particular sections of the Turnpike, and the Authority's consulting architect, were present for specific presentations and discussions involving design and construction of the highway and associated buildings.

The Chairman and the other members of the Authority, at times accompanied by members of the staff, held conferences with the Governor to keep him informed of progress and developments, and to discuss highway matters affecting the public interest. Also, there were meetings of the members of the Authority with the State Highway Department on matters of mutual interest, seeking as a prime objective service to the motoring public.

Early this year the Authority met with representatives of the New York State Thruway Authority to discuss the proposed connection of the New Jersey Turnpike with the New York Thruway. Further conferences are scheduled for the immediate future.

Numerous discussions were also held during 1951 with members of the Pennsylvania Turnpike Commission concerning a direct connection to the Pennsylvania Turnpike at a point south of Trenton. The engineers of the Authority are proceeding with the design of this connection.

Interconnections of the New Jersey Turnpike with the Pennsylvania Turnpike and the New York State Thruway will afford motorists and truckers safe and rapid transportation to and from New England and New York areas and, to areas as far west as the Ohio border. Moreover, these interconnections will develop new traffic and revenues for the three systems, and will aid materially in the relief of congestion on the public highways in these states.

The members of the Authority conferred several times during the year with members of the Port of New York Authority concerning matters of joint interest, particularly with respect to the connection of the Turnpike with the Lincoln Tunnel. They were guests of the Delaware State Highway Commission in August, 1951 for the opening ceremonies of the Delaware Memorial Bridge and had conferences while in Wilmington with the members of the Ohio Turnpike Commission.

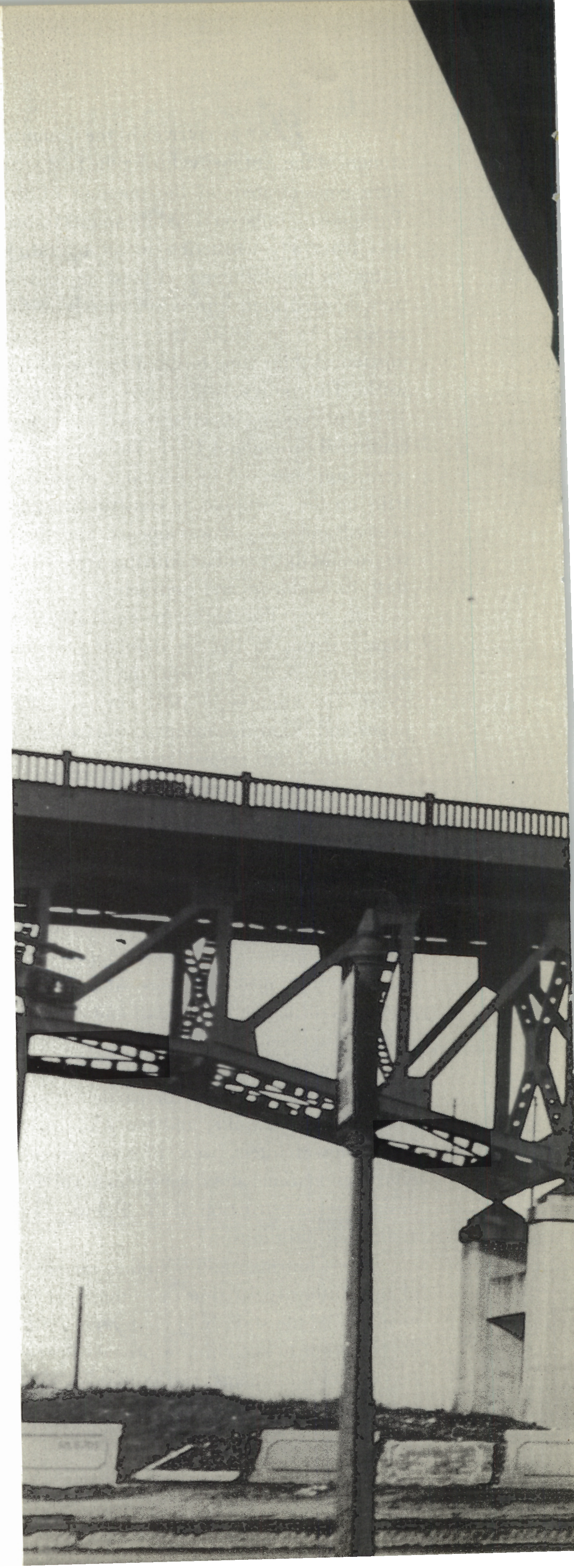
The Chairman attended dedication ceremonies at the time of the opening of the Western Extension of the Pennsylvania Turnpike to the Ohio State line.

All three Commissioners participated

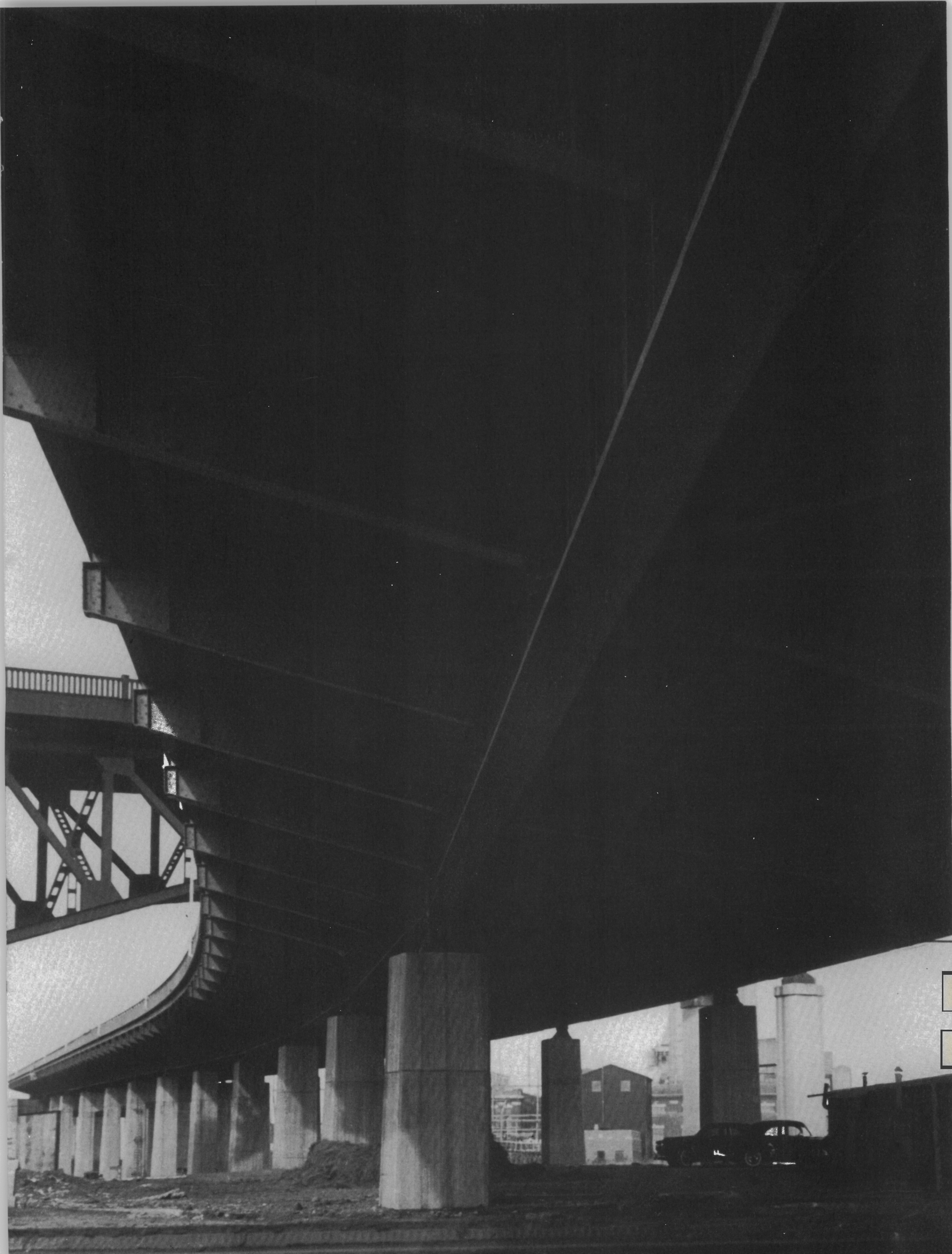
in addressing civic and service organizations throughout New Jersey and in adjacent states, telling the story of the Turnpike and discussing its safety and engineering features. They devoted considerable time and attention to the establishment of the permanent staff of the Authority and, in all cases involving key members of the organization, personally interviewed and individually approved each addition to the Staff. The selection of the vital equipment later used in toll collection and controls, and required for maintenance of the Turnpike, received the close attention of the Commissioners.

All three were active in the plans for, and the obtaining of, the additional financing of $35,000,000 needed for the completion of the Turnpike.

The Commissioners participated personally in the plans and preparations for the dedication ceremonies which heralded the opening of the various sections of the Turnpike to traffic. The ceremonies were designed to advise the public of the impending opening of this vital transportation artery and, at the same time, gave the public and local officials an opportunity to view the completed project prior to its being placed under traffic. These ceremonies and the attendant publicity were important to the quick development of high traffic volumes and revenues. They served this purpose well.



Passaic River Bridge approach underpassing Pulaski Skyway in Newark



Progress of Construction

SINCE SEPTEMBER, 1949, when it was determined that the project was feasible and could be accomplished by November 1951, the members of the Authority have held rigidly to the latter as the date for opening the Turnpike to traffic. Despite the many obstacles which subsequently arose, there had been no deviation from that schedule. Included among the obstacles were court contests to test the right of the Authority to issue bonds without a referendum, and to select the route and the method of construction; labor and material shortages resulting from the Korean War; and the elements themselves. Each of the problems was solved, but not without difficulties or losses in time. All who have participated in this tremendous undertaking can look with pride and accomplishment at the result attained.

As was shown in the 1950 Annual Report, the first construction contract was awarded only 22 months before scheduled opening and others followed in rapid succession. Within that brief 22 months, the schedule called for transformation of the various design criteria into physical Turnpike features representative of the largest and most difficult single highway project ever undertaken.

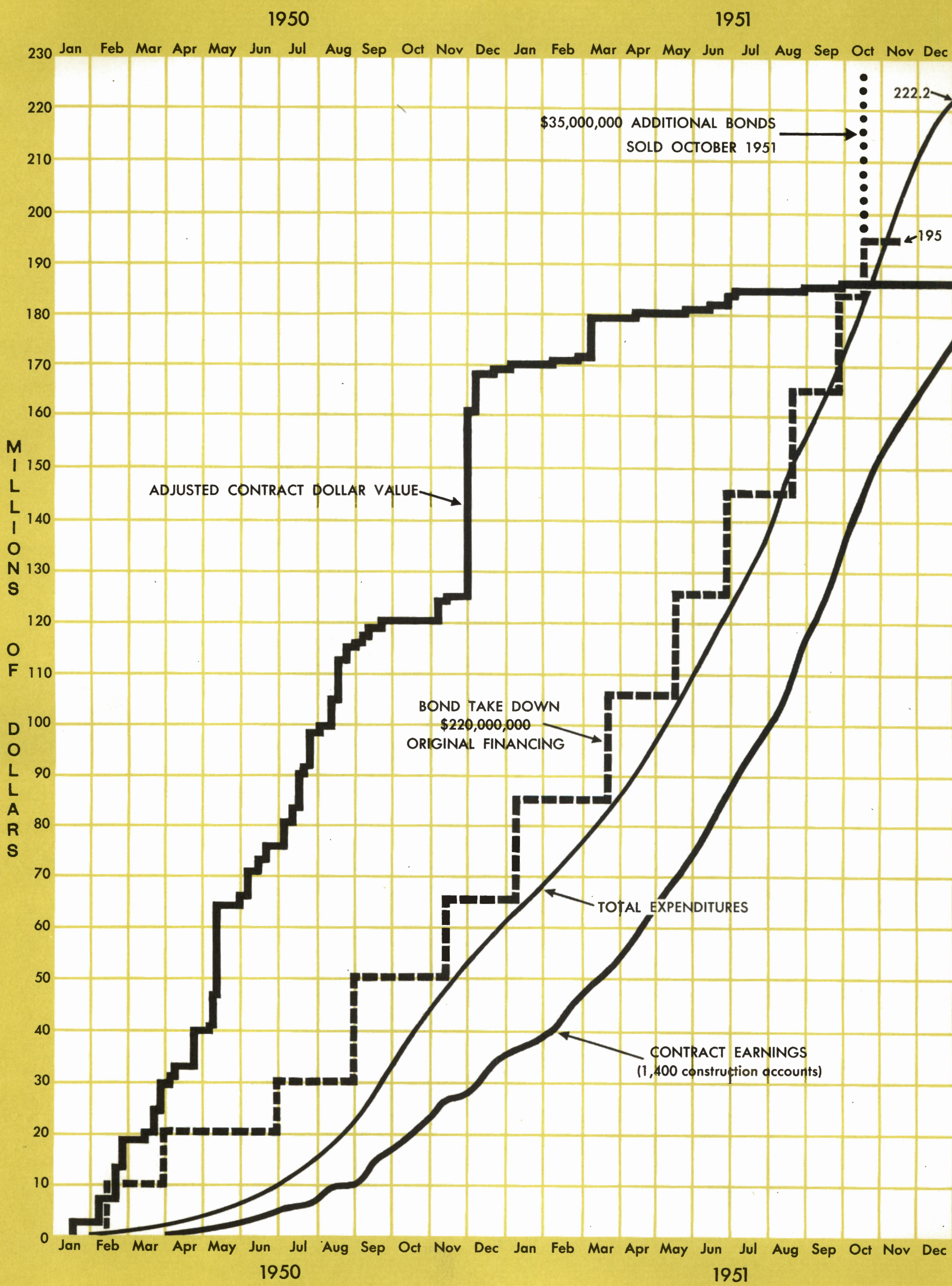
At the end of 1950 contractors' earnings had reached a total of approximately $35,000,000. This was a sizable sum, but in order to accomplish the objective set earlier for completion in November, 1951, it was necessary that construction be stepped up by at least four times that rate of earnings during 1951. The extent to which this was attained is reflected in the accompanying chart.

Weather during the early part of the year was extremely unfavorable for grading and drainage operations. Several contractors shut down their operations completely for extended periods. These steps were taken because efficient operations could not be maintained during the period of unseasonable weather. Some of the lost time was regained because increased efficiency, when operations were resumed, permitted the contractors to maintain their forces at peak strength during the regular working season.

By May, 1951, grading and drainage operations were in full swing. Weekly totals approaching three-quarters of a million cubic yards of earth were being moved. Some fills were placed as late as August and September, but excellent control of compaction operations assure that these embankments are equal in stability to those placed as much as one year earlier. At some locations, particularly in the vicinity of the Bordentown Interchange, paving operations were carried on simultaneously with grading operations and there was no interruption between the two operations at this critical point. This was equally true of the placement of embankment in the Elizabeth area where paving immediately followed the placement of the final embankment materials. There was some delay to bridge construction operations because of incompleted embankments, or because embankments in sand drain areas had not been completed for a sufficient length of time to permit full consolidation. In each of these instances, however, it was possible to utilize modifications in construction procedure to assure completion in accordance with the required schedule without sacrifice in the quality of work.

By the end of 1951 grading and drainage operations were accomplished. The work remaining to be done was largely the final cleaning out of drains and the dressing, topsoiling and seeding of some of the slopes which could not be completed in time for the Fall planting season.

During the early part of the year the prospects for completing the major Turnpike structures during 1951 were doubtful. Foundation work was proceeding in a rapid and orderly manner, but there were uncertainties regarding the availability of struc-



1950
1951
MILLIONS OF DOLLARS
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230
222.2
$35,000,000 ADDITIONAL BONDS SOLD OCTOBER 1951
195
ADJUSTED CONTRACT DOLLAR VALUE
BOND TAKE DOWN $220,000,000 ORIGINAL FINANCING
TOTAL EXPENDITURES
CONTRACT EARNINGS (1,400 construction accounts)

tural steel for bridge structures. The need for steel in the national defense program increased with each quarter of the year and there was a corresponding reduction in the quantities of steel and other critical materials for other purposes. While the New Jersey Turnpike, early in the year was determined to be essential to national defense and priorities were assigned for the procurement of the necessary materials, the Government's needs became more pronounced and the Turnpike procurement problem correspondingly increased. Due to the enormous quantities of steel required for the many structures along the Turnpike, it was difficult for contractors to obtain materials in time to maintain their construction schedules.

Largely through the individual efforts of the Authority Commissioners, the assistance of Governor Driscoll, the cooperation of the State Highway Commissioner and his staff, and perseverance on the part of the Authority's staff in following through and expediting, it was possible to maintain steel deliveries on a schedule which avoided serious delays in construction.

The delays in the delivery of structural steel in many instances compelled contractors to rearrange their work schedules and complete other items in advance of steel erection items which, normally, would have followed such erection. Through the alertness of the contractors and the Authority's engineers in taking full advantage of these and other measures, steel erection proceeded promptly when deliveries were made, thus offsetting some of the delays.

The Authority's decision to use asphaltic concrete for the Turnpike roadway was set forth in the 1950 Annual Report. Contracts for paving were awarded in December, 1950, leaving the winter and early spring for the contractors to plan their organization and operation, and to assemble the materials and equipment necessary to accomplish the work. The placing of this paving, consisting of more than 4,000,000 square yards, represented an unusual achievement in construction. The bulk of this work was completed in a period of less than six months. In order to accomplish this operation and the more than 2,200,000 square yards of stabilized gravel and penetrated macadam shoulders, the various paving contractors assembled the largest single concentration of asphaltic paving equipment to be used on a single project. More than 15 asphaltic concrete mixing plants were called upon, along with many hundreds of trucks, rollers, spreading machines and other equipment for hauling, placing, compacting and penetrating the various courses of pavement. It is estimated that more than 10,000 workmen were engaged on the project during this operation.

Because Turnpike construction was divided into seven sections under the direct supervision of nationally recognized engineers for each section, it was necessary to prepare a program for paving work so that on all sections the design of mix would be similar, the methods of control would be alike and such that contractors could proceed at a rapid pace, and paving inspection would be adequate to keep to a minimum areas in need of correction and repair.

To accomplish these objectives several meetings of engineers from the various sections were held with the Authority engineers and their consultants to familiarize all with the plans for construction and control of the paving work. Discussions were held on each phase of the operations.

The result was coordination and cooperation to the fullest extent and the production of a superior, smooth, non-skid surface with a uniform texture for the Turnpike which will carry the heaviest loads on the public highways in comfort and safety. The thickness of frost-free materials, subbase and pavement range from 36 to 42 inches.

COST COMPARISONS OF CONTRACTS

(Prior to June 25, 1950 — Korea)

CONTRACT NO.	ORIGINAL REPORT ESTIMATE	ENGINEERS' ESTIMATE FOR BIDS	BID PRICE	DIFFERENCE BETWEEN ORIGINAL REPORT ESTIMATE AND BID PRICE
1	$1,725,400	$1,868,650	$1,968,730	$ 243,330+
2	1,787,700	2,314,995	1,884,050	96,330+
3	5,947,240	5,454,560	5,095,733	851,507—
4	353,000	554,445	368,374	15,374+
5	527,660	788,690	680,285	152,625+
6	895,508	1,513,950	1,226,910	331,402+
7	3,702,400	4,283,226	3,391,484	310,916—
8	4,125,000	3,838,764	2,477,738	1,647,262—
9	4,074,500	4,166,066	2,716,065	1,358,435—
10	1,714,100	2,574,437	1,776,420	62,320+
11	3,453,800	3,016,365	1,954,920	1,498,880—
12	438,000	661,065	603,879	165,879+
13	1,453,200	1,428,170	1,328,095	125,105—
14	2,833,000	4,342,290	3,855,960	1,022,960+
15	1,327,000	1,957,810	1,683,740	356,740+
16	1,814,000	1,698,485	1,629,230	184,770—
17	4,497,134	5,665,200	5,326,890	829,756+
18	7,418,561	5,746,565	5,320,288	2,098,273—
20	6,266,000	6,883,600	7,288,810	1,022,810+
21	1,156,200	1,440,125	1,365,108	208,908+
23	988,700	1,448,895	1,354,698	365,998+
24	160,300	320,752	281,885	121,585+
25	264,600	520,450	338,975	74,375+
26	3,663,500	2,209,966	1,838,685	1,824,815—
27	1,852,300	2,075,560	2,310,658	458,358+
28	581,000	1,249,220	1,140,145	559,145+
29	966,900	1,239,128	1,161,069	194,169+
30	882,000	754,950	848,170	33,830—
33	1,551,400	1,743,382	1,747,280	195,880+
34	3,370,600	3,155,905	2,822,636	547,964—
35	571,400	778,557	870,825	299,425+
36	1,139,316	1,817,574	1,763,277	623,961+
	$71,501,419	**$77,511,405**	**$68,421,012**	**$3,080,407—**

COST COMPARISONS OF CONTRACTS

(Subsequent to June 25, 1950)

CONTRACT NO.	ORIGINAL REPORT ESTIMATE	ENGINEERS' ESTIMATE FOR BIDS	BID PRICE	DIFFERENCE BETWEEN ORIGINAL REPORT ESTIMATE AND BID PRICE
19	$4,149,800	$6,176,585	$5,839,373	$1,689,573+
22	3,041,200	6,774,027	6,581,635	3,540,435+
31	2,629,100	2,564,755	2,375,781	253,319—
32	814,700	666,450	772,863	41,837—
37	2,173,441	2,275,475	2,129,445	43,996—
38	4,025,477	4,192,355	4,625,947	600,470+
39	576,000	504,345	517,953	58,047—
40	1,214,800	887,056	1,179,970	34,830—
41	765,500	1,090,679	1,080,913	315,413+
42	590,500	1,093,745	1,218,613	628,113+
43	1,362,000	2,139,250	2,176,300	814,300+
44	2,873,600	3,854,595	4,068,675	1,195,075+
45a	983,000	2,302,086	1,841,595	858,595+
45b	427,700	1,089,750	1,015,300	590,600+
45c	867,000	2,273,560	2,273,560	1,406,560+
46	886,300	1,417,450	1,324,925	438,625+
47	—	166,000	229,320	229,320+
48	890,000	1,199,340	1,224,450	334,450+
49	1,285,700	838,270	778,804	506,896—
50	774,000	1,738,872	1,843,480	1,069,480+
51	248,700	424,810	464,860	216,160+
52	710,000	915,000	863,825	153,825+
53	929,000	1,543,500	1,470,112	541,112+
54	1,084,000	2,136,285	1,890,936	806,936+
55	195,298	475,000	471,360	276,062+
56	354,400	815,542	838,973	484,573+
57	675,231	1,577,825	1,380,469	705,238+
58	522,750	693,975	491,850	30,900—
59	4,482,500	5,382,515	6,314,436	1,831,936+
60	3,691,600	4,169,750	5,091,044	1,399,444+
61	4,452,500	5,389,681	5,910,031	1,457,531+
62	5,493,300	6,924,843	7,086,873	1,593,573+
63	4,171,673	6,502,885	6,296,148	2,124,475+
64	3,175,505	6,225,215	5,558,791	2,383,286+
65	2,877,185	3,279,470	3,289,384	412,199+
	$63,933,460	**$89,700,941**	**$90,517,994**	**$27,127,534+**

COST COMPARISONS OF CONTRACTS

(Subsequent to June 25, 1950)

CONTRACT NO.	ORIGINAL REPORT ESTIMATE	ENGINEERS' ESTIMATE FOR BIDS	BID PRICE	DIFFERENCE BETWEEN ORIGINAL REPORT ESTIMATE AND BID PRICE
66*	—	$ 376,714	$ 470,050	$ 470,050+
67	$ 67,500	90,000	64,600	2,900—
68	392,000	835,980	543,290	151,290+
69	4,566,000	7,700,000	7,700,000	3,134,000+
70	67,760	454,709	398,434	330,674+
72	20,400	65,577	66,582	46,182+
73	—	230,400	308,985	308,985+
74	241,700	375,000	249,485	7,785+
75	—	58,800	66,459	66,459+
76	87,800	35,000	38,147	49,653—
77	55,700	30,000	26,619	29,081—
78	333,000	427,705	444,539	111,539+
79	311,000	495,903	461,951	150,951+
80	135,600	382,679	443,892	308,292+
81	83,700	241,315	274,108	109,408+
82	157,000	439,015	395,443	238,443+
83	93,000	256,950	257,517	164,517+
84	200,000	284,325	259,108	59,108+
	$6,812,160	**$12,780,072**	**$12,469,209**	**$5,546,049+**
GRAND TOTAL	**$142,247,039**	**$179,992,418**	**$171,408,215**	**$29,593,176+**

*50% of the amount of this Contract plus the paving in the vicinity of North Avenue is chargeable to the Port Authority. This contract price is subject to further negotiation.

While major items of construction were under way the Authority took bids and awarded contracts for toll collection, restaurant and service station, utility, maintenance and administration buildings.

In addition, bids were obtained and contracts awarded for: the construction and installation of a two-way radio communication system; fencing of the entire Turnpike; lighting installing at interchanges and at connections with important state traffic arteries; the striping of the entire Turnpike roadway; directional and "trail blazer" signs; delineators for 118 miles of roadway and for interchange areas; guard rail and a myriad of other items.

In February, 1951, the Authority received bids for the construction of its Administration Building in East Brunswick Township. The bids, including the lowest ones, were considered excessive with the result that all bids were rejected. In reviewing the situation, the Authority determined that, in view of the Korean War and the ever-increasing demands of national defense, there were many uncertainties then existing in the building construction industry and that it could not reasonably expect to receive a satisfactory bid for this work. Accordingly, it was decided to undertake the construction of this and other buildings on a cost-plus fixed-fee contract.

After a thorough review of the eligible contractors and after competitive fee bids were received, the Authority, in March, 1951, awarded a contract to A. A. LaFountain, Inc., and August Arace & Sons, Inc., as joint venturers, for the construction of all the Authority's buildings. This joint bid was the lowest of all the bids received. Governmental restrictions on such construction became progressively more severe and difficulty was experienced in obtaining structural steel and other critical materials necessary for this construction. Simultaneously there was a grave shortage of labor. The contractor made reasonable progress with the materials and labor available but the building program was unduly delayed. When materials and labor became available, the work was concentrated on toll collection facilities and these were completed on schedule although at the expense of the remainder of the building program.

When it was recognized that the restaurant and service station buildings would not be completed in time for the opening, plans were developed immediately for the construction of temporary facilities to serve the traveling public until the permanent buildings became available. These temporary facilities were placed in operation and, considering their size and construction, they are serving their purposes well. Construction is now proceeding at a rapid pace on the permanent buildings and it is expected that they will be placed in operation during late winter and early spring, in ample time to accommodate the increased traffic expected during the summer months.

The unprecedented variety, volume and speed of the 1951 construction operations were not accomplished without unusual occurrences. The Pennsylvania Railroad wreck near the Turnpike at Woodbridge required drastic and expensive changes in plan. While Turnpike engineering and construction were held officially blameless, the public reaction to the wreck and the attitude of the railroad company made necessary the construction of a complete railroad bridge 185 feet in length. This was built on temporary movable supports to one side of its ultimate position. At the same time, certain preparatory work was done at its final location in the embankment into which the new piers were constructed under railroad traffic. Early one Sunday morning, during a gap in the train schedules, the old track was ripped out, its supporting ballast and some embankment beneath were swept aside, and the new bridge complete with

CONTRACTS AWARDED DURING 1951

DATE OF AWARD	CONTRACT NUMBER	CONTRACTOR	COUNTY	TYPE OF WORK	NUMBER OF BIDDERS
1/3/51	52	Cayuga Foundation Corp.	Hudson	M.S.	3
2/7/51	70	Reid Contracting Co., Inc.	Salem	G. & D.	3
2/28/51	55	J. I. Hass Co., Inc.	Essex Hudson	Painting	2
3/9/51	69	A. A. La Fountain Inc. & August Arace & Sons, Inc.	Along Entire Turnpike	Bldgs.	1*
4/12/51	47	Lightning Electric Service Co.	Essex Hudson	Lighting	3
5/23/51	78	Whitmyer Bros.	Salem to Mercer	Guard Rail	2
6/12/51	79	O. W. Hubbell	Middlesex to Bergen	Guard Rail	2
6/28/51	83	Lightning Electric Service Co. & Emerson Garden Electric Co., Inc.	Middlesex	Lighting	6
7/2/51	82	Lightning Electric Service Co. & Emerson Garden Electric Co., Inc.	Salem to Mercer	Lighting	7
7/3/51	84	Lightning Electric Service Co. & Emerson Garden Electric Co., Inc.	Union to Bergen	Lighting	3
7/16/51	75	Geo. M. Brewster & Son, Inc.	Middlesex	Structure	3
8/29/51	72	Anchor Post Products, Inc.	Along Entire Turnpike	R.W.F.	1**
8/29/51	74	United Advertising Corp.	Along Entire Turnpike	Signs	3
8/29/51	76	American Gas Accumulator Co.	Along Entire Turnpike	Delineators	2
8/29/51	77	Prismo Safety Corp.	Along Entire Turnpike	Pavement Marking	3
8/29/51	80	Whitmyer Bros.	Salem to Mercer	R.W.F.	1**
8/29/51	81	O. W. Hubbell	Middlesex to Bergen	R.W.F.	1**
9/26/51	73	Villa Contracting Co., Inc.	Middlesex	Paving	3
		TOTAL			49

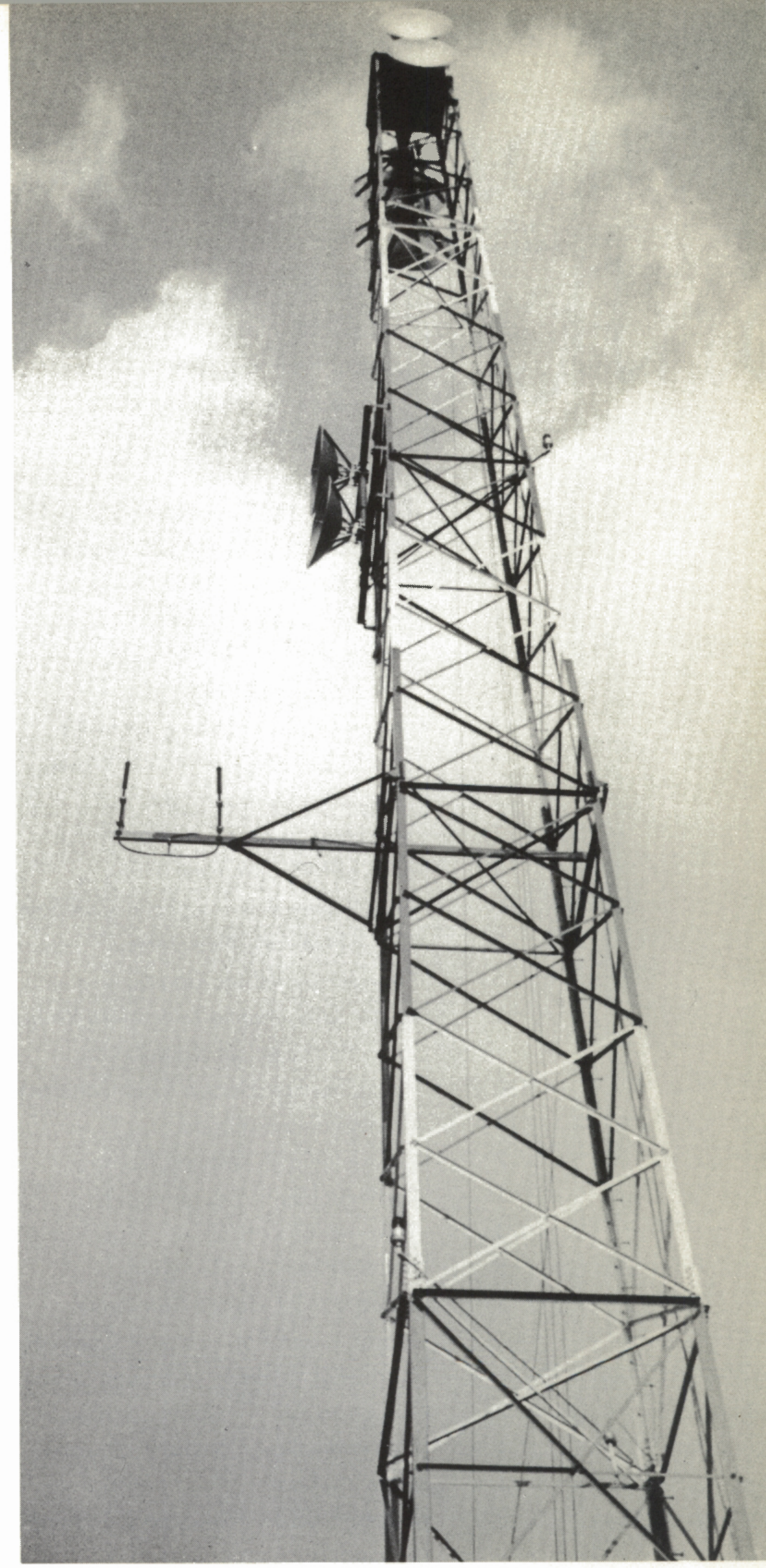
Legend:
G. & D. = Grading & Drainage
M.S = Major Structure
R.W.F. = Right-of-Way Fence
*Negotiated on a cost plus fixed fee basis following receipt of competitive bids.
**Negotiated on a unit price basis following receipt of unacceptable bids.

tracks, was rolled over the piers and lowered into position. The remaining operations were completed without interference to train schedules. The increased cost to the Turnpike for the changes in design was more than $1,000,000.

Typical of extraordinary construction in the northern sections of the Turnpike there are, within the 14-mile length from the Rahway River to the Hackensack River, about 45 bridges and viaducts having a total length of about 5 miles; including 15 overpasses within as many city blocks. The Turnpike also has grade separations with the numerous railroad lines and yards converging on the greater New York area, and the Turnpike passes through the largest oil refinery on the East Coast. Foundation conditions in this northern area varied from fairly good to exceptionally poor. It was inevitable that problems should arise but these were resolved by the ingenuity of the engineers and contractors.

The 118-mile Turnpike passes through the most densely populated and the most highly industrialized sections of New Jersey. The construction resulted in interference with existing and planned facilities of every conceivable type of public and private utility, and in such locations these interferences occurred with unbelievable frequency. In order to cope speedily with these problems a special division was established in the Authority to process agreements covering utilities. Each agreement was approved by the three Commissioners. Much of the construction work covered by these agreements had to be integrated closely with the construction operations on the Turnpike itself. Also, the various toll plazas, and the service and maintenance areas, required that new utilities be brought to service those areas.

The majority of construction detail associated with the utilities was carried on during 1951 and at the end of the year most of the work had been completed.



One of six short wave radio towers used for the Turnpike

An indication of the extent and complexity of the problems affected by utilities can be obtained from the following tabulation of agreements as of December 15, 1951.

RELOCATION OF UTILITIES

NO. OF AGREEMENTS	NAME OF UTILITY	ESTIMATED COST
25	Atlantic City Electric Company	$ 89,642.00
1	Crosswicks Water Company	15,085.00
20	Central Railroad of New Jersey	1,358,674.00
1	Cities Service Oil Company	27,000.00
2	D. L. & W. Railroad	14,016.00
3	Erie Railroad Company	145,505.00
14	Elizabethtown Consolidated Gas Co.	231,155.00
1	Elizabethtown Water Co. Consol.	55,235.00
1	Forsgate Farms, Inc.	2,195.00
1	Freehold Electric Service Co.	7,974.00
3	Hackensack Water Company	37,170.00
1	Boro of Hightstown	9,350.00
17	Jersey Central Power & Light Co.	103,514.00
1	Jersey City Dept. of Public Works	10,510.00
2	Lehigh Valley Railroad	57,001.00
13	Middlesex Water Company	180,520.00
2	Boro of Milltown, New Jersey	9,474.00
150	New Jersey Bell Telephone Company	1,127,327.00
2	City of Newark, New Jersey	1,971.00
6	New Jersey Water Company	48,552.00
1	N. Y., Susquehanna & Western Railroad	11,800.00
1	New York Central Railroad	58,180.00
130	Public Service Elec. & Gas Company	2,906,061.00
14	Pennsylvania Railroad	845,395.00
2	Philadelphia & Reading Company	11,808.00
1	Perth Amboy Gas Light Company	12,000.00
3	Township of Raritan	2,500.00
5	South Jersey Gas Company	32,170.00
1	Standard Oil Co. of New Jersey	798,633.00
1	Staten Island Rapid Transit Company	5,946.00
1	Susquehanna Pipe Line Company	7,215.00
2	Tuscorora Oil Company	58,269,00
1	Tidewater Pipe Company Ltd.	2,385.00
1	Town of Kearny	124.00
3	Western Union Telegraph Company	11,142.00
1	Woodbury Water Company	10,926.00
1	City of Linden	3,752.00
436	**Sub Total**	**$8,310,166.00**
5	**Pending**	**40,000.00**
	Total	**$8,350,166.00**
441		
DEDUCT: Reduction in cost due to redesign of facilities		**300,000.00**
		$8,050,166.00

Turnpike passing through residential section of Elizabeth

Design

SAFETY was one of the prime factors considered in fixing the geometric standards and design characteristics for the Turnpike. Studies of records of accidents on highways have shown that accident rates are increased by the presence of certain characteristics such as sharp curves, steep grades, left turns, grade intersections, inadequate sight distances, slippery pavements, inadequate maintenance, lack of definition at night or in fog, lack of provision for off-the-roadway parking of disabled vehicles, and lack of separation of traffic lanes in opposing directions. The designers of the Turnpike made a systematic and extensive attempt to eliminate all such features which cause accidents. It is unfortunate that no amount of design effort can eliminate those highway accidents which result from human failures or from defects in mechanical equipment of the vehicles.

The convenience and needs of the motorist, second only in importance to safety, were given special consideration by the Authority. Every effort has been made to provide the services necessary to make his trip with the least amount of strain or inconvenience. At the same time, the Authority has made a conscientious attempt to keep the service features located on the Turnpike within limits of reasonable necessity to avoid unnecessary competition with private business interests.

As outlined in the 1950 report, the New Jersey Turnpike is a fully controlled access express highway with all highways and railways grade separated, opposite direction traffic divided by a raised safety mall, specially designed traffic interchanges for elimination of left or "U" turns, wide stabilized shoulders, moderate grades, easy sweeping curves and wide traffic lanes. All are constructed on wide rights of way with all access and frontage rights prohibited from the adjacent private property. There has been no modification of these principles.

The wide sweeping curves of the roadways, the flat grades, the long sight distances and the many important features for the safety and convenience of the motorists all became visible realities during 1951. To the user these items will constitute the Turnpike. The subsurface conditions which were problems for the designers and work for the contractors will be taken for granted. The motorists driving over the Hackensack River and Passaic River Bridges will give little thought to the record-breaking structures hidden from their view beneath the roadway, but these same structures presented knotty problems during design and construction.

These bridges, which are the two largest structures on the Turnpike, are within two miles of each other. They contain the longest single plate girders ever erected. The river spans are each 375 feet long and provide 110 feet of vertical clearance over the rivers. The total length of the Passaic River Bridge with its approach viaducts is 6,955 feet and that of the Hackensack River Bridge is 5,623 feet. Approximately 60,000 tons of steel and 100,000 cubic yards of concrete were used in the construction of these two bridges.

Due to the selected alignment for the roadway and river crossing, the design of the Passaic River Bridge presented a problem because the southern terminus of the bridge was so close to the Pulaski Skyway. In studying the problem, it was found that by-passing the Skyway would result in a more costly and otherwise undesirable alignment. It, therefore, became a question of passing over or under the elevated Skyway. Further study indicated the feasibility of passing under the Skyway while retaining sufficient clearance to make possible a structure which would not exceed the maximum grade established for the Turnpike and yet reach the required height of 110 feet at the river channel.

During the year design was completed

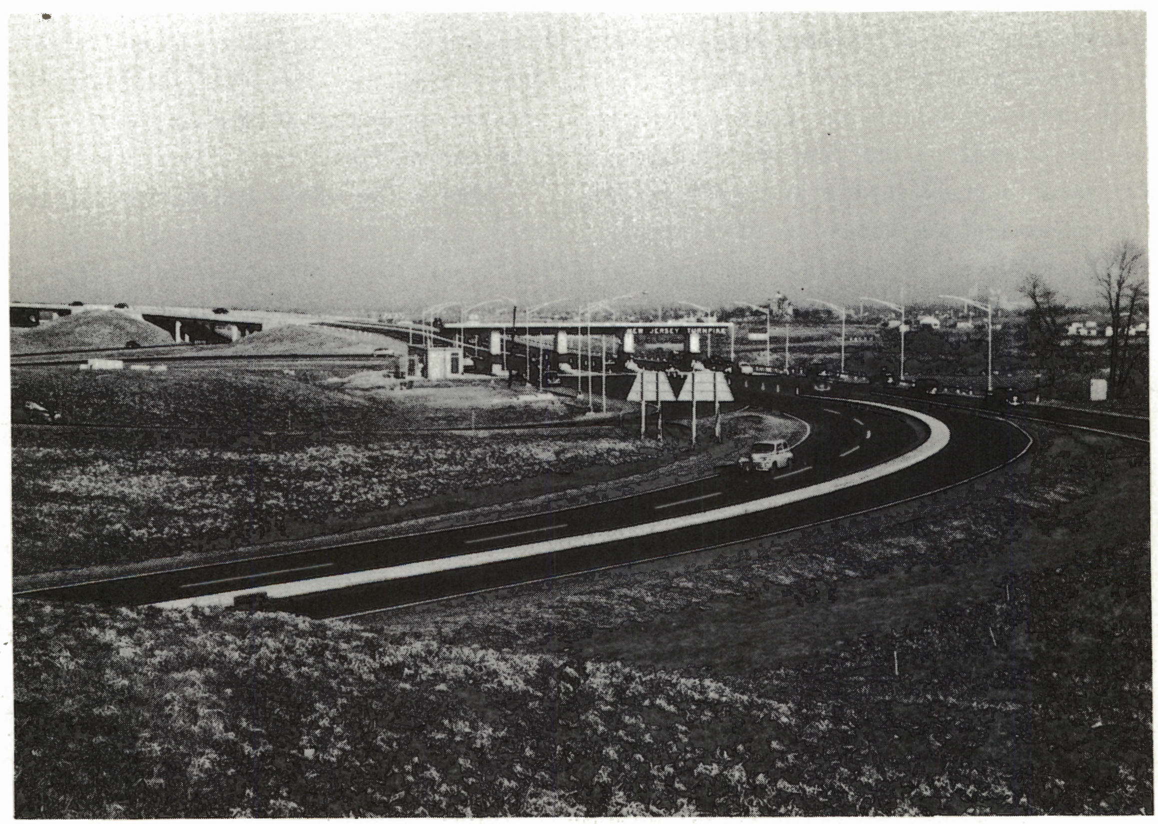
on service areas, toll collection facilities, high frequency radio system, signs, reflectorized roadside delineators, paint striping of pavement, lighting, guard railing, right of way fencing and toll, service area and maintenance buildings. Studies for decorative landscape planting were initiated, designs were completed and contracts awarded for planting at the twin gasoline and restaurant facilities at Woodbridge as well as the design and contract plans for the Delaware Memorial Bridge Interchange area at Deepwater.

Considering the Turnpike as a whole, major redesign was unnecessary. Such minor redesign as was done consisted of adjusting drainage, bridge foundations and piling to comply with actual conditions disclosed after excavation uncovered the underlying soil. Several minor roadway grade changes were made to adjust the profile above soft underlying strata and improve drainage. In one instance an embankment section was redesigned to utilize sand drains when it was discovered, after a slide, that dredging had failed to remove all underlying soft material from the underwater foundation.

Prior to the start of the paving season of 1951, Turnpike contractors proposed to the Authority the use of an all asphalt-bound stone base in lieu of the part stone dust-bound and asphalt-bound stone base. This modification in procedure was approved and greatly facilitated the rapid completion of the pavement, since the asphalt-bound stone courses afforded an excellent haul road for the delivery of materials for the succeeding pavement layers.

Another modification which facilitated construction was the agreement by contractors to place the $4\frac{1}{2}$ inch thick hot mix asphaltic concrete courses in three $1\frac{1}{2}$ inch layers instead of two layers and thus avoid the use of side forms.

One additional small structure was



Entrance to Woodbridge-Amboys interchange at Route 35 added during the year in order to separate the grade of a local street and a ramp exiting to a state highway. Recent developments indicated that the territory served by this street would, in all likelihood, develop soon into an industrial area.

Critical examination of all design features of the Turnpike will continue during operation in order to assure that this highway will afford the utmost in comfort, convenience and safety to the traveling public in the years ahead.

The scarcities and rising costs caused by the war necessitated further reduction of the scope of the initial work outlined in the last annual report, and required careful scheduling of the work remaining on the current program. Sequence of building operations was repeatedly adjusted to best employ the funds, materials and manpower in the order in which the most essential buildings had to reach completion.

The buildings needed in the operation on the Turnpike total 81; namely, the administration building; 42 toll booths now handling 81 lanes of traffic; 20 toll plaza utility buildings; 10 service area buildings — gasoline stations, lunch rooms and restaurants; 3 maintenance buildings and 5 radio buildings.

Top priority had been given to shortwave stations and toll stations to insure that these would be in operation in time for opening the respective sections of the Turnpike. This aim has been substantially achieved. Minor exceptions consist of delay on certain items in critically short supply, principally underground cable for power supply and area lighting, which necessitated temporary overhead installations.

Second priority was given to concession buildings catering to the needs of Turnpike patrons. Since the last Annual Report the principal reductions of the initial program, which projects thirteen sites, now provides for the postponement of all development at

Signs direct motorists to service areas which are set back from Turnpike travel lanes.

three sites, and reduction in the extent of paving, curbing, etc., at the remaining sites. Two of these latter sites are in locations that may be affected by the connections between the New Jersey and Pennsylvania Turnpikes. The delay in their construction will allow the Authority to review the facilities proposed for these sites when the route of the connection is more clearly defined.

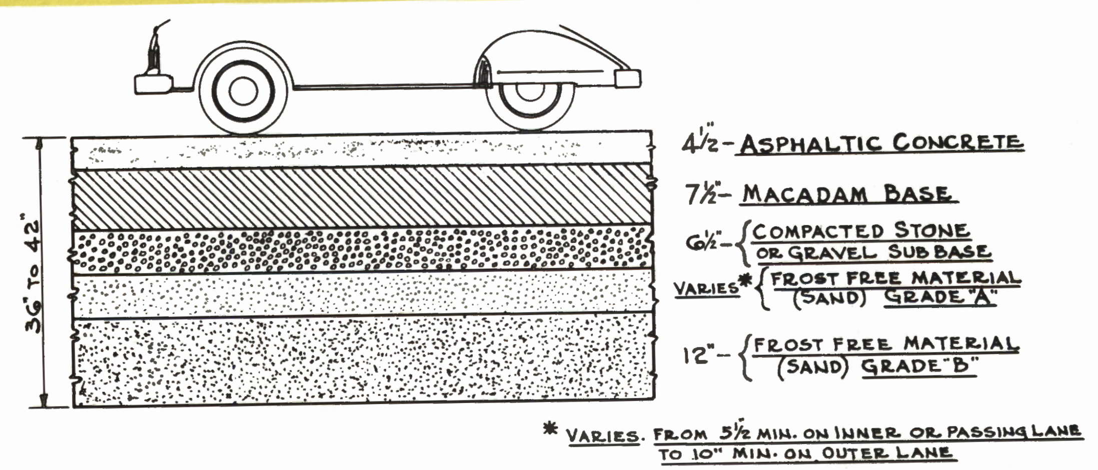
Maintenance sites received third priority. The delay of the permanent facilities will impose some difficulties upon the work of maintenance during the first winter. To mitigate this condition, certain warehouses, intended originally for subsequent construction at each site, were rescheduled to precede the principal headquarters buildings. Quonset huts, 40 feet by 100 feet were ordered after thorough canvass of the costs and time requirements of several prefabricated construction types. Further temporary expedients were used in the relocation and adaptation of surplus contractors' buildings for office and toolshed purposes.

Insofar as the building units become exposed to public observation, response appeared to be favorable. It is expected that these structures will contribute their full share towards the popularity and economic success of the Turnpike.

Except in the industrial areas, the Turnpike traverses a pleasant countryside alternating among highly cultivated farm land, residential developments and timbered areas. Many fine vistas of the unblemished countryside are afforded the traveler on the Turnpike. Consequently, it is considered unnecessary to embark on an extensive planting program to enhance the landscape.

The grading and paving contracts provided for the treatment of the median and slopes with topsoil to be fertilized, limed and seeded with a selected variety of grasses. This program involves 11,000,000 square yards of surface and is calculated to heal construction scars and control erosion from wind and rainfall. Due to the necessity for completion of a substantial portion of the paving in the Fall it became necessary to suspend the grass seeding operation until next spring because germination and rapid growth of grass is impossible through the winter months. The lawn areas adjacent to the Turnpike, therefore, will not be fully established until 1952.

Studies are also under way on screen planting at parallel local roads to shield headlamp glare.



Cross section of roadway foundation and pavement

Turnpike passes under Main Street in Woodbridge and Garden State Parkway

Section of Turnpike in Mercer County looking to the south

Acquisition of Rights of Way

By the end of 1950 most of the real estate obstacles had been removed, opening the path for practically uninterrupted construction during 1951. Real estate personnel concerned itself largely with the completion of the overall acquisition program and clearing up the few remaining problems which had not been resolved by the end of 1950. The relocation of tenants and the demolition of properties lying within the right-of-way through the City of Elizabeth were continued and finally completed in the early spring. Several homes remaining within the right of way, particularly in the Secaucus and Camden areas, were carried into condemnation before negotiations for their acquisition were completed.

As construction progressed during the year, the need for additional small parcels of land to correct drainage conditions and enlarge ramps and widen slopes became apparent. By the end of 1951, the number of parcels required rose from 3,426 to 3,558. These parcels were owned by 1468 individual owners. During the year, the Authority entered into contracts in amounts totaling $3,838,337, bringing the total for purchase from private owners to $13,516,537, as of the close of the year.

By the end of 1950 there were but two instances where awards were made by Condemnation Commissioners. During 1951, 43 more cases were heard in court and awards made thereon. There are 38 cases currently in condemnation which are awaiting hearing before Commissioners. These should be brought to conclusion in early 1952. Of the total number of 139 cases which have been filed in condemnation, 56, representing 40% of the total, were settled prior to actual hearings. Of those cases on which awards were made, the greater majority of the awards were at prices approximating the amount which the Authority had established as fair and reasonable prices. In but a few instances were the awards in an amount substantially greater than the Authority's appraised value of such parcels. In one instance where the award was over 70% higher than the Authority's appraised value, the Authority appealed the action and the jury before which the case was heard, reduced the Condemnation Commissioners' award to a figure within the Authority's appraisal.

There still remains slightly more than $4,500,000 of Real Estate on which negotiations must be completed. On all of these properties the Authority has legal possession and negotiations have not been completed because of problems involved in determining an appropriate price for the real estate and damages. Negotiations are being continued on all of them. While the real estate yet to be acquired represents a large financial value, most of it is contained in large parcels of land and but approximately 10% of the total number of owners along the Turnpike are involved in this remainder. Many consist of large tracts of land on which there are substantial remaining elements on either or both sides of the Turnpike, thereby involving numerous severance problems. On others, negotiations have reached a point where, if not resolved in the near future, the cases will be referred for condemnation action. By and large, however, it is expected that the bulk of the Real Estate acquisition will be brought to a conclusion by spring or early summer of 1952, leaving for disposition at that time only those cases which are in the courts and those on which major problems are involved.

It is anticipated that during 1952, with the acquisition problems largely resolved, the Authority will embark upon a program of disposing of its surplus property which now consists of 63 dwellings, most of which are relocated from the right of way. In addition there are approximately 2000 acres of land, consisting principally of parts of farms which were severed by the Turnpike.

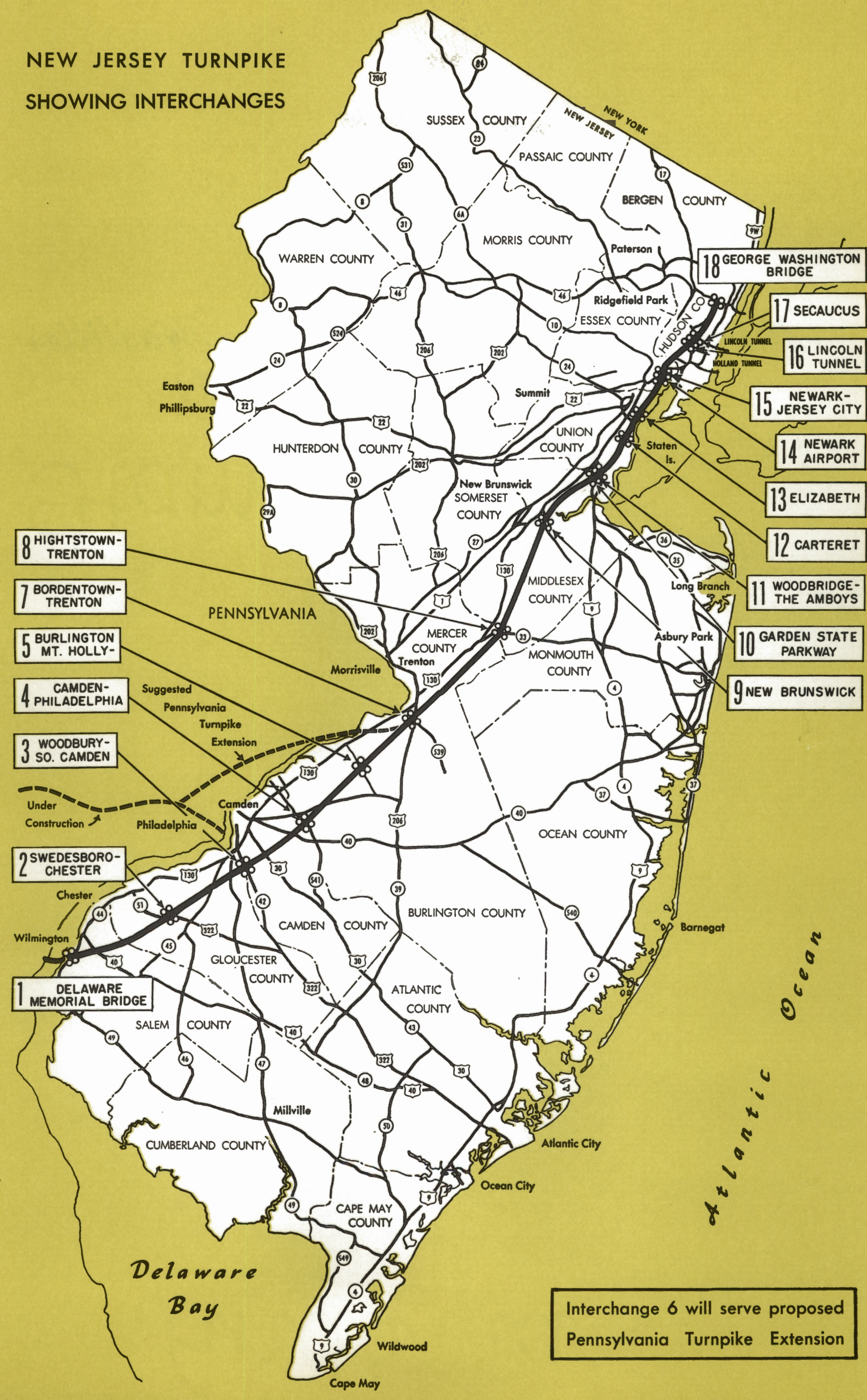
This excess property is valued at more than $600,000.

There has been but little change in the anticipated total cost of real estate from that shown on the revised cost estimate contained in the 1950 Annual Report. The present estimate of $18,162,000. represents an increase in cost of $932,000., brought about largely by the inclusion of the additional parcels previously cited, together with slight adjustments as a result of the additional experience gained in the acquisition completed during the year. After deducting the anticipated $600,000. to be realized from the disposal of excess real estate, the net cost, as shown in the revised cost estimate, is $17,562,000.

The Authority has constantly done everything within its power to effect prompt payment for lands taken. The title companies engaged to perform the title work have kept pace with the land acquisition program. As of December 31, 1951, of the 1,321 owners with whom negotiations had been concluded, 1,162, or 87%, had been paid the purchase price in full. Of the remaining 13%, delay has been occasioned because of the condition of the title and the curative work necessary to clear the defects. This work is receiving close and constant attention with a view to effecting payment at the earliest possible date.

Final twin girder for closure span of Passaic River being lifted in place. Its weight about 175 tons.

NEW JERSEY TURNPIKE SHOWING INTERCHANGES



Maintenance and Operating Facilities

To prepare adequately for the scheduled opening of the Turnpike in the Fall of the year, the Authority early in 1951 gave consideration to its maintenance organization. By Spring, arrangements had been completed for the employment of a chief maintenance engineer and the Authority made comprehensive studies of operating and maintenance procedures and equipment on the Maine and Pennsylvania Turnpikes and on several state highway systems. Being cognizant of the growing shortage of critical materials, the Authority decided to purchase the necessary maintenance equipment during the early Summer. As a result the Authority had acquired all but a few of the maintenance items in time for the Turnpike opening.

Just prior to the scheduled opening of the Turnpike, the recruitment and selection of maintenance and operating forces were undertaken. About 125 persons of various skills were needed for maintenance and practically all have been employed.

The Authority is determined to keep the Turnpike roadway and all bridges open for safe travel at all times despite weather conditions. Extraordinary provisions have been made for prompt removal of snow and alleviation of icing conditions.

As stated in the 1950 Annual Report, the maintenance of the Turnpike will be accomplished through six maintenance districts located at Swedesboro, Moorestown, Hightstown, Milltown, Elizabeth and Secaucus. Responsibility for snow removal, ice control and general maintenance is placed directly in each district where the equipment and personnel for the accomplishment are available.

Snow removal is planned to start as soon as 1 inch of snow falls and will be continuous by each section team until the storm has ceased. Each team will go over its section every 1 to 1½ hours, thus holding to about 2 inches the amount of snow to be removed at each pass. The teams enter the highway at intervals of about 400 feet, plowing lanes from the left hand to the right hand edge of the road.

Following completion of plowing, and to take care of icing conditions, trucks will spread salt to melt the thin ice coating left by the plows. After the storm the snow accumulation at the sides of roadway and bridges will be removed by the use of snow blowers, overhead and bucket loaders, and dump trucks.

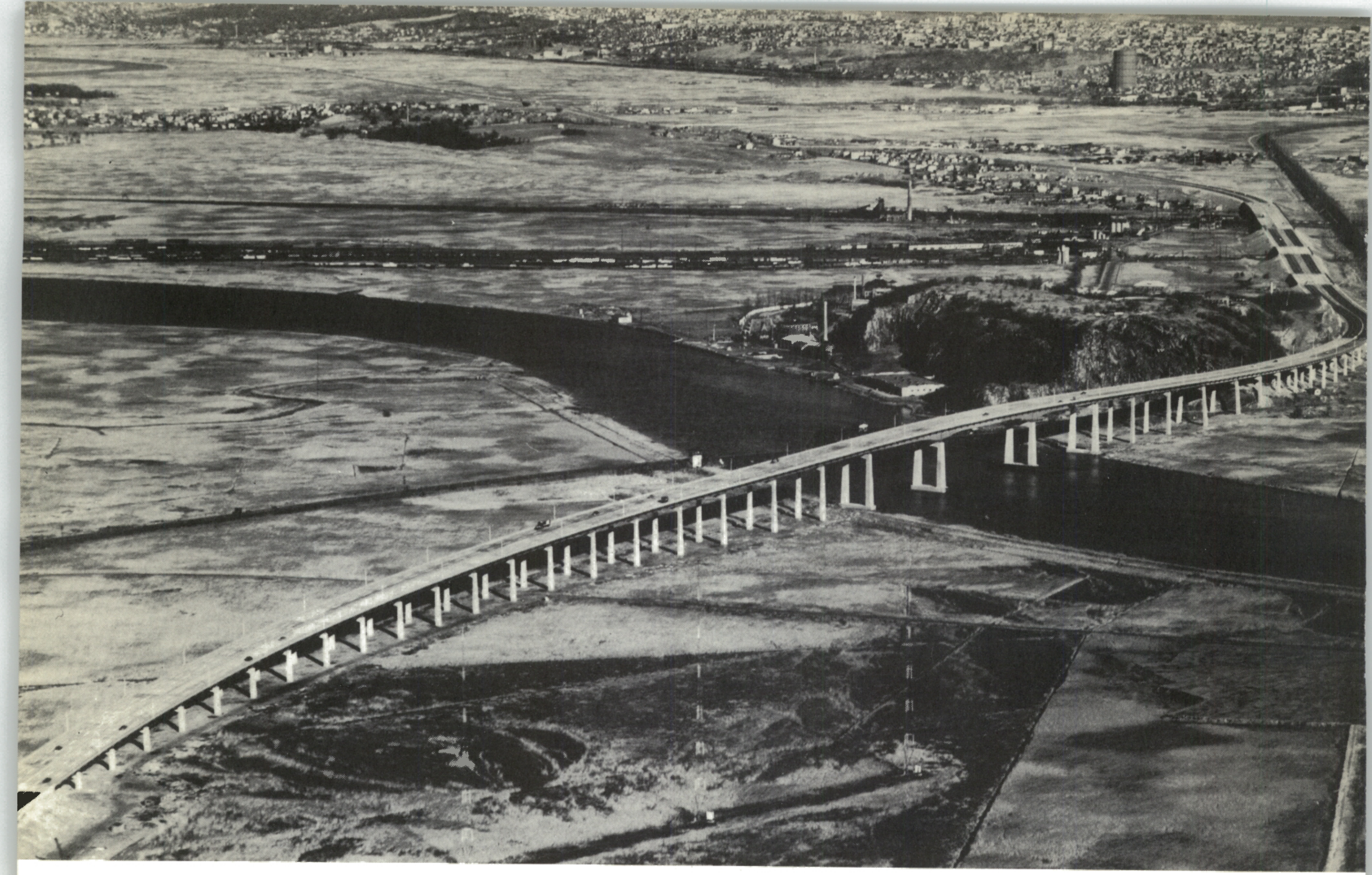
A central repair shop, within the interchange loop near Hightstown will perform all general equipment repair services including those for automotive, radio and toll collection. General maintenance of the roadway, median strips, shoulders, slopes and drainage will follow normally accepted practices.

The most modern equipment will be used to perform the various functions of maintenance with adequately equipped shops to assure that the equipment at all times is in excellent operating condition.

With an expected revenue in tolls in excess of $8,000,000 in the first full year of operation, the requirements for toll collection and appropriate safeguards were given most careful consideration by the Authority.

Prior to the selection of equipment and the establishment of procedures an exhaustive investigation was made. The facilities in use by the many other toll projects operated in this section of the country were carefully studied and consideration was given to new devices recommended by specialists in this field.

The Authority's auditors and its consulting engineer, together with the Comptroller, members of the Authority and its staff, carefully reviewed all of the equipment and the experience of others, and determined upon a system similar to that presently in use on nearby Turnpikes, but with certain modifications to meet the spe-



Approach to Hackensack River Bridge from South and passing Laurel Hill in Hudson County

Burlington-Mount Holly interchange

cial needs of the New Jersey Turnpike and to provide superior service and controls. It is believed that the Authority has adopted a system which will provide quick and accurate collection of tolls and the necessary financial control with simplicity and economy of operation.

The system includes equipment installed at each interchange, together with tabulating equipment which will be located at the Administrative Headquarters. Some of the more important features of the system consist of:

1. A treadle in the pavement over which no vehicle can pass without recording the number of axles, whether or not the lane is in operation.
2. A ticket time stamp in the toll booth, which identifies each toll ticket, the interchange and the time and date of entry and exit.
3. An automatic device, located in a section of the adjacent utility building and inaccessible to collectors, which records the number of axles passing over the treadles and the number of transactions as reflected by the ticket time stamp.
4. An identification and control unit which records the number of the collector on duty.

The toll collection organization established under the general supervision of the Comptroller consists of 142 men, of which 135 are toll collectors and seven are in supervisory capacities. In addition, it is anticipated that approximately 30 or more additional collectors will be required on a temporary, or part-time, basis to handle the peak summer traffic.

This organization was recruited, selected, employed and trained within a brief period immediately preceding the opening of the various portions of the Turnpike. These men were drawn from all walks of life, and few had any previous experience in toll collection. Despite this lack of experience and the large number of vehicles which have used the Turnpike, the vast majority of the collectors have performed their functions remarkably well and will improve with experience.

The Authority is cognizant of the fact that its toll collection personnel represents to the majority of the public the first contact with the Turnpike. Our greatest opportunity for favorable impression lies with this group. The personnel was selected with this thought in mind and courteous treatment and efficient handling of the traffic has been stressed in the training program. Many unsolicited letters commenting on the courtesy and efficiency of the collectors are testimony to the success of selection and the training program. One of the many features adding to the esprit de corps of this part of the organization is the uniform which, while not unduly costly, is unusually attractive.

The toll ticket adopted by the Authority is unique and represents a saving in cost over that in use elsewhere. It has the advantage of maintaining an inventory at a much lower level than is normally the case; is readily adapted to changes in toll rates and consequently, minimizes the danger of obsolescence. The ticket is so designed that the toll can be read easily by both the patron and the collector. Prominently in mind was its adaptability to a system of credit for large users of proven responsibility such as bus companies and trucking concerns. Such a system is now being developed with a view toward placing it in effect at an early date. This method of payment is attractive to large users in that it avoids the necessity for entrusting cash to drivers or of the drivers advancing the cash for subsequent reimbursement by the companies. The system, as ultimately designed, will facilitate prompt billing and collection of the accounts.

Safety Features and Accommodations

SAFETY, CONVENIENCE AND SERVICE must be prime objectives in providing the public with a superior means of transportation not otherwise available. To be safe a highway must be fundamentally designed for the purpose and the New Jersey Turnpike is outstanding in that regard. Wider than normal traffic lanes, the absence of sharp curves on roadways, bridges and interchanges, minimum grades (none over 3 percent) and long sight distances will be found throughout the 118 miles. The elimination of left hand turns in virtually every instance, the complete absence of cross traffic and skid-resistant pavement are among the features that have already caused the Turnpike to be called "the safest highway in the world."

Many of the most serious highway accidents result from head-on-collisions of vehicles moving in opposite directions. The design of the Turnpike has decreased the possibility of such accidents to the maximum practical extent by providing a wide median strip between roadways, by center malls on bridges and by barrier curbs between opposing lanes of traffic on ramps. The 20 and 26 foot wide median areas between roadways are raised and built with a sod curb to lessen the likelihood of motor vehicles crossing from one roadway to the other. The median strip also assists in decreasing the undesirable effects of approaching headlights during night driving. Included in the median area are two shoulders, each 5 feet wide and equipped with drainage basins which quickly carry away the water from the roadway and facilitate snow removal.

On the right hand side of all roadways are improved 10 foot wide shoulders to provide readily available space for vehicles which must stop. Thus, a motorist who has mechanical trouble, a flat tire, runs out of gasoline, or for some other reason is required to stop, can immediately remove his vehicle from the traffic lanes. As in the case of the 5-foot left hand shoulder, the 10-foot right hand shoulder assists in draining the roadway and aids in the removal of snow.

Extraordinary safety features have been incorporated in the design of the various interchanges. The most densely traveled connecting highways leading to the Turnpike have been provided with grade separations and left turns have been eliminated. Virtually all of the less densely traveled highways have been provided with channelized traffic intersections. Leaving the ramps and entering the Turnpike, the motorist uses a long separate lane to bring his vehicle to the speed of the adjacent traffic moving in the same direction. The result is that, as he merges with through traffic, he is traveling at the same speed and thus is free of the hazard that would otherwise be present.

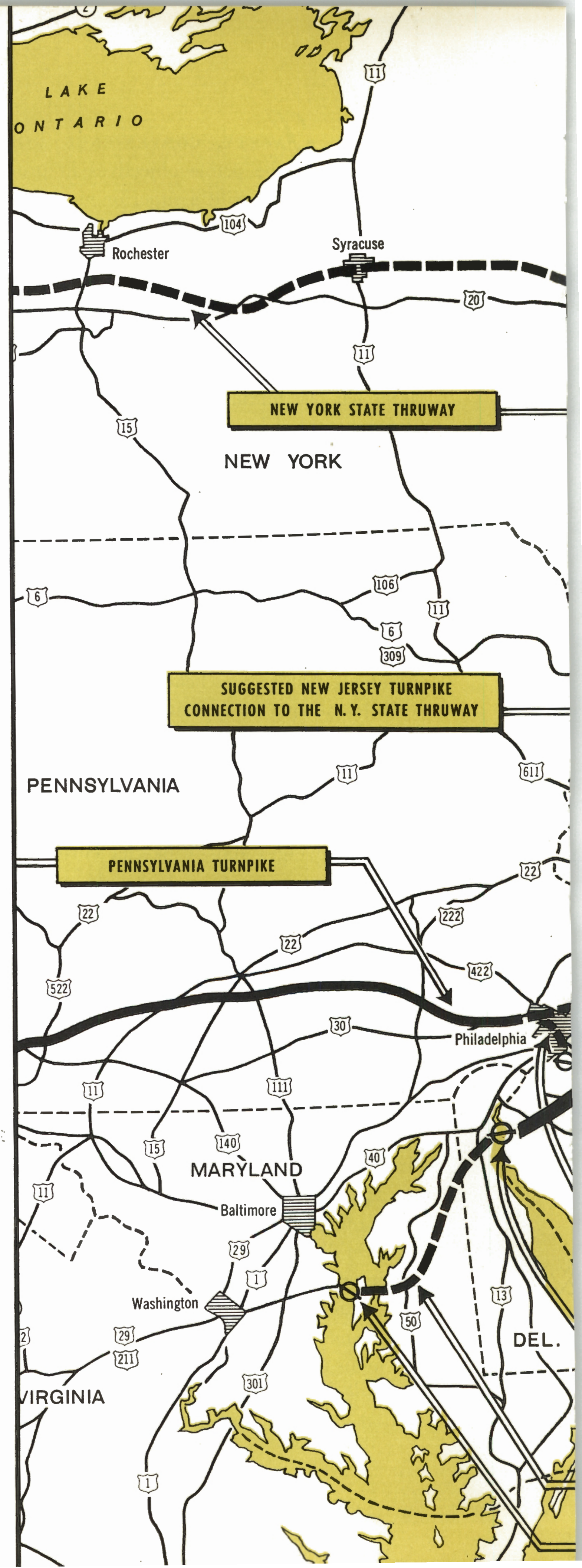
As one nears his destination and desires to leave the Turnpike, there is a long deceleration lane into which entrance can be made at the normal rate of speed. After entering this lane, the motorist has a distance of approximately one-quarter of a mile in which to slow down before reaching the ramp leading to the interchange. The approach to the ramp is made by gradual transition in both horizontal curvature and superelevation so that the motorist naturally decreases speed to a rate consistent with passage through the toll plaza and exit to the connecting highway system.

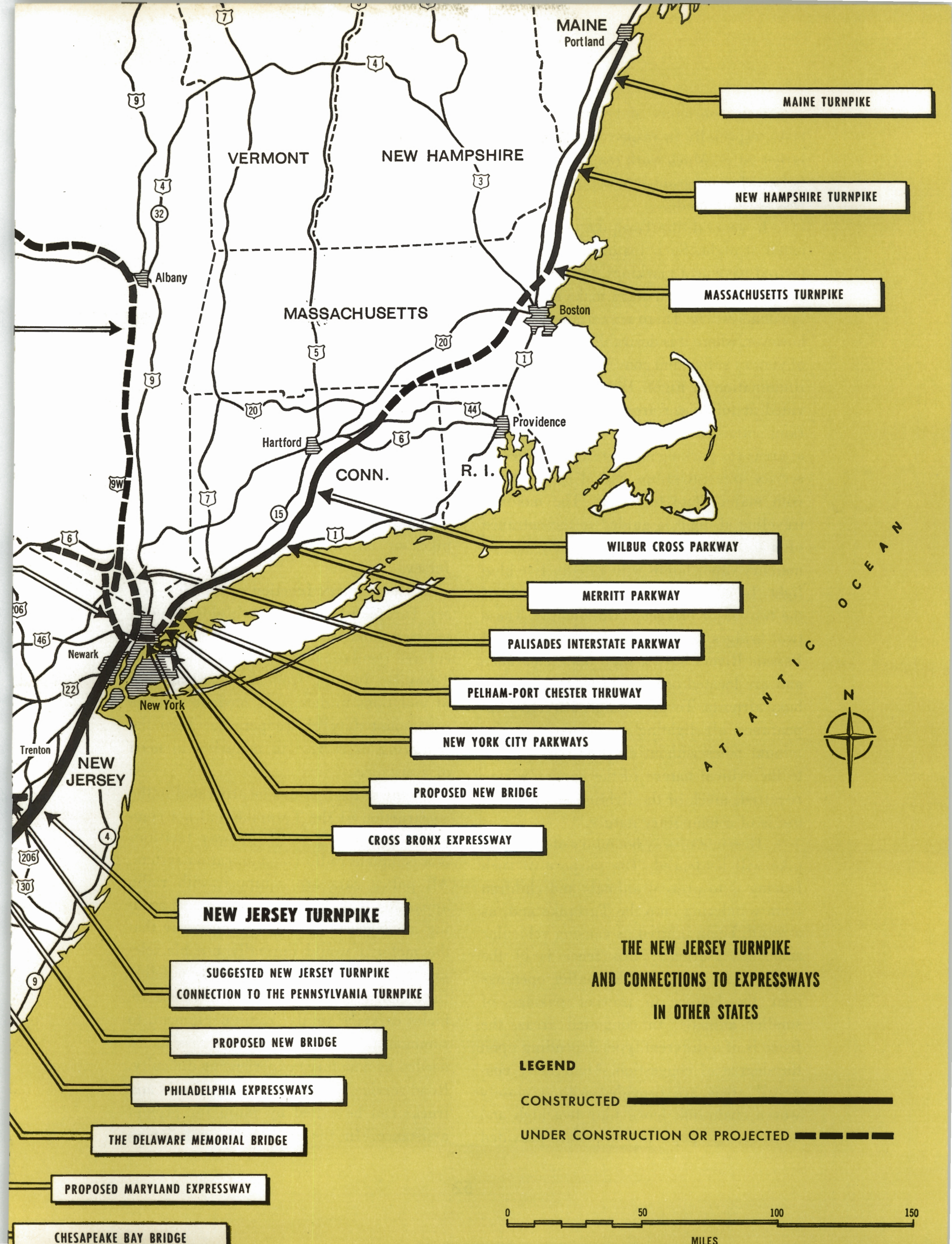
Guard rails have been constructed at all locations where the embankment on which the pavement is placed is high enough above the surrounding area to be dangerous to a vehicle out of control. At locations where this height is below 10 feet and guard rail is not used, the slope down the embankment is gradual so as to reduce the hazard should a driver lose control of his vehicle. Guard rails are also provided at all approaches to bridges carrying Turnpike

pike traffic, where such approaches are on embankments and they are also placed adjacent to ramps similarly located. At approaches to bridges there is integrated with the guard rail a curb design which will funnel a vehicle into the roadway surface of the bridge should it approach the bridge too far off-side.

All pavement surfaces are skid resistant and are provided with six inch wide white striping to mark the travel lanes and guide motorists. This striping contrasts very effectively with the dark surface of the pavement itself, and consists of top quality, long lasting reflectorized paint highly visible night and day and especially important under foggy conditions. Supplementing the reflectorized striping, reflector type delineators, spaced 150 feet apart, clearly outline the edges of the roadway, the bridges, railings and the interchange and service area lanes.

These delineators are particularly effective under adverse driving conditions. An incidental contribution made by the delineators, which are mounted 42 inches above the pavement surface, is that they provide a guide for snow plows, thus making it easy for the plowers to remove snow from the full width of the travelled roadway. Numerous reflectorized signs have been strategically placed on the Turnpike, at interchange and service areas to guide and inform the motorist. These "directional" signs have proved to be generally adequate but the Authority is conducting a continuing study to correct deficiencies, some of which became apparent soon after the Turnpike was opened to traffic. Another and important part of the signing program is the system of reflectorized "trail blazer" signs placed on public highways leading to Turnpike interchanges. The trail blazer signs are obviously for the purpose of guiding motorists and truckers to the Turnpike. The proper locations of such signs and their adequacy





THE NEW JERSEY TURNPIKE AND CONNECTIONS TO EXPRESSWAYS IN OTHER STATES represent enormous and time consuming tasks, especially in respect to the streets of larger cities. Much work remains to be done before this program is complete but progress is being made.

In general, the Turnpike is not illuminated at night. Such features as the reflectorized pavement markings, the delineators, and the reflectorized signs make such lighting unnecessary. There are certain locations, however, where it is desirable from the point of view of safety and convenience to provide illumination at night. Illumination is provided at toll plaza areas between point of ramp intersections on each side of the plaza; at areas for parking and service facilities in service areas; at ramps and at intersections with major State highways. The motorist traveling at night is guided to the entrance of a toll plaza or service area by use of mercury vapor lamps with a distinctive blue light. In addition the roadway on each of the two major bridges is illuminated. These two bridges across the Hackensack and Passaic Rivers have a high underclearance and are located only a short distance from busy airports. To produce an attractive appearance all lighting standards are aluminum poles without exposed wiring. Due to the critical nature of the copper wiring required, much of the lighting currently in use is of a temporary nature.

The right-of-way boundary of the Turnpike will be fenced. The purpose of such fencing is to prevent animals and children from wandering onto the Turnpike and, as a result, being injured or causing vehicular accidents. Normally this fence is of the ordinary farm type, with smaller openings near the bottom to prevent passage of smaller animals. In congested areas, the fence is of a different type, depending upon the degree of congestion. Moderately congested areas are provided with a closely woven chain-link fence four feet high and more densely populated areas are provided with a seven-foot high closely woven chain-link fence, topped with barbed wire.

The Authority found it both satisfactory and desirable to take advantage of Governor Driscoll's suggestion that a specific division of New Jersey State Police be used to patrol the Turnpike.

After meetings with the State Attorney General and the Superintendent of the State Police, a detachment of 38 men, consisting of 6 sergeants and 31 troopers under the command of a lieutenant, has been assigned to the Turnpike. The Authority is reimbursing the State for all costs.

Tentative patrols have been established but some will doubtless be changed on the basis of needs as shown by actual experience. The number of police per mile is substantially greater than on other Turnpikes or on the State highways of New Jersey.

The primary function of the New Jersey Turnpike troopers is twofold; namely, to assist motorists in need of service and to enforce regulations governing traffic on the Turnpike. Judging from the small number of violations to date, it is obvious that the paramount duty of troopers has been the rendering of service to motorists in need of assistance.

One of the features incorporated in the construction of the Turnpike and not commonly found on normal highway facilities is a complete radio communication system. All police cars are equipped with radio apparatus, capable of receiving and sending messages in almost the same way that the motorist would normally use his telephone at home. It will, therefore, be possible for a police officer, or for maintenance vehicles carrying similar radio equipment, to summon instantly the type of assistance needed by a motorist experiencing difficulty. Road service vehicles for disabled cars and trucks can be called by radio for prompt assistance. In the same way ambulances and towing equipment can be brought quickly to the aid of the motorist.

The radio system also furnishes instantaneous inter-communication among vehicles of the Maintenance Department, Toll Collection, Executive and Service Departments, an important feature in times of emergency.

Wire line connections have been almost entirely dispensed with and, where used, as at the administration area, have been placed in underground conduit. At each fixed station, relay or otherwise, engine-driven generators can be brought into emergency service within four or five seconds after failure of commercial power circuits because of storms or other adverse factors.

Emergency road service is being handled through two methods. First, the turnpike gasoline concessionaire, Cities Service Oil Company, has emergency vehicles stationed at each service station. These will render service for a reasonable fee to motorists whose vehicles run out of gasoline, or become disabled because of flat tires, battery and other similar troubles which can be overcome through products, or parts, normally dispensed at service stations. Secondly, emergency road service will be available under contract with privately owned garages, for disability because of more serious matters, such as mechanical failure. Where the service of a tow truck is required, cars or trucks will be removed from the Turnpike by privately-owned garages. These garages are all located in communities near interchanges.

Ambulance service will be rendered by the Volunteer First Aid squads located in each community adjacent to a Turnpike interchange except in Newark and Elizabeth. Ambulance service in the latter cities will be obtained from hospitals which normally render such service in those cities.

The effectiveness of the features and facilities which have been incorporated into the design and construction of the New Jersey Turnpike cannot be judged finally until the lapse of several years' experience. In this Annual Report, it is only possible to say that every effort has been made to produce the highest type of traffic artery furnishing rapid, convenient and safe transportation for motor vehicles. The provisions for safety and convenience will not be considered finished as long as the Turnpike is in operation, and will receive continuing attention.

Turnpike Trooper at short-wave radio

Service Stations and Restaurants

TURNPIKE CONCESSION BUILDINGS were planned to combine under one roof certain gasoline station facilities, food service, a small shop for travel needs and notions, a lounge and rest rooms.

In appearance the buildings are designed in a restrained contemporary style, inside as well as out, intended to harmonize with the countryside. The exterior design features large areas of heat-resisting glass and a light buff-to-gold stone facing of the remaining solid portions of the sides most closely seen from the roadway and parking areas; a light buff Roman brick will be used elsewhere.

The buildings are of fire-resistant construction and of materials designed to provide the anticipated hard service with a minimum of maintenance. All buildings will be air-conditioned for the comfort and convenience of the public.

The plan of all concession buildings follows the same principle. Therefore, only two basic types are involved, differing from each other only in the scope of food service to be provided; the lunchroom type and restaurant type. Both plans were conceived for expansion from a central core, to the extent of, and in, the particular facilities warranted by future operating experience.

The principle features which are uniform in all plans are as follows:

A circular lounge forms the central portion of the plan. This will be furnished, in part, with settees and chairs. The rest of the floor area will be used for circulation to the other spaces used by the public all of which will radiate from the lounge. This room contains telephone booths, a candy and tobacco counter and an area for the cashier of the restaurant. The public washrooms will open off this lounge.

The gasoline station wing extends from the lounge towards the motor fuel vending areas, and consists of a salesroom with space for the display of accessories and replacement items. Adjoining it are spaces for tire repairs, greasing, storage and a first aid room.

The food service wing extends in the opposite direction toward a parking space set aside for its patrons. It contains a lunchroom with counter and booths in all buildings. Beyond that are a dining room for table service in the restaurant-type buildings, a kitchen and appropriate storage and refrigerator space.

A small arcade-type shop is included off the lounge for the sale of gifts and souvenirs and articles helpful to travelers.

Twelve locations were selected for development of concession areas. Selections were made with due regard to the safety and convenience of the traveling public. The areas are set well back from the travel lanes, are at slightly higher elevation where possible to provide better visibility, and will contain ample parking facilities with an adequate network of roadways within the area to avoid congestion.

Further study during the year indicated the advisability of limiting initial construction to ten units. These consist of two restaurant-type buildings, located on each side of the Turnpike just north of Woodbridge, six lunchroom-type buildings located in the general vicinity of Milltown, Cranbury, Moorestown, Haddonfield and one unit near Auburn on each side of the roadway. Gasoline stations will be located at each of the above 8 sites and, in addition, at locations just north of Elizabeth and at Secaucus. There will be no food service facilities at the latter two locations in the initial program. Of the ten units, five will be located on the northbound side and five on the southbound side.

Proposals for operation were obtained from seven catering organizations, which, after prequalification as to management, finances, service and quality, submitted bids. The Howard D. Johnson Co. of Wollaston, Massachusetts submitted the highest bid for the food service and was awarded the contract.

Similarly, the Authority sought bids on the operation of the service stations from the thirteen major oil companies serving the State of New Jersey. The Cities Service Oil Co. of New York was the high bidder and was awarded the contract for operation of all service stations on the Turnpike. Regular and premium gasoline, diesel fuel, lubricants and such additional supplies and accessories as are regularly sold in similar establishments will be available at these stations, together with facilities for car washing, changing oil, lubrication, tire repair and other services.

Due to the superior type of facilities being provided, combined with the large volume of traffic expected, extremely favorable bids were received for both the restaurant and service station concessions. The proposals received for the restaurant concession were such that the fourth and fifth highest bids would have been considered excellent for an average facility. As to the service station concession, the price which the Authority will receive surpasses any known bid for a similar concession. As a result of these bids, it is estimated that the Authority will receive $1,344,000 from this source in the first year of full operation of the permanent facilities and increasing

Battery of gasoline pumps at service area on Turnpike amounts thereafter. This figure compares with an original estimate of $536,000 for the first year's operation.

Typical of the Authority's policy to provide its patrons with satisfactory service, the concession contracts provide for high standards of quality at prices no greater than those normally charged on adjacent public highways. The Authority reserves the right of inspection and control by designated members of its staff.

All ten of the concession buildings are under construction. Due to delays in procuring equipment and materials as a result of shortages brought about by the Korean War, their completion, coincident with the opening of the Turnpike, was not possible. Construction of these buildings and their related facilities is proceeding as expeditiously as possible and their completion is expected in late winter and early spring.

With the delay in completion of the permanent concession buildings it became necessary to provide, with the opening of the Turnpike, temporary facilities for the motoring needs of its patrons and these have been constructed at five locations. Food, gasoline and rest room facilities are available at these sites. At still another site rest room facilities and gasoline are available and provision is now being made for similar facilities at two more sites to better serve the public during this interim period.

Typical restaurant on the Turnpike

Financing and Costs

THE ANNUAL REPORTS of 1949 and 1950 reviewed the various steps taken by the Authority in arranging for its initial financing in the amount of $220 millions on a "forward commitment" basis. This plan, which was consummated early in 1950, involved the execution of contracts between the Authority and various insurance companies, savings banks and New Jersey State Trust Funds whereby those institutions agreed, for a stand-by consideration of 1/2 of 1%, to purchase, severally, upon demand a total of $220 millions 3 1/4% Revenue Bonds of the Authority due January 1, 1985 (1950 Issue) from time to time as funds were needed by the Authority to carry forward its construction program. The first takedown under those contracts was effected February 17, 1950 and as of December 31, 1951 the total of such takedowns stood at $195 millions — leaving a balance of $25 millions which the Authority plans to draw down in 1952 to meet obligations which will become payable in that year.

During the early months of 1951 it became apparent that the costs of completing the Turnpike would exceed those which had been previously estimated. The principal factors responsible for those increased costs were stated by the Authority's Consulting Engineers to be as follows:

1. The Korean War and the general world situation with the resulting inflation.
2. The enlarged requirements of local communities, counties and state agencies which were affected by the Turnpike location and construction.
3. The enlarged requirements of railroads, power companies, and other utilities thus affected.
4. The wreck on the Pennsylvania Railroad at Woodbridge.
5. Increased real estate costs.

Analysis of these conditions as of June 1951 indicated that additional funds in the amount of $32,208,000 would be required to effect completion of the Turnpike project. Comparison of February 1950 and June 1951 cost estimates is as follows:

	ORIGINAL ESTIMATE AS AMENDED 2/17/50	ESTIMATE OF JUNE 28, 1951
Cost of Construction		
Under Contract (or commitments completed)		$189,939,014
To be Contracted (or committed)	$149,030,000	5,168,986
Real Estate	10,145,000	17,672,000
Reimbursement to New Jersey for Route 100	11,150,000	9,700,000
Engineering	13,600,000	14,751,000
Administrative and Legal	1,000,000	1,625,000*
Allowance for Contingencies	18,760,000	—
Net Interest from Construction Fund and Financing Costs	16,315,000	13,352,000
	$220,000,000	$252,208,000

*Includes financing costs other than interest and commitment fees.

In view of the foregoing developments, the Authority determined to proceed immediately with the necessary steps to assure itself of the additional funds that would be needed. The Resolution securing the initial financing of the Authority contained no provision for the issuance of additional indebtedness and, therefore, it was necessary, before proceeding with any new financing, to secure the consent of the holders of 66 2/3% of the Authority's outstanding Bonds to an amendment of the Bond Resolution for that purpose. The task of securing this consent, together with the approval of the Bondholders concerning certain other revisions of the Resolution which the Authority considered to be desirable, was undertaken during the summer and early autumn of 1951 with the assistance of the Authority's Financial Advisor. It resulted in the adoption by the Authority on September 19, 1951, of a Resolution amending the Resolution which secured its then outstanding indebtedness.

This Amendment made it possible for the Authority to accomplish three principal objectives, namely:

1. To issue not exceeding $35 millions principal amount of bonds (1951 Issue) for the purpose of effecting completion of the Turnpike as defined in the Resolution authorizing issuance of the 1950 Issue. The amending Resolution provides that the 1951 Issue, which will mature January 1, 1986, shall rank pari passu with the 1950 Issue as to lien upon revenues of the Authority; shall be entitled to annual minimum sinking fund payments during the years 1968 to 1985 in amounts sufficient in the aggregate to retire all of the Issue by maturity; and shall share proportionately with the 1950 Bonds in accelerated retirement from surplus earnings.
2. To issue Bonds for the purpose of refunding outstanding bonded indebtedness. Specific provisions are set forth in the amending Resolution covering the refunding of either the 1951 Bonds or the 1950 Bonds, or both of those Issues simultaneously.
3. To issue Extension Bonds to provide direct connections of the Turnpike with the Pennsylvania Turnpike and with the New York State Thruway. Chapter 286 of the Laws of 1951, approved June 25, 1951, amended the legislation defining the Turnpike to permit the Authority to construct additional Turnpike projects **(a)** from Route 6 northward to connect with the New York State Thruway; **(b)** from a point in the vicinity of Port Street, Newark, across Newark Bay, and **(c)** from the general vicinity of the Bordentown interchange westward to connect with the Pennsylvania Turnpike by means of a bridge across the Delaware River. The Bond Resolution, as amended, provides specifically that the Authority may issue Extension Bonds for the purpose of constructing direct connections of the Turnpike with the New York State Thruway and with the Pennsylvania Turnpike. Issuance of bonds for these purposes is dependent upon the fulfillment of certain conditions including an earnings formula, and, under the amending Resolution, such Extension financing cannot be undertaken prior to the expiration of eighteen months following the opening date of the original Turnpike project.

Pursuant to the amending Resolution, the Authority issued public advertisements inviting proposals to be received October 17, 1951 for the purchase of $35 millions 1951 Bonds; the bidders being required to stipulate the interest rate to be payable on the Bonds and a minimum bid price of 98%. The Authority reserved the right to redeem the 1951 Issue as a whole at any time subsequent to December 31, 1954, which compares with a primary redemption date of January 1, 1960 on the 1950 Issue. Both Issues may be redeemed in part on any interest payment date through sinking fund operation. At the time specified for the opening of bids, a single proposal for the purchase of the Bonds was received designating an interest rate of 3.20% and a bid price of 98.15%, which is the equivalent of a net interest cost at an annual rate of 3.2536% to the final maturity of the Bonds in 1986. The 1951 Issue was subsequently awarded on that bid, the Bonds being pub-

Aerial view showing Newark-Jersey City interchange in foreground and approach to Passaic River Bridge underpassing Pulaski Skyway

licly reoffered and successfully distributed to investors throughout the United States at a price of par.

During the spring and summer of 1951, the Authority's Traffic Engineers revised their estimates of traffic and revenues to reflect the sharply increased volume of motor vehicle traffic which had been experienced in the area to be served by the Turnpike during the calendar years 1949 and 1950, as well as the increased concession revenues which are expected to result from contracts which had been executed earlier by the Authority with Cities Service Company and Howard D. Johnson Company. Amortization schedules prepared by the Authority's Financial Advisor show that these revised estimated revenues, which are set forth in a report by the Traffic Engineers dated July 3, 1951, are sufficient to retire the $255 millions Revenue Bond indebtedness of the Authority in its entirety by January 1, 1975.

There is shown on the following page a revised cost estimate as of December 31, 1951 which, in view of the present status of construction, the Authority believes will prove to be substantially correct barring further unforeseen conditions.

ESTIMATES OF COST OF CONSTRUCTION

As of December 31, 1951

	SEPTEMBER 15, 1949 ESTIMATE OF COST	DECEMBER 31, 1950 ESTIMATE OF COST	CURRENT ESTIMATE OF COST
CONSTRUCTION:			
Grading, Drainage, and Structural (Current Estimate Based on Contracts Awarded as of December 31, 1951)	$106,034,300	$118,841,200	$121,179,300
Paving (Current Estimates Based on Contracts Awarded for all Paving of Turnpike Roadway)	28,344,300	39,546,700	39,546,700
Administration, Concession, Utility and Maintenance Buildings, including Toll Booths and Canopies, and related site development, excluding grading and paving except for 1949 — (See Note 1)	6,927,000	7,761,100	11,894,000
House Moving and Demolition	—	800,000	867,000
Change Orders and Supplementary Agreements issued and approved	—	3,275,000	12,232,000
Change Orders being Processed or Contemplated	—	4,259,000	262.000
Contracts To Be Awarded	957,500	1,328,800	—
Relocation of Utilities	3,571,000	8,266,000	8,050,000
Traffic Aids, Communications, Safety Devices, and Interchange Lighting	1,987,000	3,443,000	3,603,000
Equipment	1,664,000	1,600,000	1,607,000
Miscellaneous, including Construction Signs, Special Construction Policing, Warehousing of Equipment, etc.	—	—	562,000
SUB-TOTAL	**$149,485,100**	**$189,120,800**	**$199,803,000**

ESTIMATES OF COST OF CONSTRUCTION

As of December 31, 1951

	SEPTEMBER 15, 1949 ESTIMATE OF COST	DECEMBER 31, 1950 ESTIMATE OF COST	CURRENT ESTIMATE OF COST
Carried forward (See Note 2)	$149,030,000	$189,120,800	$199,803,000
Reimbursement to New Jersey State Highway Department (See Note 3)	11,150,000	11,273,000	7,479,000
Real Estate	10,145,000	17,230,000	17,562,000
Engineering, Architectural, Borings, Design, Supervision, and Inspection	13,600,000	13,359,200	15,278,000
Administration and Legal Costs including in 1950 and 1951 cost of financing and including in 1951 cost of financing re 1951 Bond Issue	1,000,000	1,715,000	1,779,000
	$184,925,000	$232,698,000	$241,901,000
Interest (See Note 4)	23,000,000	—	—
Interest and Commitment Fees to December 31, 1951	—	7,302,000	6,945,000
Interest and Interest Reserve Charges in 1952 in excess of that estimated to be provided from Revenue	—	—	4,856,000
Discount on 1951 Bond Issue	—	—	648,000
Allowance for Contingencies (See Note 4)	22,075,000	—	650,000
TOTAL (See Note 4)	**$230,000,000**	**$240,000,000**	**$255,000,000**

NOTE 1: Item of $6,927,000 includes items of $302,000 and $1,516,000 shown in 1950 report under "Service Areas." Relative items are reported herein under "Change Orders being processed or contemplated" in December 31, 1950 estimate of cost and under "Change Orders and Supplementary Agreements issued and approved" in December 31, 1951, estimate of cost.

NOTE 2: The total of $149,485,100 is carried forward as $149,030,000 the figure appearing in the Preliminary Report of September, 1949. This difference is due to variations in the distribution of the preliminary report amount.

NOTE 3: The amount of $7,479,000 excludes amounts of approximately $1,600,000 and $2,200,000, both of which were included in the figure of $11,273,000 and the $2,200,000 was included in the figure of $11,150,000. It is now determined that the item of $1,600,000 is not reimbursible by the Authority. No decision has yet been made as to payment of the amount of approximately $2,200,000, largely attributed to acquisition of right-of-way, and the amount is therefore not reflected in the present estimate.

NOTE 4: Based upon the method of financing adopted, the item of interest (and interest reserve fund) was reduced to $16,315,000 and the contingency to $18,760,000, making the total bond issue $220,000,000.

Legislation, Legal Matters and Insurance

ADDITIONAL LEGISLATION received much attention from the legal staff during the course of the year. A series of conferences was held with the members of the Pennsylvania Turnpike Commission and their counsel. These resulted in the drafting of a satisfactory compact between the two states providing for a direct connection between the Pennsylvania and New Jersey Turnpikes by means of a bridge across the Delaware River to be constructed near Bordentown, New Jersey. The next step was to have this compact approved by legislation in each of the states. It was especially urgent to have this done in 1951 since the Pennsylvania Legislature will not meet again until 1953. After conferences with legislative leaders and members of the Governor's staff there was adopted in New Jersey Chapter 285 of the Laws of 1951, giving formal approval of the compact. A similar statute was adopted in Pennsylvania. The Governors of the two states then signed the formal compact, subject, however, to approval by Congress to meet the requirements of the United States Constitution that "No state shall, without the Consent of Congress, *** enter into any Agreement or Compact with another State ***". A bill to give such approval was then prepared and introduced simultaneously in both the Senate and House of Representatives. After a hearing before a subcommittee of the House Committee on Public Works, an amendment was drafted to cover points raised by the Public Roads Administration and was incorporated in H. R. 5131 which passed both houses and was signed by the President on October 26, 1951.

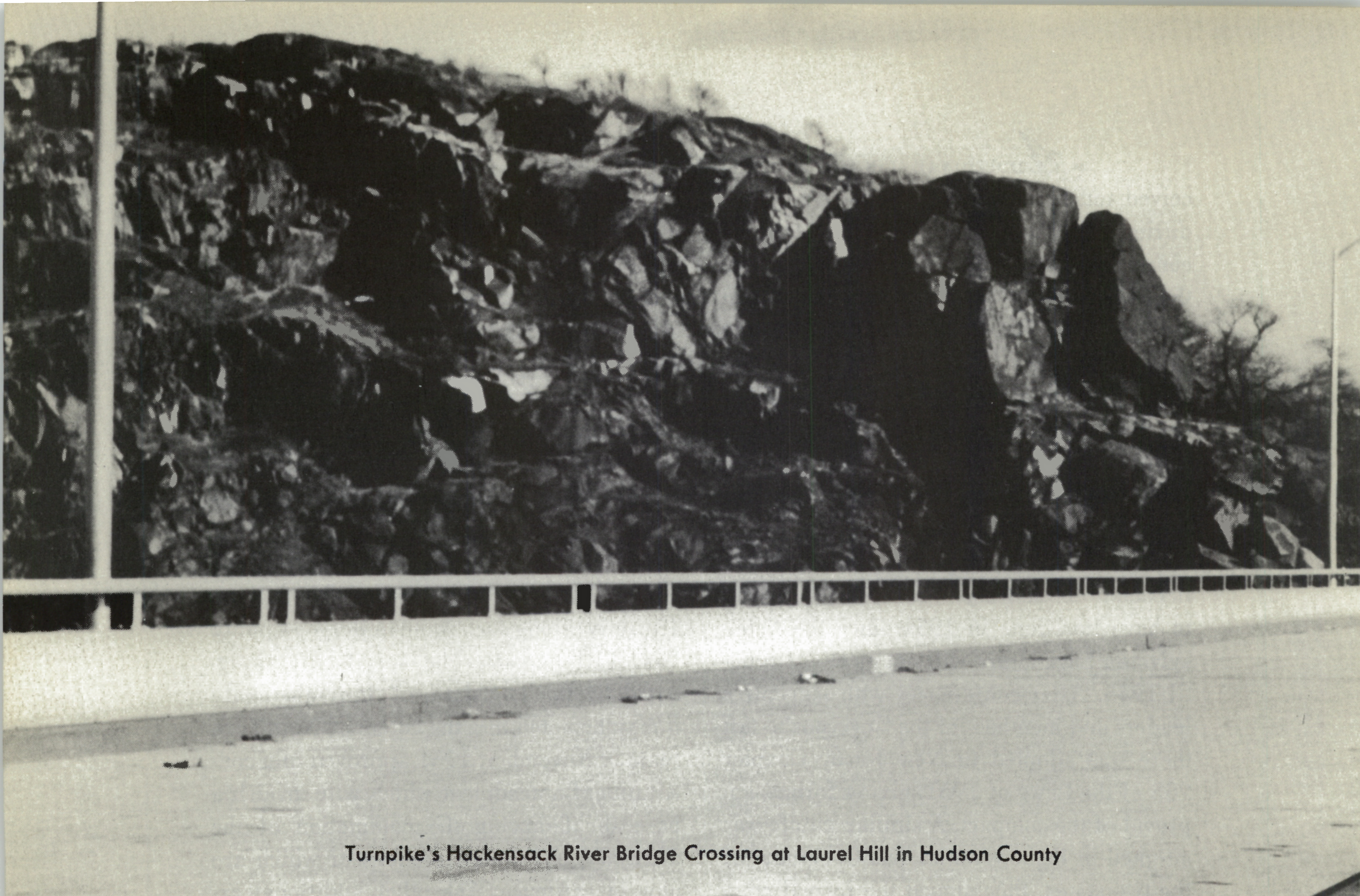
In addition to the compact legislation it was necessary to enlarge the powers of the New Jersey Turnpike Authority and the Pennsylvania Turnpike Commission to authorize them to build to the Delaware River and there connect the two turnpikes by a bridge. A statute for that purpose was drafted and after thorough discussion and revision was introduced and passed as Chapter 286 of the Laws of 1951. In form it is an amendment of the original Turnpike legislation. Similar action was taken by the Pennsylvania Legislature giving the Pennsylvania Commission enlarged powers to construct the contemplated link between the two turnpikes.

Looking further into the future, Chapter 286 of the Laws of 1951 was drafted to provide for two additional extensions. One of these is a connection between the New Jersey Turnpike and the New York State Thruway, along such route in Bergen County "as shall hereafter be specifically designated by the Legislature." Parenthetically it may be noted that the voters of New York State in November, 1951 approved of a constitutional amendment which will furnish a base for financing the completion of the Thruway, only small sections of which are now in existence. The other additional extension is a connection between lower Hudson County and the Port Street Interchange near Newark Airport, this to be by bridge across Newark Bay.

All three extensions given legislative authorization by Chapter 286 of the Laws of 1951 are, of course, subject to financing requirements, and the New York Thruway and Hudson County connections are expressly subject to the written consent of the State Highway Commissioner.

Still another new statute was drafted and passed to provide for regulation of traffic upon the Turnpike. This is Chapter 264 of the Laws of 1951. Among other things, it authorizes the Turnpike Authority to adopt traffic regulations, thereby giving a flexibility of control which would not be possible if changes shown by experience to be needed should have to await a stated session of the Legislature.

Once the power to adopt traffic regulations had been conferred by the statute, a set



Turnpike's Hackensack River Bridge Crossing at Laurel Hill in Hudson County

of regulations was drafted and adopted by the Authority. Much effort was devoted to formulating nine concisely stated regulations, the most noteworthy being the one providing for a maximum speed limit of 60 miles an hour except where a lesser speed is indicated by signs. It is recognized, however, that actual experience in the use of the Turnpike may indicate need for additional regulations or changes in those now existing, and the staff of the Authority intends to keep alert for such indications.

As the annual report for 1950 went to press, the New Jersey Superior Court decided in favor of the Authority a suit brought by the City of Newark and that victory was noted. In 1951 there was an appeal to the New Jersey Supreme Court which filed a strong opinion upholding the Authority's decision to build the Turnpike through the "meadowland" section of the City on dirt fill rather than on a steel viaduct approximately a mile and a half in length. The City had contended that a viaduct would induce future industrial development and justify the greatly increased cost of construction. An attempt was made to have the United States Supreme Court review the case, but that appeal was dismissed because of the lack of any federal question.

Although the Authority has almost universally awarded contracts to low bidders on the basis of public bidding, there have been minor exceptions to the rule as a result of the need for speed and the very great shortages existing in the construction industry. An exception was made for the buildings being constructed by the Authority where public bids were rejected because they were unacceptable, and a cost-plus-fee contract was awarded for their erection after the receipt of competitive bids on that basis. This was questioned by legal action and the

Superior Court upheld the position of counsel that the Authority is not required by law to award contracts to low bidders after public bidding and in no other way.

The problem of obtaining on the most economical basis adequate insurance coverage for the Authority also received much attention from the legal department during the year. The opening of the Turnpike for use made it necessary to insure against risks not previously of importance. For example, the three major bridges are required to be insured by the Bond Resolution, which is the Authority's agreement with its bondholders. Such insurance cannot be obtained on a standard policy and many questions had to be answered before it was obtained. It is believed that the Authority is now well protected by insurance on a prudent business basis and in prudent policy limits.

The additional financing completed in 1951 and mentioned elsewhere in this report was a major concern of the Authority's bond counsel.

More important than the particular activities of the law department mentioned above was the day-to-day legal work which, if described in detail, would make tedious reading. An injunction suit had to be started on short notice against the City of Elizabeth to prevent interruption of construction, and was later dismissed when an understanding was reached. Many problems of getting possession of land arose during the year and had to be solved, a number of them by legal action. Legal questions in connection with contractors' activities arose frequently and had to be answered. The major effort of counsel had to be directed at all times to clearing away existing or threatened obstacles to the progress of construction, and it is believed that a good measure of success in that direction was achieved.

The Turnpike in Operation

THE STEADILY INCREASING VOLUME of traffic on the State's public highway system, together with the large volumes of traffic which have been pouring into southern New Jersey since the opening of the Delaware Memorial Bridge in August, point up the wisdom of the Authority's Commissioners in first establishing, and then tolerating no deviation from the scheduled opening of the Turnpike, despite the seemingly impossible task at times confronting them. Already, with the Turnpike opened but two short months, the relief afforded adjacent highways has been significant.

With the opening of the Delaware Memorial Bridge directly connecting the States of Delaware and New Jersey, previously served only by ferry, thousands of additional cars have been adding to the congestion of New Jersey's highways. With this uppermost in the minds of those guiding the many and varied construction operations, all efforts were directed to opening the Turnpike at the earliest possible date and, particularly, the southern end where the impact of this added traffic was felt most severely. Accordingly, the section from Deepwater, to Bordentown, a distance of 53 miles was given special attention and was opened to traffic on November 5, 1951, several weeks ahead of schedule.

Prior to the opening of this section, and others which followed, the Authority held appropriate preview, or dedication ceremonies. On all of these, Governor Driscoll, local officials and members of the Authority were active participants. These ceremonies were held in each of the counties traversed by the Turnpike, and in each case there was a large attendance. Since the ceremonies served as an ideal medium for a source of news to the public, representatives of newspapers, magazines, radio, television and other means of public communication in New Jersey and adjacent states were invited. The resultant news coverage was extraordinary and of great value to the Authority in apprising the motoring public of the highway and its immediate, or impending, opening to traffic.

By November 30, 1951, another 40 miles were opened to traffic from Bordentown to Woodbridge, and on December 12, 1951, an additional 16 miles from Woodbridge to Newark making a total of 109 miles.

The final nine miles in the northern section from Newark to Ridgefield Park, adjacent to the George Washington Bridge, were opened on January 15, 1952. The delay of six weeks in this particular section was caused principally by steel shortages incident to the war in Korea. At one time it appeared that this section might not be opened before April, 1952 but the determination of the Commissioners and the remarkable cooperation of the Staff, the Engineers and the contractors, enabled the Authority to reduce the delay from four months to six weeks.

The opening of each successive section of the Turnpike showed increasing traffic volumes and corresponding relief of the parallel State highways. Several factors make specific analysis difficult, particularly those of the initial "curiosity traffic" and the fact that the Turnpike was not open throughout its length. The facts summarized below indicate a very satisfactory volume of traffic on the Turnpike.

During the fifty-seven days of operation in 1951, 790,066 vehicles passed through the Turnpike toll booths, traveling 38,275,906 vehicle miles and producing $587,355 in revenue. Although the traffic and revenue estimates prepared by the Consulting Engineers do not specifically include an estimate for 1951, nor for a partial opening, it is possible to derive from the basic data some figures which may be used for rough comparisons. In this computation it has been assumed that each of the partial

SCHEDULE OF TOLL RATES BETWEEN INTERCHANGES

Adopted October 4, 1951

INTERCHANGE NAME	CLASS 1 PAS-SENGER CARS	CLASS 2 PAS-SENGER CARS WITH TRAILERS	CLASS 3 2-AXLE DUAL TIRE TRUCK	CLASS 4 3-AXLE SINGLE-UNIT TRUCK	CLASS 5 3-AXLE SEMI-TRAILER COMB.	CLASS 6 4 OR MORE AXLE SEMI-TRAILER COMB.
(1) Delaware Memorial Bridge						
....	.15	.20	.25	.30	.35	.40
(2) Swedesboro-Chester						
....	.15	.25	.30	.30	.35	.40
(3) Woodbury-South Camden						
....	.10	.15	.15	.20	.25	.30
(4) Camden-Philadelphia						
....	.10	.15	.20	.20	.25	.30
(5) Burlington-Mt. Holly						
(6) †						
....	.10	.15	.15	.20	.25	.30
(7) Bordentown-Trenton						
....	.15	.20	.25	.30	.35	.40
(8) Hightstown-Trenton						
....	.15	.25	.25	.30	.35	.40
(9) New Brunswick						
....	.10)					
(10) Garden State Parkway*						
....	.05)	.30*	.40*	.40*	.45*	.50*
(11) Woodbridge-The Amboys						
....	.10	.15	.15	.20	.25	.30
(12) Carteret						
....	.15	.15	.15	.20	.25	.30
(13) Elizabeth						
....	.20	.30	.35	.40	.50	.55
(14) Newark Airport						
....	.10	.15	.20	.20	.25	.30
(15) Newark-Jersey City						
....	.20	.30	.35	.40	.45	.55
(16) Lincoln Tunnel						
....	.05	.10	.10	.10	.10	.10
(17) Secaucus						
....	.15	.20	.25	.30	.35	.40
(18) George Washington Bridge						
Maximum Toll................	**$1.75**	**$3.00**	**$3.50**	**$4.00**	**$4.50**	**5.00**

*Not permitted on Garden State Parkway.
†Number (6) interchange to be reserved for future connection to Pennsylvania Turnpike.

section lengths between interchanges of the Turnpike would generate the same traffic and revenue as they would have if the entire Turnpike had been open which, while not true, is conservative for purposes of this comparison. Based on these assumptions, the following table summarizes the operations in each of the partial length sections.

BETWEEN INTERCHANGES	PERIOD	ACTUAL VEHICLES	ESTIMATED VEHICLES	ACTUAL REVENUE	ESTIMATED REVENUE
1-7	Nov. 5-30	230,135	174,000	$119,445	$104,000
1-11	Dec. 1-12	173,354	86,000	114,205	91,000
1-15	Dec. 13-31	386,577	262,000	353,705	289,000
TOTAL	Nov. 5-Dec. 31	790,066	522,000	587,355	484,000

NOTE: The above estimates are based on average daily traffic and do not reflect the normal Seasonal trend. They are 6% less than published figures which show 1952 as the first full year of operation. These figures indicate the total number of vehicles handled as 51%, and the gross income as 21%, above that expected.

The actual volumes of traffic on the Turnpike, that is, the density of traffic between interchanges, reflects the amount of traffic actually diverted from the State highways plus new traffic generated by the new facility. Again, because of the many factors affecting initial operations, the figures must be interpreted as only partially significant. The table below summarizes the average daily traffic experienced between interchanges, and for comparative purposes, a derived figure based on the same assumptions as above.

TRAFFIC BETWEEN INTERCHANGES	NOV. 5-NOV. 30	DEC. 1-DEC. 12	DEC. 13-DEC. 31	ESTIMATED
1- 2	6,528	6,355	8,339	4,400
2- 3	6,754	6,708	8,660	4,800
3- 4	6,594	7,487	8,818	5,100
4- 5	6,537	10,730	10,650	6,500
5- 7	6,205	8,265	10,762	6,600
7- 8	–	7,884	11,006	6,700
8- 9	–	8,015	11,181	6,900
9-10	–	7,633	11,810	10,700
10-11	–	6,335	10,924	10,700
11-12	–	–	12,752	13,300
12-13	–	–	13,569	13,300
13-14	–	–	12,518	13,900
14-15	–	–	3,411	11,800

The classification system established for the collection of tolls includes separate classes for passenger cars, passenger cars with trailers, and buses, while trucks are divided into four classes, according to the number of axles. A brief description of these classes, with the proportion of traffic and revenue represented by each, in 1951, is listed below:

CLASS	VEHICLES INCLUDED	PERCENT OF TOTAL TRAFFIC	PERCENT OF TOTAL REVENUE
1	Passenger Cars	92.49	82.54
2	Passenger Cars with Trailers	0.26	0.41
3	Two-Axle Trucks	1.50	2.32
4	Three-Axle Trucks	0.31	0.68
5	Three-Axle Tractor Semi-Trailers	2.19	5.34
6	Four- and Five-Axle Tractor Semi-Trailers, Trucks and Full Trailers	2.67	8.26
7	Busses	0.22	0.45
8	Special Vehicles	–	–
9	Non-Revenue Vehicles	0.36	–

This shows 7.5% of the vehicles and 17.5% of the revenue came from other than passenger cars. Adjusted estimates for the part of the Turnpike between interchanges 1 and 15 indicate that these classes would represent 8% of the vehicles and 24% of the revenue.

Activities of the Authority Staff

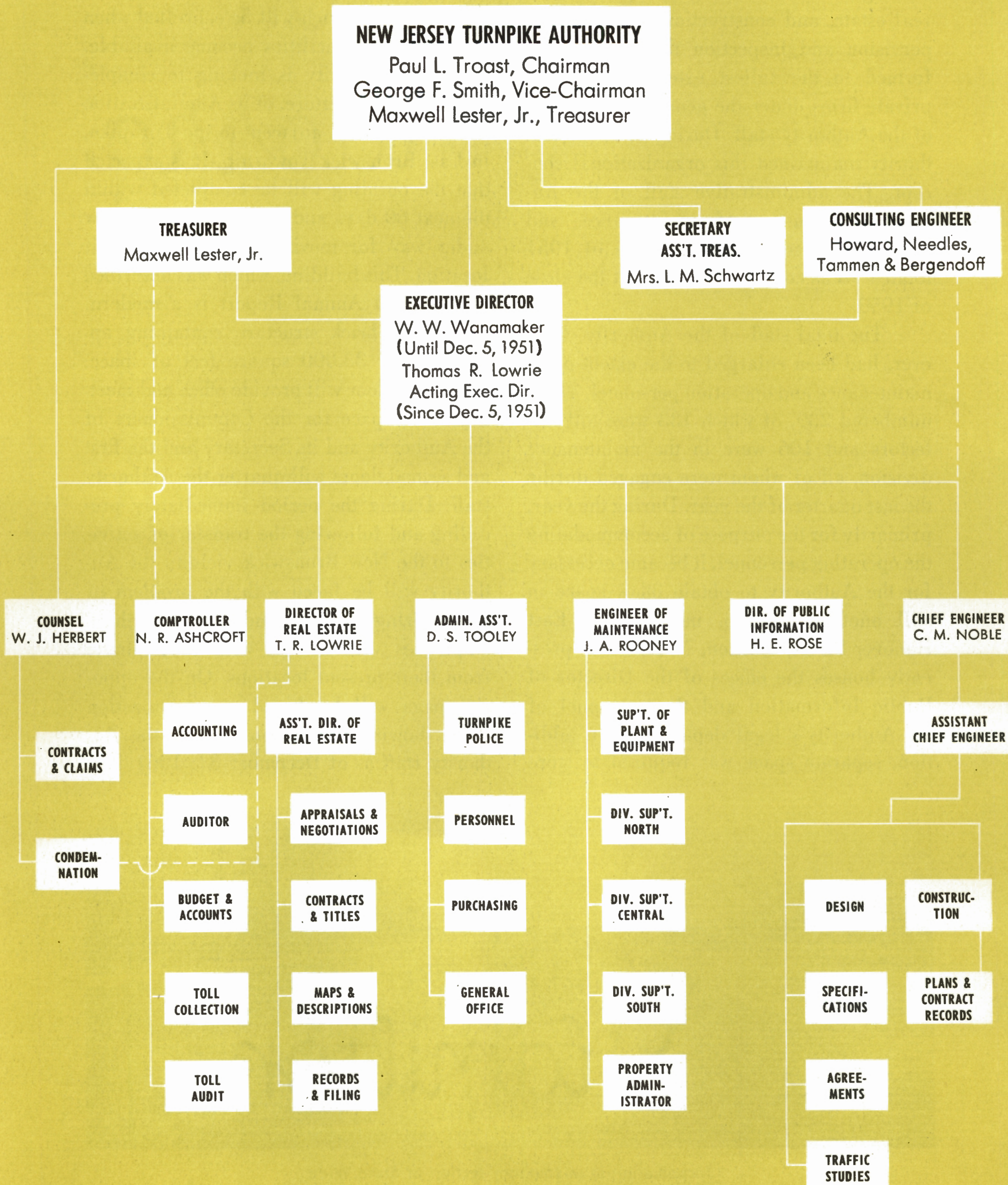
As STATED in previous reports, it is the intention of the Authority that the staff be kept small in number and that engineering study and design, acquisition of real estate, and construction, including supervision and inspection thereof, be performed to the fullest extent possible by private firms under the general supervision of the Authority staff. During 1951 the Authority maintained this organizational concept. The administrative staff of the Authority, exclusive of maintenance and operating personnel, at the close of 1951 totaled 98 as compared with 82 at the close of 1950.

The total staff of the Authority, however, had been enlarged to the extent of its maintenance and operation personnel. These numbered 239, of which 133 were toll collectors and 106 were in the maintenance division, all of whom were engaged during the last quarter of the year. During the year, primarily for the purpose of accommodating the operating personnel, it became necessary for the Authority to obtain office space in still another location, namely 223 East Hanover Street, Trenton, N. J., which presently houses the offices of the Director of Public Information and the personnel of the Authority's legal department. In addition, separate space was required to store operating equipment and materials as they were delivered in advance of the facilities becoming available to receive them. Temporary leases have been executed in these instances, all of which will be cancelled when the permanent facilities become available.

The Authority is looking to completion, in the near future, of its Administration Building, located adjacent to the Turnpike, in East Brunswick Township. It is expected that the building will be completed within the next 60 days and preparations are now under way for moving to that permanent location. This building, which was described in the 1950 Annual Report is a modern, 2½ story, brick structure containing approximately 33,000 square feet of space. The upper floor will provide office and meeting room space for the Commissioners of the Authority and its Secretary and the first and second floors will quarter the Authority staff. During the period immediately preceding and following the transfer of activities to the New Brunswick vicinity the Authority will be faced with the problem of reorganizing the staff and replacing those employees who do not wish to commute from their present locations. On the opposite page will be found an organization chart showing the composition of the Authority staff as of December 31, 1951.

Turnpike in use in southern section of State. Wide dividing strip between opposing traffic lanes

AUTHORITY ORGANIZATION CHART



Aerial view of Woodbridge-
Amboys interchange at Route 35

Informing the Public

THE PUBLIC INFORMATION PROGRAM of the Authority during 1951 encompassed a wider sphere of operations to acquaint potential users of the facility with its features of safety, ease of travel and dates of opening. Every media of communication with the public was utilized, including popular, technical and company magazines; newspapers; radio; television; displays; addresses before chambers of commerce and before service, church, school, engineering, company and women's organizations. Exhibits and models of the Turnpike were widely displayed.

The story of the Turnpike in the past year has appeared in newspapers in almost every State in the country, with many of those publications using feature articles illustrated with photographs depicting structures, sections of completed highway in operation, and maps showing the route of the Turnpike and its connections to express and other principal highways in adjacent states.

In connection with the official previews and dedications prior to opening of the various sections, and stimulated by an organized campaign initiated by the Authority, at least a dozen newspapers in New Jersey, New York and Pennsylvania published special supplements on the Turnpike. These, in many instances, were profusely illustrated with photographs. They told the story of this important traffic artery and its potential benefits to motorists, truckers, industry, commerce and the State's famed vacation resorts. During the year, also, there were special feature articles in Sunday rotogravure sections of newspapers in several states.

The pre-opening dedications also provided excellent vehicles for informational coverage, especially for television and radio over a wide area. In connection with the dedication on November 30, radio stations in New Jersey and New York carried broadcasts of the ceremony together with highlight features of the Turnpike and its opening. From the standpoint of television coverage, numerous stations in the east and others extending as far west as Ohio, carried film footage of the ceremonies either as public service programs or on company sponsored programs. Copies of footage also were dispatched to the west coast by one company for use on television stations there. The radio and television program was extraordinarily successful because, like the newspaper supplements, the Authority conceived and executed a carefully developed plan.

The members of the Authority, at various times during the year, also appeared on radio and television programs in New York, New Jersey and Pennsylvania. Through the cooperation of the Chamber of Commerce of the United States, the story was recently told on a national network.

Magazine coverage has been national in scope. It included articles in such publications as the Saturday Evening Post, Fortune, Time, Business Week, Nation's Business, Popular Science and many others. Comprehensive coverage of various aspects of Turnpike construction was made by the national engineering and construction publications which devoted considerable space during the year to this modern highway. Many publications of nationally known companies, including the New Jersey Bell Telephone Company; Standard Oil Co. (N. J.); Cities Service Oil Co.; John A. Roebling Sons Co.; Ethyl Corp.; Western Electric Company; and others, as well as publications of various automobile clubs, carried comprehensive articles and photographs of the Turnpike.

The interest in the New Jersey Turnpike has been so great that publications in foreign lands (Denmark, Switzerland, England, and Germany) have published articles. The film footage of one of the television broadcasting companies in the east has been sent to 28 stations in Europe to demonstrate America's private enterprise system. Through the Department of State the Fed-

Turnpike leading to overpass at Oak Island freight yard in Newark

eral Government has used pictures of the Turnpike, with descriptions, in publications which are distributed in foreign lands.

Many engineers from abroad — India, Pakistan, Japan, England, France, Belgium, British Columbia, Peru — and others have visited and viewed the Turnpike under construction and in operation, as well as engineers from many parts of the United States.

The American Society of Civil Engineers utilized a full day's session of its 99th annual meeting for a discussion of the New Jersey Turnpike. The January issue of its periodical "Civil Engineering" is almost wholly devoted to the subject.

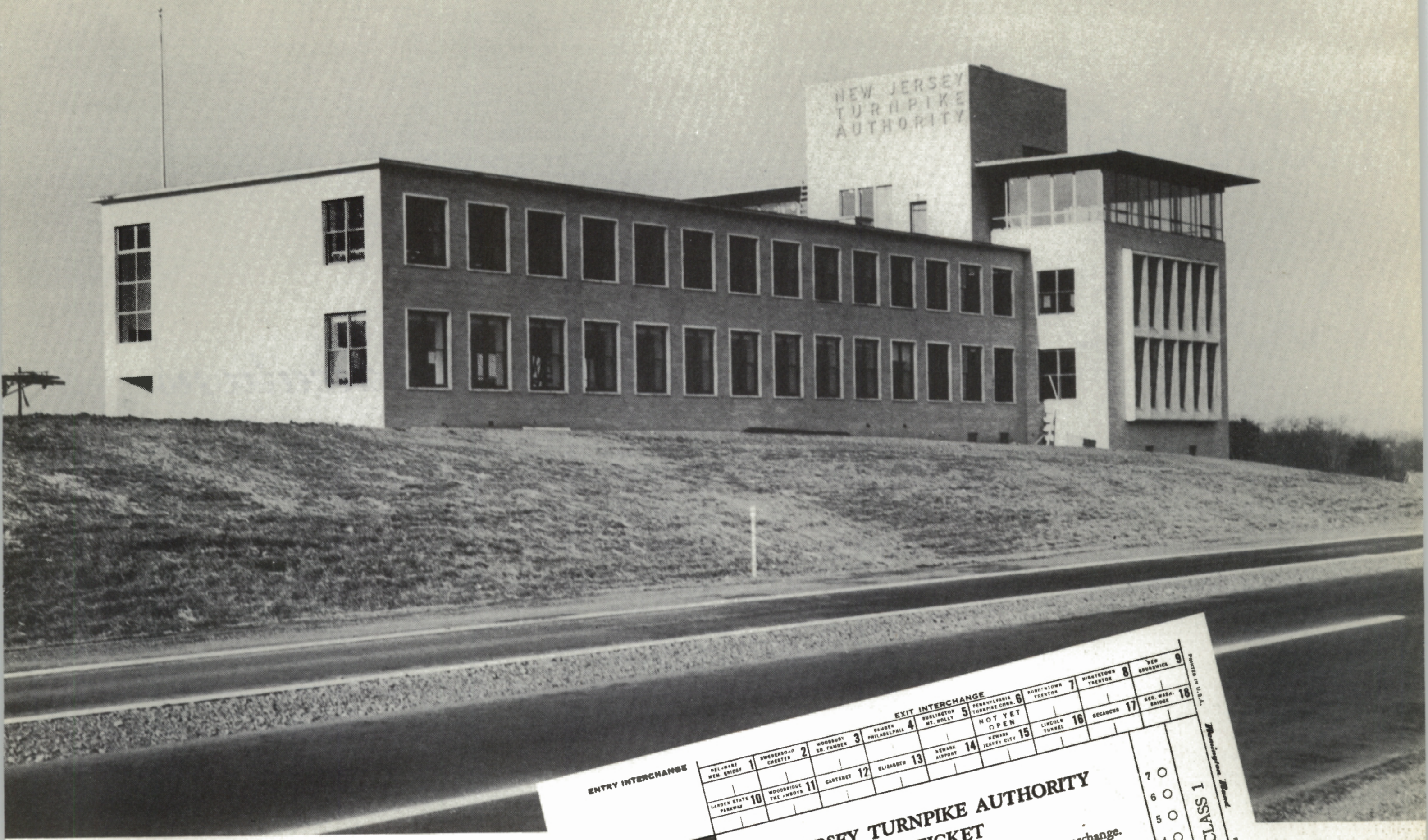
Exhibits and models of the Turnpike have been on display in areas throughout New Jersey, including the rotunda of the State Capitol in Trenton, in Atlantic City, Ocean City, Newark, Jersey City, Camden, Riverside, Carneys Point, Mount Holly and Paulsboro. On two occasions displays were arranged in Philadelphia. These exhibits were viewed by hundreds of thousands of visitors.

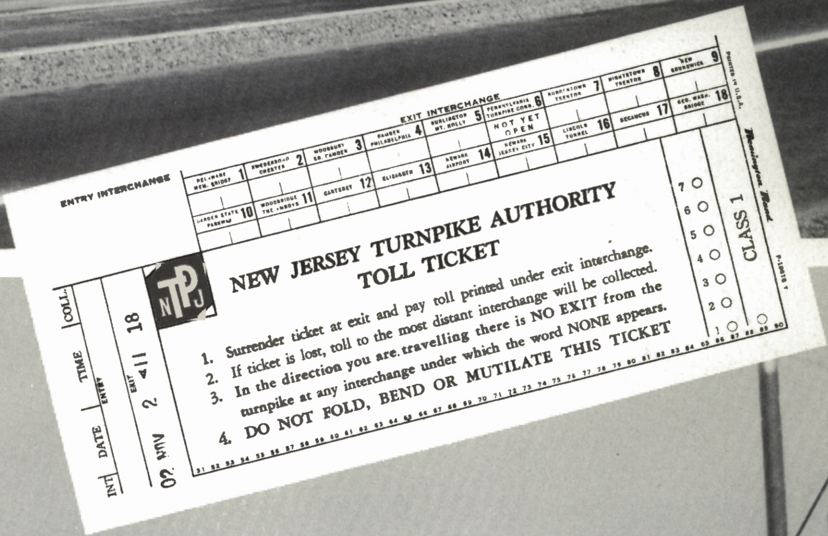
More than 50,000 copies of maps of the Turnpike were distributed by the Authority during the year to persons in all parts of the country. Several banks and trust companies and chambers of commerce in New Jersey also distributed such maps to their depositors or members.

Newspaper and radio advertising had been used to supplement the public information program in local areas to acquaint potential users with the Turnpike and its benefits to motorists and truckers. Recently the Authority added to its staff a representative to inform large fleet owners of the benefits they can derive by using the Turnpike, and to solicit their business. These benefits, available to truckers, include savings in travel time; making more trips in a day; in cutting man hours of work and in reduced vehicular operating costs.

The Authority has in process the preparation of several booklets designed to stimulate the interest of motorists in using the Turnpike for rapid and safe travel to the State's famed vacation resorts and points to the south and west, and of truckers in their use of the Turnpike. Every available means of promotion will be utilized in the program to further stimulate Turnpike use.

Administration Building in final stage of construction, East Brunswick




ENTRY INTERCHANGE
EXIT INTERCHANGE
DELAWARE MEM. BRIDGE 1
SWEDESBORO CHESTER 2
WOODBURY SO. CAMDEN 3
CAMDEN PHILADELPHIA 4
BURLINGTON MT. HOLLY 5
PENNSYLVANIA TURNPIKE CONN. 6
BORDENTOWN TRENTON 7
HIGHTSTOWN TRENTON 8
NEW BRUNSWICK 9
GARDEN STATE PARKWAY 10
WOODBRIDGE THE AMBOYS 11
CARTERET 12
ELIZABETH 13
NEWARK AIRPORT 14
NEWARK JERSEY CITY 15
NOT YET OPEN
LINCOLN TUNNEL 16
SECAUCUS 17
GEO. WASH. BRIDGE 18
NEW JERSEY TURNPIKE AUTHORITY
TOLL TICKET
1. Surrender ticket at exit and pay toll printed under exit interchange.
2. If ticket is lost, toll to the most distant interchange will be collected.
3. In the direction you are travelling there is NO EXIT from the turnpike at any interchange under which the word NONE appears.
4. DO NOT FOLD, BEND OR MUTILATE THIS TICKET
INT. DATE TIME COLL.
ENTRY EXIT
CLASS 1
PRINTED IN U.S.A.

Turnpike toll collector

Bridge Dedications

THE COMMISSIONERS, in the early summer of 1950, decided to name the Turnpike's major bridge structures in memory of war heroes of the State, believing such a step both fitting and appropriate as a lasting memorial to the sacrifices made by those heroes.

To effect the plan the Commissioners invited suggestions for names from the various veterans' organizations in the State. Many names were submitted. Subsequently, the Authority asked those organizations to appoint representatives to sit on a committee to counsel the Authority in the selection of names of heroes to be honored. Members of the Authority held several meetings with those representatives and names were recommended for three of the bridges.

The full war records of the war heroes to be honored were, with the suggestions of the representatives of the veterans' organizations, submitted to the Commissioners who approved the selections. Appropriate dedication ceremonies were held at the various bridges.

The first ceremony was held on November 30, 1951, at the Raritan River Bridge which was dedicated the "Basilone Memorial Bridge" to honor the memory of Gunnery Sergeant John A. Basilone, U. S. Marine Corps, of Raritan, N. J. Sergeant Basilone was killed in action at Iwo Jima on March 23, 1945. He was awarded the Medal of Honor, the highest military award, in 1943, "for extraordinary heroism and conspicuous gallantry in action against enemy Japanese forces above and beyond the call of duty" in Guadalcanal on October 24 and 25, 1942.

Two ceremonies were held on January 15, 1952, at the Passaic and Hackensack Rivers.

The Passaic River Bridge was named the "Chaplain Washington Memorial Bridge" after Chaplain John P. Washington, U. S. Army, of Newark. Chaplain Washington was one of the four chaplains who gave their lives to their fellow comrades in the sinking of Troopship "Dorchester" by enemy submarines on February 23, 1943 in the North Atlantic.

The Hackensack River Bridge was named in honor of three Lewandowski brothers (Alexander F., U. S. Army; Walter M., U. S. Marine Corps; and William J., U. S. Army), of Lyndhurst, who were killed in action during World War II, on November 25, 1944; July 21, 1944; and March 14, 1945, respectively.

At each of these dedications simple and appropriate ceremonies were held, including the unveiling of bronze plaques. The relatives of the families of these heroes were invited to, and participated in, the ceremonies. In Memoriam prayers were offered by the clergy of each of these families and appropriate music was provided by Army, Navy and Marine bands. Governor Driscoll, the Commissioners of the Authority, state and local officials attended these ceremonies. Representatives of the veterans organizations also were invited and attended.

At each of the bridges two large bronze plaques will be erected. Photographs of these ceremonies appear in this report.

Chronology

FEB.-MAR. '49	Three Commissioners for Authority appointed by Governor and confirmed by Senate as follows: Paul L. Troast on February 14; George F. Smith and Maxwell Lester, Jr., on March 31. Governor designated Paul L. Troast as chairman and George F. Smith as vice chairman on March 31. Authority elected Maxwell Lester, Jr. as treasurer on April 5, and secretary on December 28, 1949. First meeting was held on March 31 with then Commissioner and Chief Engineer of State Highway Department to discuss aims and objectives of the authority.
APR. 14, '49	Legislation enacted for preliminary route of New Jersey Turnpike from Alpine, N. J. to Deepwater, N. J.; and for construction of "feeder roads" to facilitate access to Turnpike.
MAY 15, '49	Preliminary engineering reports begun on basis of (1) northern area; (2) southern area; (3) traffic and revenues for entire Turnpike and (4) appointment of general consultant to prepare review of studies.
SEPT. 15, '49	Preliminary engineering reports completed. Show Turnpike would be self-supporting and can be financed. General alignment suggested from State Route 6 (Ridgefield Park) to Deepwater. Estimated cost of construction $230,000,000.
SEPT. 22, '49	Eight firms of nationally recognized consulting engineers selected (one as general consultant) to proceed with design and supervision of construction of Turnpike.
NOV. 17, '49 to JAN. 5, '50	Authority holds meetings in ten counties through which Turnpike traverses to discuss plans and alignment with officials and public before adopting route.
DEC. 5, '49	N. J. Supreme Court, in opinion, sustains constitutionality of Turnpike Act with reference to issuance of bonds. Holds that Authority was without power to condemn State property and that Highway Department could not advance funds to Authority.
JAN. 19, '50	Construction contract No. 1 awarded.
JAN. 31, '50	Two amendments to Turnpike Act passed by Legislature; one to provide for changes in connection with acquisition of property for right-of-way and to pay interest from bond proceeds during construction and first years of operation; and second to define northern terminus of Turnpike as Ridgefield Park (State Route 6) instead of Alpine.
FEB. 6, '50	Authority adopts by-laws and form of bond purchase agreement for financing.

FEB. 10, '50 — First bridge contracts awarded — Raritan, Hackensack and Passaic Rivers.

FEB. 17, '50 — Authority concludes arrangements for sale of $220,000,000 revenue bonds with 51 private investors, mostly insurance companies, on "forward commitment" basis. Takes down initial $10,000,000.

MAR. 29, '50 — Superior Court decides Authority has right to proceed with construction through City of Elizabeth.

APR. 11, '51 — Contract award, based on competitive bids, to Howard D. Johnson Co. for restaurant concessions.

JUNE 25, '51 — Amendments to Turnpike Act passed by Legislature to provide for extensions to Pennsylvania Turnpike and New York State Thruway, and for connection across Newark Bay to Hudson County peninsula.

JULY 12, '51 — Contract award, based on competitive bids, to Cities Service Oil Co. for gasoline concessions.

OCT. 17, '51 — Authority sells additional $35,000,000 revenue bonds to banking groups to provide financing for completion of Turnpike.

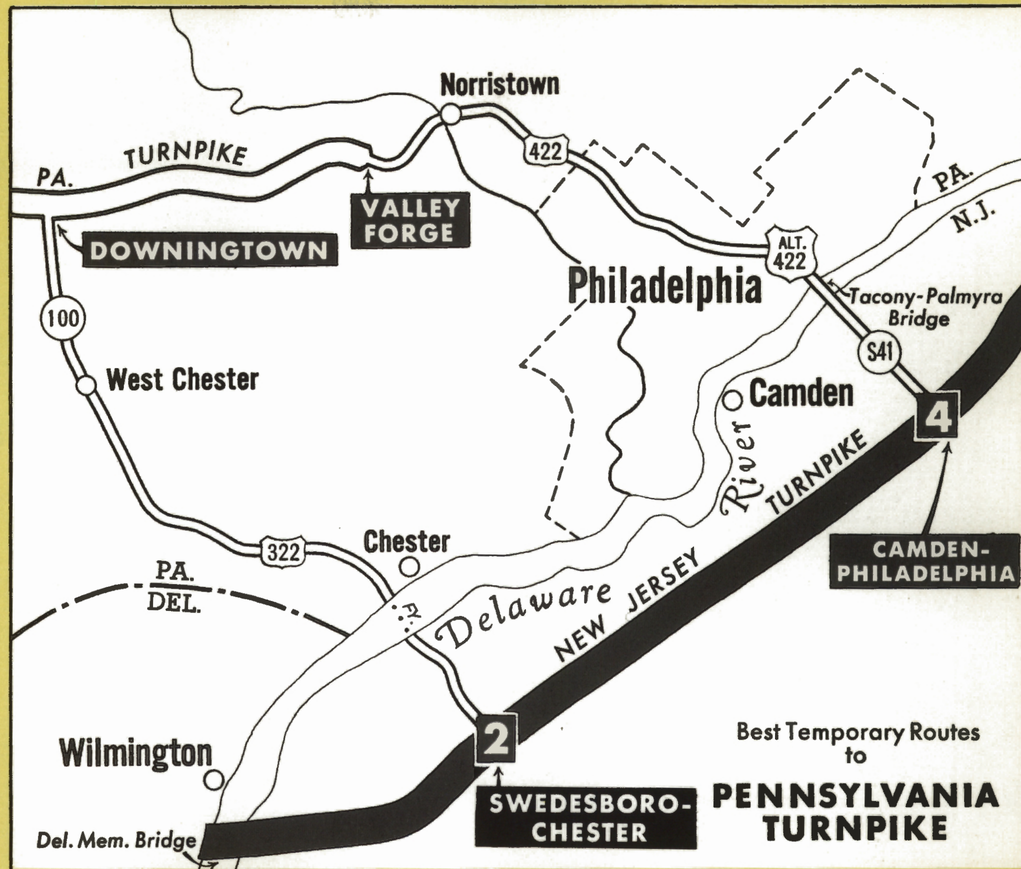
OCT. 31,' 51 — Official preview of Turnpike for 53 miles from Deepwater to Bordentown with Governors Alfred E. Driscoll, of New Jersey, and Elbert N. Carvel, of Delaware, participating.

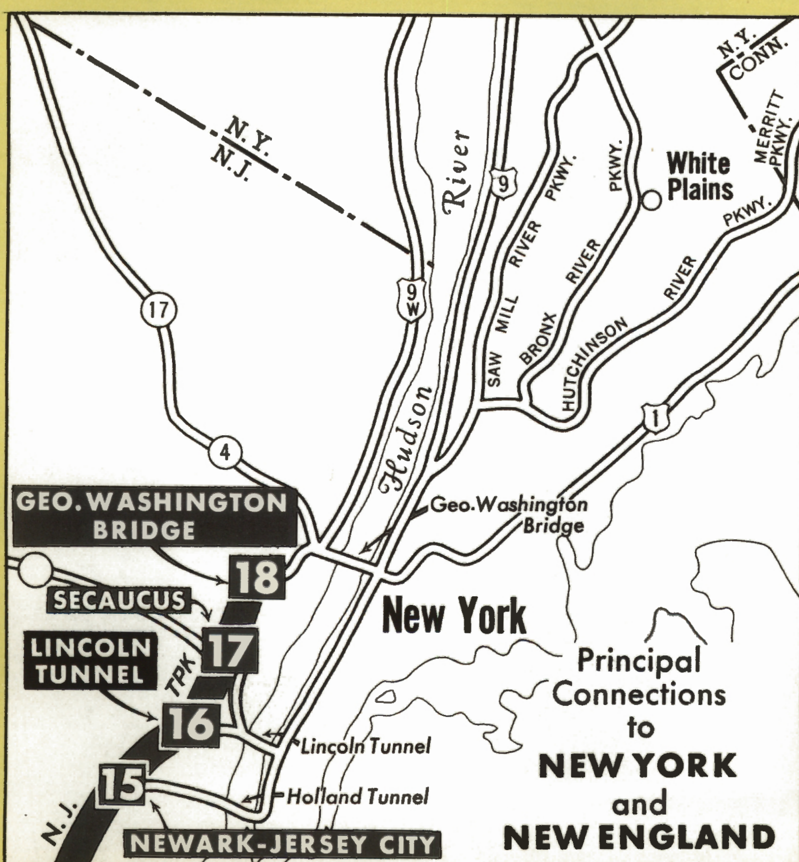
NOV. 5, '51 — Initial 53 miles from Deepwater to Bordentown opened to traffic, three weeks in advance of scheduled completion.

NOV. 30, '51 — Dedication of Turnpike held with officials and opening of additional 40 miles from Bordentown to Woodbridge.

DEC. 12, '51 — Additional 16 miles of Turnpike opened to traffic from Woodbridge to Newark.

JAN. 15, 52 — Dedication, and opening to traffic, of final nine miles from Newark to George Washington Bridge interchange.


Norristown
PA. TURNPIKE
422
VALLEY FORGE
DOWNINGTOWN
Philadelphia
ALT. 422
PA.
N.J.
Tacony-Palmyra Bridge
100
West Chester
S41
Camden
4
Delaware River
NEW JERSEY TURNPIKE
322
Chester
PA.
DEL.
CAMDEN-PHILADELPHIA
2
Wilmington
SWEDESBORO-CHESTER
Del. Mem. Bridge
Best Temporary Routes to
PENNSYLVANIA TURNPIKE


N.Y.
N.J.
N.Y.
CONN.
MERRITT PKWY.
White Plains
Hudson River
9
9W
SAW MILL RIVER PKWY.
BRONX RIVER PKWY.
HUTCHINSON RIVER PKWY.
17
4
1
GEO. WASHINGTON BRIDGE
Geo. Washington Bridge
18
SECAUCUS
17
New York
LINCOLN TUNNEL
TPK
16
Lincoln Tunnel
15
Holland Tunnel
N.J.
NEWARK-JERSEY CITY
Principal Connections to
NEW YORK and NEW ENGLAND

Program for 1952

THE TURNPIKE in operation will be under continuous scrutiny to determine where alterations of design, improvement in facilities and operating procedures are required to assure the best possible service to patrons.

Maintenance, snow removal and ice control methods will be under constant surveilance, not only to assure the most efficient and economical operations but more importantly to assure the utmost service, safety and comfort for the traveling public.

Although the toll booths and lanes were designed on the basis of more than 100% above predicted 1952 traffic and more than 50% above 1960 traffic, volumes so far experienced have indicated the wisdom of ordering additional booths and toll collection equipment which are in short supply. Those orders have been placed. Studies are now under way to determine the necessity of paving additional toll lanes in readiness for the 1952 summer season.

Continuing studies of Turnpike signs, trail blazer signs, delineators, pavement marking, electrical illumination and other traffic aids will assure that prompt adjustment will be made in these devices to keep abreast of traffic needs.

Completion of Construction

Roadway construction was completed in 1951 and bridge construction on all but the northerly nine miles of the Turnpike, which was opened to traffic on January 15, 1952.

A section of pavement between Bordentown and Hightstown and short spotty sections elsewhere do not meet specifications. The contractors will be required to correct these conditions when weather conditions permit.

Erosion control devices and grassing of those areas not yet planted will be completed throughout the coming year. Decorative planting at the Woodbridge Service areas and at Deepwater will be carried to completion and it is expected that additional decorative and screen planting will be initiated during the year. Fencing of all critical right-of-way areas will be accomplished early in the year.

The finishing touches will be completed at all the toll areas early in the year and all service area buildings will be available and in full operation before the summer touring season. Service area paving and grassing will be completed immediately after the frost is out of the ground in the Spring. The extraordinary and unforeseen traffic load at a number of interchanges suggests the need for wider entrances and exit lanes at such points. This will be accomplished by replacing inner and outer shoulders with pavement.

The New Jersey State Legislature has authorized the Authority to study and undertake construction, if feasible, of three projects which are extensions of the Turnpike as now constructed. These are a connection between the New Jersey Turnpike and the Pennsylvania Turnpike near Bordentown; an extension of the Turnpike northward from Route 6 to the New York State line to connect with the New York Thruway and the proposed Hudson River Bridge near Nyack; and a bridge across Newark Bay which will connect the Port Street Interchange in Newark with a proposed interchange near the Bayonne and Jersey City line, together with a possible Expressway through Jersey City to connect with the Holland Tunnel Plaza.

Pennsylvania Turnpike Connection

A traffic and revenue study has been obtained to show the prospective earnings of the New Jersey connection with the Pennsylvania Turnpike. Preliminary engineering investigations have been authorized to develop location and cost studies. Discussions with the Pennsylvania Turnpike authorities are now in progress as a result of which the bridge over the Delaware River can be specifically located, its characteristics determined, and engineering studies undertaken for the New Jersey connection. It is anticipated that plans will be advanced sufficiently by March to seek War Department approval for the construction of the bridge over the river after which detailed plans and specifications are to be prepared for the necessary construction. The methods by which this connection is to be financed are also receiving extensive study toward the end that construction may be started with the least possible delay.

New York Thruway Connection

A meeting with the officials of the New York Thruway is to be held early in 1952 in order to coordinate activities between the Turnpike Authority and the Thruway Authority. The New York Thruway bonds were approved by the voters of New York state in November 1951, and it is understood that plans for the foundations for the Hudson River Bridge near Nyack are nearing completion, with the expectation that foundation contracts will be awarded in coming months. It is understood that the superstructure steel for this bridge is not yet available, and this fact may determine the rate of progress on the construction of the Thruway and Turnpike connection. Preliminary engineering investigations have been made to determine possible locations and cost of the Turnpike extension to the New York State line. A preliminary analysis also has been made of the traffic and revenue studies prepared for the New York Thruway in respect to the proposed Hudson River Bridge, which studies will have material bearing upon the feasibility of the Turnpike extension. Further specific studies should demonstrate the financial practicability of the Turnpike extension to the New York State line.

Newark Bay Crossing

Previous engineering investigations have determined approximate costs and revenues for the Newark Bay Bridge and the Jersey City Expressway to connect the Bridge with the Holland Tunnel Plaza. These previous investigations show that the Bridge across the Bay is financially feasible if the Expressway through Jersey City or a similar traffic artery could be constructed. It has been indicated that this Expressway would not be self-supporting as a separate toll project. Ways and means of building the Bridge and the Expressway, either separately or jointly, are to be explored further as soon as the new traffic patterns to be developed by the Turnpike are clearly discernible. It is anticipated that the benefits to come from the building of the Bridge and the Expressway may then be more readily evaluated. It is not possible to know with assurance in advance what the traffic patterns will be following the opening of the complete Turnpike, and only then will it be possible to review the effects of the Newark Bay Bridge and the Jersey City Expressway upon the Turnpike as a whole. Pending this development, the State Highway Department is proceeding with Engineering Studies and working drawings as requested by the Governor in order that valuable time may be saved. If this project later proves feasible on a Revenue Bond basis, the construction will be undertaken by the Turnpike Authority.

Other Projects

Although no other projects have been authorized for study at this time by the New Jersey State Legislature, the Governor has requested that the Authority begin a study of a possible connection from the Turnpike to serve Essex and Morris Counties. This study is under way.

Garden State Parkway interchange
near Woodbridge, Middlesex County

Auditor's Report

PEAT, MARWICK, MITCHELL & CO.
CERTIFIED PUBLIC ACCOUNTANTS
(INCORPORATING BARROW, WADE, GUTHRIE & CO.)
744 BROAD STREET
NEWARK 2, N. J.

NEW YORK
ATLANTA, BALTIMORE, BOSTON, CHARLOTTE, CHICAGO, CINCINNATI, CLEVELAND, DALLAS, DENVER, DETROIT, GREENSBORO, HOUSTON, INDIANAPOLIS, KANSAS CITY, LOS ANGELES, MEMPHIS, MILWAUKEE, MINNEAPOLIS, NEWARK, NEW ORLEANS, OKLAHOMA CITY, OMAHA, PHILADELPHIA, PITTSBURGH, PORTLAND, ST. LOUIS, SALT LAKE CITY, SAN FRANCISCO, SAN JOSE, SEATTLE, TERRE HAUTE, TULSA, WASHINGTON, WATERBURY

AFRICA, AUSTRALIA, CANADA, CONTINENTAL EUROPE, CUBA, GREAT BRITAIN, HONG KONG, INDIA, JAPAN, MEXICO, SOUTH AMERICA

ACCOUNTANTS' REPORT

New Jersey Turnpike Authority
Trenton, N. J.

We have examined the statement of financial condition of the New Jersey Turnpike Authority as of December 31, 1951, the related statement of operations for the period from November 5, 1951 (date of partial opening of the New Jersey Turnpike) to December 31, 1951, and the statement of construction costs of the New Jersey Turnpike to December 31, 1951. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying statement of financial condition and statements of operations and construction costs present fairly the financial condition of the New Jersey Turnpike Authority as of December 31, 1951, the results of its operations for the period stated, and the construction costs of the New Jersey Turnpike to December 31, 1951, all in conformity with generally accepted accounting principles applicable in the circumstances.

Peat, Marwick, Mitchell & Co.

Peat, Marwick, Mitchell & Co.

Newark, N. J.
January 25, 1952.

NEW JERSEY TURNPIKE AUTHORITY

Statement of Financial Condition as of December 31, 1951

Assets

Operating accounts:		
Cash funds:		
Revenue fund	$ 477,313.35	
Operating fund	384,526.21	
	861,839.56	
Accounts receivable	28,408.54	
Prepaid insurance and insurance deposits	75,059.12	**$ 965,307.22**
Construction accounts:		
Cash:		
Held by Trustee in construction fund	1,152,800.51	
Special construction account	740,331.90	
Revolving fund	120,998.93	
Real estate funds on deposit with fiduciaries	292,248.39	
	2,306,379.73	
Interim investment of construction fund — U. S. Treasury bills and accrued discount earned thereon	19,960,000.01	
Accounts receivable	677,291.19	
Deposits in condemnation cases	1,228,393.00	
Cost of turnpike — construction costs to December 31, 1951	222,206,533.40	**246,378,597.33**
		247,343,904.55

Liabilities

Operating accounts:		
Vouchers payable	48,109.17	
Employee income taxes and retirement contributions withheld	8,651.73	
Accrued payroll	18,054.14	**74,815.04**
Construction accounts:		
Vouchers payable	7,836,609.54	
Employees income taxes and retirement contributions withheld	13,148.71	
Commitment fees accrued under bond purchase agreements	26,041.67	
Retained percentage on construction contracts and engineering fees	9,002,797.41	**16,878,597.33**
Turnpike Revenue bonds:		
1950 issue — aggregate principal amount authorized $220,000,000; issued at December 31, 1951	195,000,000.00	
1951 issue — aggregate principal amount authorized $35,000,000; issued at December 31, 1951	35,000,000.00	**230,000,000.00**
Net revenues since beginning of operations, November 5, 1951, after interest allocation		**390,492.18**
		$247,343,904.55

See notes to financial statements which are an integral part hereof.

NEW JERSEY TURNPIKE AUTHORITY

Statement of Operations

For the Period from November 5, 1951 (Date of partial opening of the Turnpike) to December 31, 1951

Revenues:		
Toll revenue as shown in accompanying statement		**$587,326.32**
Concession revenue		**32,861.19**
Miscellaneous revenue		**86.78**
Total revenues		**620,274.29**
Operating expenses:		
Administration	$14,690.16	
Toll collection	44,835.22	
Traffic control and police	25,267.34	
Accounting and toll audit	9,010.72	
Maintenance, repair, replacement and reconstruction	19,121.81	
Insurance	1,626.72	
Miscellaneous	677.74	**115,229.71**
Net revenues		**505,044.58**
Net revenues allocated to payment of interest on Turnpike Revenue Bonds		**114,552.40**
Net revenues after interest allocation		**$390,492.18**

See notes to financial statements which are an integral part hereof.

Statement of Toll Revenue

For the Period from November 5, 1951 (Date of partial opening of the Turnpike) to December 31, 1951

Class	Description	Toll revenue	Miles	Vehicles
1	Passenger car, motorcycle, taxi, ambulance or hearse, two-axle single-tire truck, two-axle tractor without semi-trailer	$484,822.55	34,920,116	730,710
2	Passenger car with trailer, two-axle single tire truck with trailer, three-axle tractor without semi-trailer	2,389.45	123,125	2,058
3	Two-axle dual tire truck	13,620.90	548,835	11,870
4	Three-axle single-unit truck	3,967.30	154,925	2,447
5	Three-axle semi-trailer combination	31,396.85	1,002,788	17,289
6	Four or more axle semi-trailer combination, truck and full trailer combination	48,509.30	1,391,900	21,115
7	Bus	2,648.65	104,485	1,706
9	Non-revenue vehicles*	——	29,732	2,871
		587,355.00	38,275,906	790,066
	Deduct over and short account	28.68		
	Total	$587,326.32		

*Vehicle Class 9, non-revenue vehicles, represents traffic of members, officers and employees of the Authority actually in the performance of their duties or traveling to or from such duties, members of the New Jersey State Police Force, members of Fire Departments or local Police Departments actually in the performance of their duties, ambulances, rescue squads or necessary vehicles of concessionaires, and vehicles of contractors used in construction of the Turnpike and its buildings.

See notes to financial statements which are an integral part hereof.

NEW JERSEY TURNPIKE AUTHORITY

Statement of Construction Costs of the New Jersey Turnpike to December 31, 1951

Engineering and architectural:		
Salaries	$ 138,350.99	
Preliminary engineering	399,468.32	
Test of materials	154,785.62	
Engineering borings and foundation investigations	424,609.83	
Estimates of costs and revenues	166,746.59	
Engineering and architectural services	12,604,570.19	
Travel — staff	8,720.41	
Blueprints, plans and specifications	73,302.68	
Services and travel (other than staff) including legal fees	29,957.05	
Miscellaneous	646.90	**$ 14,001,158.58**
Land, easements and rights-of-way:		
Salaries	108,282.82	
Surveys	5,673.57	
Services and travel (other than staff) including legal fees	57,033.80	
Travel — staff	6,062.38	
Costs of land acquired by direct purchase, including damages	12,853,385.07	
Appraisals	126,598.72	
Negotiations	200,539.38	
Title insurance, examination and curative work	187,562.64	
Cost of land acquired by condemnation	30,283.30	
Expenses and costs incurred in condemnation cases	178,138.70	
Cost of options to acquire land	1,000.00	
Payments to New Jersey State Highway Department (Route 100)	263,358.00	
Miscellaneous	2,890.15	
	14,020,808.53	
Less rental from and sales of land, buildings and borrow material	63,308.68	**13,957,499.85**
Construction:		
Salaries	68,891.72	
Demolitions, relocations and clearing rights-of-way	1,134,660.70	
Grading and drainage	46,928,579.07	
Major bridges	25,125,500.66	
Miscellaneous structures, excluding buildings	51,612,222.52	
Paving	37,956,194.72	
Buildings	7,451,414.06	
Travel — staff	3,832.19	
Lighting, communications, road marking, signs, delineators and fencing	1,780,216.18	
Relocation and reconstruction of utilities, roads and other communications	4,939,693.61	
Services and travel (other than staff) including legal fees	88,093.90	
Bid advertising and expense	10,701.18	
Toll booth canopies and toll collection equipment	1,342,392.66	
Construction policing	76,308.41	
Payments to New Jersey State Highway Department (Route 100)	6,848,653.41	
Miscellaneous	60,351.60	**185,427,706.59**

NEW JERSEY TURNPIKE AUTHORITY

Statement of Construction Costs of the New Jersey Turnpike, Continued

Maintenance organization:		
Salaries	$ 38,421.61	
Motor vehicles, road maintenance equipment, tools, etc.	382,656.46	
Temporary maintenance buildings	26,688.00	
Maintenance materials	18,029.97	
Office supplies, special forms, etc.	439.79	
Travel — staff	993.88	
Miscellaneous	5,142.17	**$ 472,371.88**
Toll collection and toll audit organization:		
Salaries	6,788.03	
Office machines and machine rentals	7,616.99	
Office supplies and special forms, etc.	12,129.02	
Motor vehicles	5,862.74	
Uniforms and other equipment	4,155.50	
Travel — staff	363.93	
Miscellaneous	4,119.40	**41,035.61**
Administration:		
Salaries	221,540.23	
Legal expense and fees	42,067.35	
Audits and fiscal advice	20,129.07	
Furnishings and fixtures	81,588.92	
Motor vehicles purchased and expense	41,697.24	
Insurance	15,677.77	
Rent	26,899.00	
Stationery and office supplies	43,750.80	
Postage	22,885.01	
Telephone and telegraph	45,795.53	
Advertising, printing and binding	2,575.11	
Travel — staff	10,804.76	
Services and travel (other than staff)	521.99	
Public information	112,723.37	
Surety bond fees	5,008.72	
Repairs and maintenance	17,424.60	
Miscellaneous	5,931.44	**717,020.91**
Financial:		
Bond interest	5,472,350.63	
Discount on sale of Turnpike Revenue Bonds (1951 issue)	647,500.00	
Financial advisory fees	173,914.77	
Commitment fees	1,364,166.17	
Preparation, offer, sale and issuance of bonds	100,767.29	
Fiduciary fees and expenses	51,180.40	
Bond counsel fees	120,712.95	**7,930,592.21**
		222,547,385.63
Less:		
Income from interim investment of construction fund	335,989.22	
Cash discounts	4,863.01	**340,852.23**
		$222,206,533.40

See notes to financial statements which are an integral part hereof.

NEW JERSEY TURNPIKE AUTHORITY

Notes to Financial Statements

(1) AUTHORIZING LEGISLATION — New Jersey Turnpike Authority is a body corporate and politic created by the New Jersey Turnpike Authority Act of 1948 approved by the Legislature of the State of New Jersey October 27, 1948, authorized and empowered to construct, maintain, repair and operate turnpike projects at such locations as shall be established by law, and to issue turnpike revenue bonds of the Authority, payable solely from tolls and other revenues of the Authority. Under the provisions of the Act, turnpike revenue bonds shall not be deemed to constitute a debt or liability or a pledge of the faith and credit of the State or any political subdivision thereof.

(2) AGREEMENTS WITH BONDHOLDERS — To provide funds for the construction of the turnpike, the Authority, on February 10, 1950, adopted a resolution authorizing the issuance prior to January 1, 1953 of not exceeding $220,000,000 in principal amount of Turnpike Revenue Bonds (1950 issue) and, when for various reasons the need for additional funds to complete the turnpike was indicated, on September 19, 1951 amended the resolution to provide, among other things, for the issuance of not exceeding $35,000,000 Turnpike Revenue Bonds (1951 issue). Bond purchase agreements have been executed for the maximum principal amount of the 1950 bonds authorized and a commitment fee of ½ of 1% per annum is paid by the Authority on the principal amount of unissued bonds. The 1950 bonds mature January 1, 1985 and bear interest at 3¼% per annum; the 1951 bonds mature January 1, 1986 and bear interest at 3.20% per annum. Interest on the bonds is payable semi-annually on January 1 and July 1 in each year. Provision is made in the Bond Resolution for the redemption of the bonds prior to maturity. Minimum annual sinking fund payments are required in increasing amounts commencing with the annual period ended November 15, 1959 in respect of the 1950 bonds and the annual period ended November 15, 1968 in the case of the 1951 bonds, sufficient to retire the bonds by maturity. All revenues from the operation of the turnpike are required to be deposited by the Authority with, or in the name of, a special trustee to be applied in accordance with the provisions of the Bond Resolution. As provided in the Bond Resolution, an amount of $500,000 was transferred from construction funds to operating funds to provide initial monies to pay operating expenses on the opening of the Turnpike.

(3) CONSTRUCTION COST — In accordance with the Bond Resolution, construction costs include expenses in connection with the offering, selling and issuance of bonds for construction purposes; discount on the sale of bonds; commitment fees under bond purchase agreements; interest on bonds (less interest earned on unexpended construction funds); cost of certain real estate in excess of right-of-way requirements which will be sold and the proceeds applied in reduction of construction costs; and administrative and legal expenses during the construction period. Construction costs include $7,112,011 representing payments to New Jersey State Highway Department for purchase of right-of-way and work performed on what was originally to be State Route 100 and which became part of the turnpike. As of December 31, 1951 no decision had been made by The Authority as respects payment of approximately $2,200,000 additional reimbursement estimated by the Authority to be due the State Highway Department and this amount is not reflected in its accounts at December 31, 1951.

(4) INTEREST — Interest due January 1, 1952 on Turnpike Revenue Bonds in the amount of $3,728,750 had been deposited with the paying agent at December 31, 1951. Of this amount $3,614,198 was paid from construction funds and $114,552 from revenues.


TURNPIKE
NJ TP
TURNPIKE
NJ S-41
Camden
Philadelphia
EXIT 4 1 MI
NJ S-28
New Brunswick
EXIT 9 1 MI
Service Area
LUNCH ROOM OPEN GASOLINE STATION
Garden State Parkway
North Only
Passenger Cars Only
EXIT 10 1 MI
EXIT
5
KEEP RIGHT
EXIT
2
12 MI

Cutting ribbon at Newark. Left to right, Paul L. Troast, chairman of the Authority, Governor Alfred E. Driscoll, Senator Alfred C. Clapp (Essex County), Commissioners George F. Smith and Maxwell Lester, Jr.

NJ TURNPIKE

Guests enter Authority administration Building at East Brunswick during dedication ceremonies.

View of motorcade participating in dedication ceremonies of Turnpike:

Bridge crossing Hackensack River is dedicated to honor memory of three Lewandowski brothers, of Lyndhurst. From left are shown Governor Driscoll; mother of brothers, clergy and members of Lewandowski family.

Bridge crossing of Raritan River is dedicated to honor memory of Sergeant John A. Basilone, of Raritan. Shown are members of Basilone family and General Hart, U. S. Marine Corps.

Bridge crossing of Passaic River is named to honor Chaplain John P. Washington, of Newark. Shown from left to right are Governor Driscoll; family pastor and relatives of Chaplain Washington.

TURNPIKE