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INTRODUCTION

The purpose of this study has been to perform an analysis of the division dispatcher function, to include a review of duties and responsibilities, supervision, job classification, and method of assignment, as well as paperwork performed by dispatchers and general work flow in the dispatcher offices of the division.

This study was originally initiated in October, 1977, but progress was slowed due to pressing priority assignments. Most of the field work, research, and interviews used in reaching final conclusions were conducted between December, 1977, and February, 1978.

In order to assess work load, work flow, manpower requirements, divisions of responsibility, the inter-relationships of functions, and so on, the following study elements were completed:

- o Interviews with the Superintendent of Transportation, the Superintendent of Divisions, several staff assistants, division managers, assistant managers, dispatchers, and stenographers.
- o Field observations, at Division 1, 2, 3, and 9.
- o Review of the Transportation Department Procedure Manual.
- o Participation in division dispatcher training course.
- o Review of forms in use.
- o Review of department records.

Also, five other transit properties were telephoned to obtain an understanding of the range of duties performed by personnel in positions roughly equivalent to dispatchers.

For the purposes of this study, Division Dispatcher activities have been grouped into five major categories:

1. Window Work
2. Extra board Mark-up
3. Timekeeping
4. Bus Blocking
5. Miscellaneous

Division dispatchers, under the direct supervision of the Assistant Transportation Manager, perform all daily responsibilities of assigning and dispatching operators to runs, assigning buses and calculating operator pay time. In addition, dispatchers handle much of the miscellaneous office work of researching division records for locating operators with regards to supervisor and service inspector write-ups, customer complaints, and other such items. They are also responsible for such tasks as selling passes, assigning CEA units, stocking timetables, processing Division mail, and bundling transfers for operators.

In the current fiscal year, 1977-78, 82 regular dispatcher positions are budgeted and are assigned to the eleven divisions by the Transportation Department in Headquarters. Currently, 78 of the budgeted positions are filled. In addition to regular dispatchers, there are 36 extra dispatcher - operators who are fully trained to perform all dispatcher functions and are authorized for the purpose of filling in vacant shifts as a result of vacations, sick leave, and other time off by regular dispatchers. They are also currently being used to fill the vacant regular dispatcher positions. This classification permits employees to be returned to operator status when they are not needed to cover vacant shifts.

The dispatcher and extra dispatcher ranks have grown over the past six years as demonstrated in Table I. (See page 3)

Transportation division offices are staffed on a 24-hour basis. Division paperwork and timekeeping are performed during the hours of approximately 9 p.m. to 2 a.m. when other duties, such as window work and bus blocking, require little attention.

Most divisions were staffed with seven dispatcher weekday shifts during the course of this study.

TABLE I

DIVISION DISPATCHERS AND EXTRA DISPATCHERS
1972 TO 1978

	72-73		73-74		74-75		75 - 76		76-77		77-78	
	Auth.	Filled	Auth.	Filled	Auth.	Filled	Auth.	Filled	Auth.	Filled	Auth.	Filled
Division Dispatchers	57	51	62	45	85	70	87	70	87	78	87	78
Extra Dispatchers	21	15	21	16	33	17	37	23	37	19	47	36
Total	78	66	83	61	118	87	124	93	124	97	134	115

Source: Authorized - Personnel Department
Filled - EEO Report of January, Mid-Fiscal Year

On March 5, 1978, division dispatcher weekday shifts were reduced to six at most divisions.

Until 1976, Division Dispatcher was classified as a Grade 9. However, a classification study was performed by the Personnel Department in early 1976 which recommended an increase to Grade 10. This increase was justified, according to the study, on the basis that dispatchers "will be responsible for board mark-up, processing division payroll and assigning equipment," work which, according to the study, represented an increase in "responsibility for independent action and responsibility for relationships with others." This increase was authorized by the Board of Directors on April 21, 1976, and was implemented immediately.

DISCUSSION

Window Procedure - The window dispatcher's primary responsibilities are to dispatch buses on time and respond to short-notice changes such as one day sick and miss-outs, which affect manpower. As operators call for their runs, the window dispatcher records their badge numbers in the pull out sheets and writes the assigned bus and location on the operator's farebox card. He also insures that operators call for their runs on time and that missed runs are filled.

The dispatcher uses three basic forms: The Daily Report Sheet (32-77), the Operator Assignment Changes (22-113) and the Daily Event (32-35). Accuracy in recording transactions is vital because these sheets are used as a basis for recording absences from duty in the operator's 3IR as well as for paying time.

Window workload is subject to great fluctuation related to a. m. and p. m. pull-outs. In many divisions, pull-outs are scheduled at a rate of one or more per minute for prolonged periods. During these peak window periods, which run from about 4 30 to 7:00 a. m. and 3:30 to 7:00 p. m. , the window dispatcher is severely taxed in maintaining an orderly and punctual distribution of runs. (See Appendix A , "Distribution of Pull-Outs, by Division")

Assignments are made under generally disruptive conditions. The noise level is usually great and there are many distractions from ringing phones and operators asking for information. The window dispatcher must be alert to late sign-ons and miss-outs while insuring the accuracy of window entries.

At all divisions, except Division 6, back-ups are scheduled during peak window periods to provide adequate back-up to the window dispatcher. Typically, this "back-up" dispatcher handles the miscellaneous non-window duties in order to minimize interruptions to the window dispatcher.

In off-peak periods, window work is very diverse. Among the major tasks are review of Accident Reports and logging into the Accident Summary, handling company equipment pull-outs, researching payroll errors, and handling reliefs.

The window dispatcher maintains a closer working relationship with operators than do other dispatchers. They are often the only contact that operators have with office personnel on a daily basis. Because of this, it is imperative that dispatchers elicit a spirit of cooperation from operators.

Aside from creating a better working environment, dispatchers will have a better chance of getting operators to work extra assignments when there are shortages, if they have cultivated good working relationships.

Extra Board Mark-up - The Extra Board is marked daily for the following day. The process consists of two distinct sets of tasks. The first set consists of the preparatory steps to board mark-up which includes posting changes which affect extra board manpower availability and changes which will affect the work to be filled by the extra board.

The tasks in this series require:

- 1) Identification of changes which impact manpower requirements: Several factors can influence this. Schedule changes which are reported on pink sheets constantly change the number of runs to be filled. In addition to this, available manpower changes daily in the divisions due to anticipated absences from duty, such as vacations, requests off, suspensions, and long-term illness. The mark-up dispatcher is concerned with responding to these anticipated changes. The window dispatcher is concerned with the unanticipated changes such as miss-outs and one-day sick.
- 2) Tabulation of changes: The mark-up dispatcher must develop a systematic approach to recording changes which affect the number of runs to be filled by the extra board. The Daily Classified Sheet provides a listing of non-biddable trippers to be filled with extra-board operators. On this list, changes affecting trippers are noted. In addition, to this, open runs due to vacations, illness, etc., which will have to be filled by the extra board are entered in time sequence order. Failure to mark-up a run which should have gone to the extra-board can result in a runaround. Runarounds are costly in that a penalty of four hours of extra pay for the operator who should have been marked up to that run is assessed against the District.

3) Knowledge of information sources: Dispatchers use many sources for identifying open runs and available manpower. Among them are:

- . The weekly sick list
- . The Daily Event Sheet
- . Calender book for requests off
- . Vacation list

Through a compilation of these and other sources, the mark-up dispatcher is able to identify those runs which need to be filled from the extra board.

The second series of tasks are more complex in that they require evaluation of assignment and pay hour alternatives. This process requires a thorough knowledge of the labor contract as follows:

- 1) Calculating and posting rest time to ensure that operator rest time is not violated when the board is marked. This entails knowledge of rest time provisions in the contract.
- 2) Economically combining pieces of work; The mark-up dispatcher impacts manpower utilization at the division in several ways. The most significant one is in exercising control over tripper combinations. Trippers are combined on the Daily Classified. However, as open runs are added, the combinations can be manipulated to insure a minimum of overtime as well as coverage of all runs with available operators. Some economies are achieved if :
 - a) Trippers can be combined with short runs within an 11 hour spread.
 - b) Care is exercised in tying trippers and runs to ensure, as a general rule, that the operator that signs on the earliest signs off the earliest.

Beyond the application of general principles of extra board mark-up, the mark-up dispatcher can significantly affect the cost effective usage of division manpower through his or her experience with subtleties of the division's operators and lines. For example, from his knowledge of lines which may frequently run late, he can avoid the payment of overtime by allowing an additional delay factor to be scheduled sign off time. Yet, the scheduling of such a piece of work may not necessarily appear to the objective eye as the most economical assignment.

In addition to the actual mark-up tasks, a closely related one is the preparation of the weekly manpower survey. This report is prepared at the divisions and serves as a projection of manpower needs for the ensuing week. This process is often the basis for assessing the need to conduct an extra board shakeup.

Timekeeping - The timekeeping function is currently performed by the dispatcher, usually on the 8:00 p.m. to 4:00 a.m. shift, seven days a week. Thus eleven regular and four relief dispatcher man-years are required to provide this coverage.

Timekeeping involves primarily the recording onto the daily sheets sheets of work assignment changes for that day and calculating the time accrued by various time categories for these changes. Included in work assignment changes would be extra-board and unscheduled overtime assignments. The timekeeper must also calculate the payment of qualification time, vacation time, sick time, birthday, and holiday time, as well as pay rate differentials for instruction, accidents reports and special assignments.

The workload of the timekeeper is dependent upon a number of factors. Because the pay time of a large percentage of a division's daily work runs is pre-calculated, the timekeeper's workload is largely generated by the unassigned work, thus the size of the extra board, the number of midday trippers and the number of special events directly impact upon the volume of calculations the timekeeper must make. In a small division with few midday trippers, such as Division 6, the timekeeper is able to complete preparation and calculations within four hours. In large divisions, the timekeeping effort may require the full eight hour shift.

The task of timekeeping requires transferring of work runs, operator badge numbers, and time from the window work sheets to the Transportation Time Sheets and calculating pay time. In addition the timekeeper must keep track of changes in operator assignment with regard to weekly bumps and bids and make the necessary corrections on the pre-calculated time sheets. The timekeeper also is responsible for checking the daily payroll journals and other payroll materials sent to the division from Control Accounting. Although the division managers are responsible for verifying payroll, most division managers do little more than a cursory review of the division timekeeper documents.

Because of the timekeeper's hours, the dispatcher also helps with closing out the division at the end of the day's business. This includes collecting various working papers from division operations for that day, completing various records and reports including daily timesheets and distributing copies to the required locations.

Also because the timekeeper is occasionally the only dispatcher on duty during parts of his shift, he is responsible during those periods for all division activities including road calls, phone calls from operators, and dispatching any runs which may pull out before another dispatcher signs on.

To perform the timekeeping function, a thorough understanding of the UTU contract is required, in addition to the ability to add and subtract hours and minutes and basic handwriting skills. While this function is performed by former operators, driving experience does not provide any skills or understanding that could not be acquired through a comprehensive training program and close supervision. Calculating pay time requires a minimal amount of independent decision making, especially since many of the difficult calculations are addressed in the department's "Operator Pay Time Procedures."

Bus Blocking - Bus blocking is the assignment of buses to runs. This function is usually performed by two dispatchers as a portion of their shifts, although the amount of time spent on it varies with the proficiency of the dispatcher. Bus blocking must be performed between the hours of approximately 2:00 a.m. to 7:00 a.m. and 12:00 Noon to 3:00 p.m., although it does not necessarily require the undivided attention of the dispatcher during all those periods.

A Maintenance employee (BRAC) reads the yard at 12:00 midnight and provides to the bus blocking dispatcher the yard layout form which identifies the exact yard location of each available bus. The bus blocker will then make the assignments for as many runs as there are buses available. The bus blocking can be completed before the last a.m. pull-out.

Bus blocking basically requires dispatching buses from the lanes in chronological order, by pull-out time. The blocker must be knowledgeable of the bus assignment priorities as identified in the 4-12 Report which identifies bus series and headsign assignment by line and the Two-Way Radio Assignment List identifying lines with radio priority. Such responsibilities do not require driving experience for efficient performance.

During the scheduled hours of the bus blocking shift, the bus blocking dispatcher is also responsible for handling road calls. These two responsibilities together may not necessarily fill a full dispatcher shift, again depending upon the proficiency of the dispatcher, the volume of road calls, and the availability of equipment.

The bus blocker receives the calls from radio dispatcher and logs on the Daily Reported Trouble Sheet. If a bus is available for replacement, the bus blocker will assign a bus and a driver to make the changes and notify the Maintenance Department of a road call. If no buses are available, the bus blocker must ask Maintenance to free a bus for the road call, probably by taking a bus off inspection.

When there is no scheduled bus blocker on duty, road calls are handled by the remaining dispatchers. Any free time by the bus blocker dispatcher is spent on miscellaneous work in the office and on assisting the window dispatcher.

Miscellaneous Duties - In addition to the four primary dispatcher functions, many miscellaneous tasks must be performed in the division offices to keep the office work flowing smoothly and to maintain office records and files. These tasks are ordinarily accomplished during off peak periods or by extra dispatchers assigned to the division on a temporary basis.

While each of these separate miscellaneous duties occupies only a small daily portion of total dispatcher time, they do, taken together, represent a major source of work flow to the dispatchers.

Dispatcher Function Comparison - Table II illustrates the results of a telephone survey to five transit properties in an effort to assess how the various dispatcher responsibilities are performed at other properties. The "differentiation of jobs" refers to the number of job classifications used to complete what the RTD refers to as the Division Dispatcher position.

TABLE II

A COMPARISON OF
THE DIVISION DISPATCHER FUNCTION

	RTD Los Angeles	NYCTA New York	CTA Chicago	MTC Minneap.	METRO Seattle	AC Oakland
1. Contract or non- contract	Non- contract	Contract	Contract	Contract	Contract	Both
2. Wages	\$1492- 1847	\$1250- 1800	\$1250- 1750	\$7.67/hr. \$7.82/hr.	\$10.21 hr. \$10.62 hr.	NC \$1563-1720 3 C \$7.64- 8.98
3. Differentiation of Jobs	One	5 Titles	4 Titles	2 Titles	2 Titles	4 Titles
4. Pay Time?	Yes	Yes	Yes	Yes	Downtown	Yes
5. Board Mark-up?	Yes	Yes	Yes	Yes	Yes	Non- Contract
6. Window Work?	Yes	Yes	Yes	Yes	Yes	Yes
7. Bus Blocking?	Yes	Yes	Yes	Yes	Yes	Yes
8. Driving Exper. Required?	Yes	Yes	Yes	No	Yes	Yes
9. Make use of Extras?	Yes	Yes	Yes	Yes	Yes	Yes

RECOMMENDATIONS

1. Centralize Timekeeping - As stated earlier, the calculation of operator pay time is currently computed at each division by the 8:00 p.m. to 4:00 a.m. dispatcher. Because of their work hours, these dispatchers are necessarily isolated from other dispatchers, and from any supervision from the division managers and assistant managers. The only form of supervision timekeepers receive is from the Senior Dispatcher from Headquarters Transportation Department who visits division timekeepers from time to time to observe their work and review previous days' records.

The most frequent problem, identified by the Senior Dispatcher, of timekeepers is in being unable to interpret the notes on the work sheets made by the window dispatcher. Each dispatcher has his own method of notation on the work sheet. Further, many window dispatchers are careless about leaving a clear record of the day's transactions on the work sheets. Since the window man is unavailable when the timekeeper is performing his calculations, the timekeeper must guess as to what and how work was assigned if the window notes are unclear. While there may be some overlap of timekeeping and window shifts, there is little opportunity and no structured means for resolving operator pay time questions, or providing feedback to the window dispatcher on improving the pay time notations.

Further, because of the hours of the timekeeping shift, it has been difficult to attract senior dispatchers. Thus these midnight shifts are filled by the lower seniority dispatchers, who can be expected to require more supervision and guidance than those of higher seniority personnel.

Timekeeping basically requires a reconstruction of how work was allocated to operators and a calculation of the least expensive way to pay the various combinations of runs, trippers, shine time, and so on. Because these combinations of work and of work rules are so complicated, more than one method of paying time could be used for any given calculation.

Because of the complexity of timekeeping, it is very difficult to monitor the performance of a timekeeper without recalculating each combination of work. This the Senior Dispatcher tries to do on a periodic basis. Without doing this, the number of returned pay stubs on pay day by operators who feel their pay is short, provides the only gauge of a timekeeper's proficiency and at that point it is impossible to recover the loss from probable over-payments. Data on the number of payroll adjustments is not currently collected.

The Senior Division Dispatcher indicated that managers and assistant managers have not closely monitored the timekeeper's performance which he confirmed by his ability to find many errors in payment in any given pay period. Although it is impossible to put a dollar amount on what payroll errors cost the District, the Senior Dispatcher stated that by closely reviewing one day's pay-time calculations at a division, he is frequently able to recover his own salary for that day.

It is recommended that the Timekeeping function be removed from the division and centralized in a Timekeeping section in Headquarters as a part of the Transportation Department.

The Senior Dispatcher in Transportation, responsible for monitoring overall timekeeping function in the divisions, has estimated that seven analysts and one supervisor would be capable of handling the workload presently handled by fifteen dispatchers man-hours who calculate pay time in the divisions. Therefore, it is recommended that the section be established with seven analyst positions and one supervisor.

It is further recommended that the dispatcher timekeeping shift be eliminated from each division. The remaining shifts can be altered to provide the necessary coverage. This should result in a reduction of fourteen dispatcher positions.

Centralized timekeeping will improve the frequency and consistency of supervision of the timekeepers and should greatly reduce overpayments. Furthermore, pay times will be calculated during the hours 8:00 - 4:30 or 8:30 to 5:00 when division personnel are available to discuss, by telephone, possible discrepancies on the previous day's work.

Since an analysis of pay time reveals the proficiency of the mark-up and window dispatchers, it should be a primary responsibility of the supervisor of timekeeping to provide the Superintendent of Divisions with a regular assessment of the performance of division dispatchers for the proper action to be taken to correct problems related to mark-up and window work.

Because of the need for close coordination between timekeeping and the divisions to provide feedback on the proficiency of the mark-up and window dispatchers, as well as the need for the supervisor to have a sound working knowledge of the contract, it is recommended that this function remain in the Transportation Department.

2. Establishment of Timekeeping Analyst Position: - As stated earlier, the calculation of pay time requires a thorough knowledge of the UTU contract, attention to detail, and a capability to correctly add and subtract hours and minutes. However, it does not require knowledge or experience of driving and of working conditions of operators which cannot be acquired by close supervision and proper training. Further, the task requires no independent, discretionary action which proper supervision in a centralized location cannot address.

It is recommended that the Timekeeping Section be staffed with the position of Timekeeping Analyst at a Grade no higher than 6 or 7 to perform the pay time calculations and other related timekeeping functions. The exact grade should be determined by an analysis by the Personnel Department.

It is further recommended that the Timekeeping Analyst position be classified as an entry level position and viewed as a step towards other positions in Schedules, Accounting or Transportation Departments, including a step toward the Division Dispatcher position.

3. Transfer Bus Blocking Function - In mid-1976, the responsibility for bus blocking in the divisions was split between Maintenance and Transportation with Maintenance reading the yard and submitting the bus location form to Transportation who assigned buses to runs. Prior to this shift, Maintenance had performed the entire function.

However, since this reassignment, problems in coordination and communication between the two departments have continued to cause major delays in many divisions, despite diligent training efforts. Also because both departments have a part in this function, a constant duplication of effort results. In comparing the time commitments of both departments to complete the bus assignments for the a.m. and p.m. pull outs before and after the split, Table III shows that the current method requires over three times as much staff time as the original method.

These time estimates are based on a survey of Maintenance employees, supplementing the observations of dispatchers performing bus blocking.

In any case, the results of the present sharing of the bus blocking task are to further obscure the definition of responsibility and accountability for completing the division pull outs on time.

It is recommended that in order to reduce duplication and clarify responsibility, the entire bus blocking function be performed by the Maintenance Department in each division.

TABLE III

WORKLOAD COMPARISON - BUS BLOCKING

	Shared Method Maintenance: Yard Reading Transportation: Bus Assignment			Maintenance: Yard Reading and Bus Assignment		
	A.M.	P.M.	Total	A.M.	P.M.	Total
Transportation	5 hrs.	2½	= 7½	0	0	= 0
Maintenance	5	3	= 8	2½	2	= 4½
Total Bus Blocking Time Required			15½			4½

4. Revised Window Forms - Under the current system, absences from duty are recorded for the purposes of:

- 1) Filling open assignments
- 2) Documenting absences for future entry into operators' 3IR
- 3) Paying time

Through a system of entering daily transactions in a series of three forms, the Daily Report (Form 32-77), the Daily Event (Form 32-35), and the Operator Assignment Change, (Form 22-113) the window dispatcher is able to respond to the immediate needs of filling open work assignments with available manpower. Through reconstruction of the events of the day, the timekeeper makes the necessary adjustments to pay time.

Through a series of multiple entries, this system is designed to provide a check and balance of the accuracy of the window work and provide the timekeeper with all of the information necessary to pay time.

The Daily Sheets also provide the input necessary for posting absences from duty to the employees' 3IR. This task is performed by the division steno.

The present system of recording the days' events is cumbersome. Multiple entries requiring the transfer of identical information to several forms increases the chance of error due to the transposition of numbers or the deletion of an important item. This, in turn, increases the probability of payroll errors. A run can also go unfilled if the window dispatcher overlooks an entry in the Daily Event or the Operator Assignment Change Sheet.

It is recommended that the Daily Report Sheet be expanded to include all of the information required to fill runs. Exhibit 1 is an example of the proposed format. (See page 44)

Report men would continue to be listed in the Daily Report Sheet. Open assignments would also be listed on this sheet and numbered sequentially. As a run was assigned to a report man, a number representing the work run would be entered in the "Work Run Assigned" column.

5. Out Of Service Card - Current attendance record practice includes noting an absence in the Operator Assignment Change and the Daily Event. This is then used to compile the daily sick-list from which employee permanent records are posted. The board mark-up dispatcher uses the sick list and the latest entries in the Daily Event to identify open pieces of work for reassignment.

At present the division stenographer is responsible for documenting absences in the operator's 3IR. The Daily Event (form 32-35) is used to prepare the daily sick list. This list is typed by the steno and used as a basis for posting absences to the operator's 3IR. The list is also used to compute the weekly payment of sick time. The mark-up dispatcher uses the list to fill open runs due to absence. Multiple entries are therefore required to process and document absences.

The Superintendent of Divisions indicated that the information currently posted in the operators' 3IRs is inadequate for tracing absence patterns of operators. This information could prove to be a useful tool in analyzing chronic absenteeism and supporting disciplinary efforts. Under the present system, it is difficult to tell whether an employee is developing a pattern of absences, for example, absences prior to or immediately following days off or holidays.

Because of the variability of the sick list, as well as the multitude of entries required under the present system, there is a possibility of failure to fill an open assignment either by the mark-up dispatcher or the window dispatcher.

It is recommended that an "Out of Service Card" be implemented to record attendance and to strengthen board mark-up. Under this proposed system, there would be an Out of Service Card (See Exhibit 2) for every operator. This card would be the permanent attendance record as well as the basis for opening up a piece of work. The system would include the posting of more detailed information to the Operator's 3IR than is presently available to provide a means of effective documentation and evaluation of potential absence patterns.

A card system of recording absences from duty in conjunction with a modified Daily Report Sheet could provide a means of improving control over the filing of open runs. Implementation of such a system would

eliminate the posting of absences to the 3IR by the Division steno and thus effect a savings of 2.5 hours of steno time per week in most divisions.

Cards would be filed in two places--an In-Service File or an Out-of-Service File. Cards would be moved from one file to another to reflect an operator's attendance status and the division's daily manpower condition. Cards would be placed in the Out-of-Service File as employees missed out, called in sick or went on the sick list. Cards would be returned to the In-Service file as employees ok'd for work.

The Out-of-Service File could be divided into the following categories: "One Day Absence"; "More Than One Day Absence"; and "Sick Over 30 Days."

The file would give the mark-up dispatcher not only better control over the runs which need to be filled on a continuing basis, but would also provide improved control over the changing day-to-day manpower requirements.

The Out-of-Service Card of employees with excessive absenteeism or those requiring a doctor's release prior to returning to work could be tagged for greater visibility.

The proposed Out-of-Service Card is designed to provide the information necessary for opening up a piece of work as well as providing all of the information required for permanent documentation of an absence. The impact of the Out-of-Service Card and the proposed revised Daily Report Sheet is summarized on Table V. (See page 21)

It is recommended that a trial Division be selected for implementing a procedure as outlined in Exhibit 2 for monitoring and documenting absences from duty.

This system would reduce the number of entries from 23 to 13 for straight sick entries and therefore the amount of dispatcher time required to record an absence, and would also provide the timekeeper with a clearer accounting of the day's events. Since a significant amount of the timekeeper's time is spent in analyzing the daily sheets and comparing entries, this could result in substantial savings of time.

Table IV indicates the reduction in entries the proposed system would allow for major incident types.

TABLE IV
COMPARISON OF REQUIRED FORM ENTRIES
EXISTING AND PROPOSED WINDOW SHEETS

<u>Incident</u>	<u>Current System</u>	<u>Proposed System</u>
One-Day Sick Entries	32	13
Straight Sick Entries	23	13
Miss-Out Entries	21	14

TABLE V
 IMPACT OF PROPOSED FORM CHANGES
 (POSTING ONE DAY SICK)

	<u>Present System</u>	<u>Proposed System</u>
Window Dispatcher	Daily Report Sheet (5 entries)	Revised Daily Report Sheet (13 entries)
	Daily Event Sheet (19 entries)	Out-of-Service Card (8 entries)
	Operator Assignment Change (8 entries)	
	Total - 32 entries	Total - 21 entries
Mark-Up Dispatcher	Consults two sources for open assignments due to sickness-Daily Event Sheet and Sick List	Consults one source for open assignments due to sickness- the Out-of-Service File
Division Steno	Post absence to 3IR	Not necessary
	Type Sick List	Possibly not necessary

6. Revise Accident Reporting Method - Under the current method of reporting and recording accidents, a driver is required to complete an Accident Report (Form 32-43) following an accident. The division dispatcher checks the form for completeness and logs all accidents for the day in an Accident Summary (Form 32-2). The division dispatcher also prepares an Equipment Damage Report which is forwarded to the Maintenance Department. Costs related to the repair of the vehicle are reported on this form and returned to the Transportation Department. Costs of repairs to the company vehicle are then entered in the division's copy of the Accident Summary.

The Accident Summary is prepared in quadruplicate and distributed, as follows:

Original	-	Safety Department
1st Copy	-	Personnel Record of the Operator
2nd Copy	-	Stays at the division. Costs of repairs are entered in this copy.
3rd Copy	-	Instruction Department

The Accident Summary serves several purposes. It serves as a permanent record of the accident in the employee's personnel record, and provides the data input for key punching and tabulation for the monthly Safety Report and the quarterly Accident Report. It is on this form that the accident type and the determination of avoidability of an accident are recorded.

The Accident Report provides the information needed for preparing the Accident Summary. Many of the entries on these forms are repetitious.

The current Accident Summary provides a very brief and in some cases inadequate historical record of the accident, yet this form remains in the operator's personnel file. The Accident Report is forwarded to the Transportation Department, the Safety Department, and the General Adjustment Bureau.

The following is recommended as a means of streamlining procedures and improving the quality of accident data:

- a. Consolidate the Accident Report and Accident Summary;
- b. Design a one-sided form with insert carbons or carbonized paper. This form should include a

short tear-off sheet which could be separated and sent to data processing for key punching. In addition to this, three other copies are required for distribution to the insurance carrier, the Safety Department, and the Operator's file ;

- c. Discontinue distribution of a copy of the Accident Report to the Transportation Department;
- d. Expand the Transportation Department procedure manual section on the Accident Report to include the distribution of the form and other relevant information.

A copy of the "Revised Accident Report" is shown in Exhibit 4. Exhibit 5 contains the proposed addition to the department manual. (See pages 47 and 49)

- 7. Discontinue Transfer Bundling - It has been the practice in most divisions, for division dispatchers to manually bundle passenger transfer books before distributing them to operators, along with the farebox cards, when they report for duty. This practice is rooted in the line-specific transfers which were used until recently.

Division dispatchers ordinarily try to bundle the transfers during slow periods. Nonetheless, this represents a commitment of dispatcher time of up to one or two hours a day per division, depending upon the division.

Division 9, on the other hand, has traditionally used un-numbered transfers which were not bundled before distribution. This has not affected transfer usage at Division 9.

It is recommended that all divisions immediately discontinue bundling transfer before their distribution to operators.

It is further recommended that transfers be placed in a location where operators can conveniently pick up their own transfers when signing-on, but where the dispatchers can readily observe them in order to minimize pilferage or vandalism.

8. Dispatcher Working Environment - Division dispatchers perform their duties in an office that is separated from the train room by an open counter. Generally the working environment is noisy, especially during the peak periods of the day, cluttered because of minimal space, and equipped with old office furniture.

It is recommended that a division-by-division assessment be made of the working environment of the dispatchers. Recognizing that a pleasant working environment can improve employee productivity and morale, the following modifications should be considered and implemented where possible:

1. Comfortable stools and counter-top height tables be purchased for working at the window counter, especially during off-peak periods so that dispatchers may perform paperwork and, at the same time, watch over the train room.
2. Other office furniture be replaced to upgrade and modernize division offices.
3. Acoustical improvements be made such as sound-proof paneling or wall carpeting, sound barriers in the train room and other such modifications as may be feasible.

It is recognized that the overall conditions of District facilities limit the extent to which major modifications to offices should be made.

9. Establish Trial Division - There are many variables in the division dispatcher work load which make quantification of task time requirements very difficult to obtain. The work environment is characterized by work load peaks and valleys, interruptions, unequal distribution of responsibilities, and tight deadline pressures.

The peak periods of work with specific operational deadlines are generally as follows:

2:00 a.m. to 7:00 a.m.	Bus Blocking	5
4:30 a.m. to 7:00 a.m.	Roll-Outs	2.5
8:30 a.m. to 3:00 p.m.	Board Mark Up	5
Noon to 3:00 p.m.	Bus Blocking	3
3:30 p.m. to 7:00 p.m.	Roll-Outs	3.5
8:00 p.m. to 4:00 a.m.	Timekeeping	8
		<hr/>
		27 hours

There are, of course, other duties which round out dispatchers' workload. These other miscellaneous tasks are, however, less pressing operationally and can be flexibly scheduled to be performed during slower non-peak periods.

One of the difficulties in assessing manpower requirements is the large amount of time allocated to miscellaneous or general clerical duties. The duties listed above represent most, but not all, of the time spent in performing the primary dispatcher tasks: Bus Blocking, Window Work, Board Mark-up, and Timekeeping.

For a division with a staff of six dispatchers, a total of 48 hours a week would be devoted to dispatcher duties, not counting additional extra-dispatcher assistance. Of these 48 hours, about 27 are spent on the "deadlined" duties listed above, leaving about 21 hours a day for other responsibilities.

There are several recommendations in this report which should have a general beneficial impact on the workload and work flow of the division offices. These recommendations and the approximate daily time savings, in most operating divisions, which should result are as follows:

Shift Bus Blocking to Maintenance	8.0 hours
Discontinue Bundling Transfers	1.0 hours
Consolidated Attendance Record Posting	.5 hour
Discontinue Daily Sick List	.5 hour
Discontinue Accident Summary	.3 hour
Total	10.3 hours

A number of additional recommendations in this report will result in improved procedures and probable time savings, but are too indistinct to be quantified:

- Revised Window Sheet
- Improved Accident Report
- Improved Work Arrangements and Environment
- Carbonized Forms
- Clarify Division of Responsibilities

These time savings will not result in an automatic increase in the productivity or efficiency of the function. To accomplish this, it will be necessary to either increase unit output or decrease manpower input to the unit.

While it is, admittedly, not possible to assess more precisely or definitely the actual time saving or the amount of "discretionary" time spent on non-essential tasks, it can be said with confidence that the recommendations contained in this report will reduce work load significantly.

In order to assess the work load reductions and time savings recommended in this report and to convert these efficiencies into meaningful economies, it is recommended that a test be conducted on the feasibility of reducing division office personnel.

For this purpose, division dispatchers, stenographers, and the proposed division clerk position should be considered as elements of the same operating unit, rather than as distinct functions.

It is recommended that the following manpower configuration be implemented at a single division for this test:

3 Division Dispatchers
1 Division Clerk
1 Division Stenographer

This manpower configuration should be tested following the centralization of the timekeeping functions.

This test of reduced manpower should be set for a minimum of one month. At the conclusion of the one-month period, a decision can be made to stop the test or continue for a more adequate three-month test.

Following the three-month trial, a formal written evaluation of systemwide implementation should be prepared.

This trial should be conducted at one of the larger, centrally located divisions to facilitate daily management attention to the test. Division 1 or Division 3 are considered to be the better locations for this experiment.

10. Establishment of Division Clerk Position - In addition to the four primary functions, a significant portion of dispatcher time is spent doing a large variety of miscellaneous tasks which do not require the specialized training and experience of a Grade 10 Dispatcher. If there is the regularly scheduled number of dispatchers in a division on a given day, these tasks are accomplished through the routine course of the day. However, when additional manpower is assigned to a division, these miscellaneous duties frequently fill the entire shift of a Grade 10 Extra Dispatcher.

Through an analysis of the Tasks and Standards, field observations, and interviews with managers and dispatchers, it is estimated that from 15 to 20 hours of work per day in a dispatcher's office is spent performing these non-discretionary, clerical functions:

- . Answer telephone
- . Research and process supervisor write-ups
- . Service inspector reports, accident reports
accident tracers and customer complaints
- . Give operators instructions on accident reports
- . Prepare farebox cards for pull outs
- . Pull paddles for next day and place in assignment
rack
- . Sort and band transfers and place in assignment rack
- . Load timetable rack and keep timetable inventory
- . Monitor assignment of CEA units and log in keys
- . Process division mail
- . Keep bulletin boards up to date with TD notices
and general information
- . Balance cash drawer
- . Log in SAM Cards
- . Issue paychecks
- . Log lost-and-found items
- . Sell monthly passes
- . Close out reports for day's business and send copies
to proper departments
- . Maintain files
- . Order supplies for Division

It is recommended that a new job classification of Division Clerk be created at a grade no higher than 6 or 7 to perform the non-discretionary, clerical duties necessary in the division offices. the exact grade should be determined by an analysis by the Personnel Department.

It is further recommended that division office staffing include Dispatcher coverage for a.m. window work, extra board mark-up, and for p.m. window work. For most divisions requiring five personnel, this would result in an assignment of three dispatchers and two clerk positions.

This position should be classified as an entry-level position and viewed as a step towards other positions in Schedules or Transportation Departments, including a step toward the division dispatcher position.

The workload in the division offices should be split between dispatchers and clerks such that the dispatchers are responsible for window dispatching work, board mark-up and related duties and staffing the divisions when the manager and assistant manager are not present. The clerks should be responsible for performing the miscellaneous duties similar to those identified above.

It should be noted that a large portion of the board mark-up preparation is also distinctly clerical. Thus it is recommended that as the division clerks assume routine office duties, they also be utilized to assist the board mark-up dispatcher, who may then be freed to perform more difficult dispatcher-related duties.

11. Division Staffing - During the time of this study, the larger divisions were staffed with seven dispatcher week-day shifts and the smaller with six dispatcher shifts. As of March 5, 1978, these levels are reduced to six and five shifts respectively, as a result of reducing shifts which had been filled by operator-extra dispatchers.

With the establishment of a centralized timekeeping section, an additional shift can be eliminated from each division, leaving five shifts in the large divisions and four shifts in the small divisions.

It is recommended that the larger division be staffed with three dispatcher shifts per day and two clerk shifts per day and the smaller divisions with three dispatchers and one clerk per day.

12. Re-evaluation of Pay Grade - On April 21, 1976, the Board of Directors approved a request to up-grade division dispatchers from 9 to 10. This request was based on the fact that "division dispatcher classification has received a significant increase in the level of duties and responsibilities ... since this classification will be responsible for board mark-up, processing division payroll, and assigning equipment."

With the removal of timekeeping to a centralized location and the return of bus blocking to the Maintenance Divisions, the level of duties and responsibilities of a division dispatcher will have been, significantly, reduced by 50%. It is highly questionable, in any case, whether the remaining duties can justify a Grade 10 position.

The most convincing reasons for retaining division dispatcher at salary Grade 10 or 9 are that this will maintain shift morale and promotional opportunities for bus operators at a competitive salary. These are legitimate concerns which should be included in a pay grade calculation.

It is recommended that division dispatchers be downgraded to a salary of no higher than Grade 9. This would be a return to the position's previous pay range and would also maintain the dispatcher position as a promotional opportunity for bus drivers and the proposed division clerk and timekeeper analyst positions.

It is recommended that the Personnel Department assess the consistence of this recommended pay grade change with other District non-contract positions.

13. Dispatcher Shift Scheduling - There are two basic shift structures for all divisions with no specific allowance made for the unique individual needs of a particular division. The distribution of pull-outs, for example, is a key indicator of a division's manpower needs during peak periods. An analysis of the pull-out distribution indicates that peak pull-out times vary among divisions. Other variables might impact a division's manpower needs on a day-to-day basis, such as special events. The existing shift structure does not allow a division manager to respond to these needs.

Scheduling of shifts downtown tends to diminish division managers' autonomy over work flow and lessens a manager's commitment to completion of tasks with existing manpower.

It is recommended that managers be given responsibility over the assignment of manpower in their divisions.

Downtown should set forth criteria on the number of dispatchers assigned and allow managers to distribute shifts in the manner most suited to their needs.

Managers would inform downtown of shift changes in order to insure that relief dispatchers were correctly assigned.

14. Extra Dispatcher Working Conditions - District employees are necessarily placed in a very difficult personnel position when they assume extra-dispatcher duties, due to the uncertain and tenuous status of an "extra." Extra assignments are somewhat similar to probationary appointments except that they last for several years, with no definite close-out date. Further, there is no guarantee that an extra dispatcher will be selected for a regular dispatcher position.

When an operator assumes extra-dispatcher duties, many ordinary rights and privileges of other contract and non-contract employees are not extended to him or her. For example, extra dispatchers are expected to work every day; only if they request days off, are they granted what another RTD employee ordinarily gets as a "week-end."

Extra dispatchers are also expected to learn the board mark-up process on their own time, not being paid for this training. However, all extra dispatchers are expected to be qualified in all aspects of dispatcher duties.

Further, extra dispatchers have received no performance evaluations and no step increases. When they work as extra dispatchers they continue to be paid as a Grade 10A, many extra having worked continuously as extra dispatchers for the last two years. No effort is made to assess the performance of extras, of their strong points or weak points, what they can do to be a better dispatcher or to formally hear their ideas on how operations might be improved.

Further, according to the Superintendent of Divisions, although they are performing a non-contract function, they are not permitted to file a grievance under the non-contract grievance procedure nor are they represented by the union while performing dispatcher functions.

It is recommended that:

- . Extra-Dispatchers be scheduled as a routine practice on a 5-day work week;
- . Extra-Dispatchers receive pay for all training time, including extra board mark-up;
- . Performance evaluations be performed for extra dispatchers after 1,040 hours in the position and on 2,080-hour intervals after that based on agreed to Tasks and Standards.
- . Step increases be granted as merited, in accordance with established procedures for non-contract employees;
- . Extra-Dispatchers be permitted to file grievance under the non-contract Grievance Procedures;
- . Extra-Dispatchers be informed of the rights and privileges of non-contract employees and of those which apply to them as extra-dispatchers.

15. Budgeting for Operator-Extra Dispatchers - Extra-Dispatchers are working as non-contract employees and significantly supplement the regular non-contract staff, in the last six months by almost 50%. However, extra dispatchers are paid out of the UTU wages account and, therefore, the cost of this supplementary non-contract staff is hidden in the total UTU wages. In other words, the non-contract wages account is not truly reflective of the cost to run the department and divisions.

The department has not, in the past, specifically identified these non-contract personnel in the department budget justification and working papers, nor have they estimated the amount of extra-dispatcher staff that will be necessary in the next fiscal year. Thus unlike other departments in the district, this department has the resource and capability of increasing non-contract staff beyond what is justified from year to year through the budget process.

As a further illustration of this point, currently 47 extra-dispatcher positions are authorized by the Board, although only 35 positions are filled. The department's original budget request and justification, for example, of 84 regular dispatchers could be denied and only 80 positions would be approved for the coming year. It is possible, then, that the department could then fill four authorized extra-dispatcher positions without violating any agreement reached during the budget process and without exceeding non-contract wages budget.

Because the cost of extra dispatchers receive no clear visibility in the Department 3200 expense summary, there is little incentive for the department to monitor closely the assignment of this group of personnel. The department had performed virtually no analysis of division workload needs prior to increasing or decreasing staffing levels. Many extras have stated that there was little work for them to do when they were assigned dummy shifts. But there appeared to be no effort on the part of department management to use this information for the more careful assignment of extra dispatchers in the future.

It is recommended that extra dispatchers be treated as a District manpower resource in the department's budget development process and included in the department's personnel justification and resource allocation working papers as a part of the budget process each year. Although extra dispatchers may not always be working as dispatchers, some estimate should be budgeted for the amount of extra-dispatcher manpower through the year.

It is also recommended that extra-dispatcher wages be budgeted and charged to the non-contract wages account.

16. Extra Dispatcher Manpower Requirements - Operator-Extra Division Dispatchers provide a very flexible reserve manpower pool insofar as they can be assigned as bus operators or division dispatchers in response to the District's short-term manpower requirement changes.

A review of extra-dispatcher assignments to "unscheduled" or "dummy" shifts indicates, however, that operator-extra dispatchers are not returned to operator status, even when the number of available extras exceeds the number of open scheduled shifts. This is done without any indication of excessive work load requiring additional dispatcher assistance.

The major consequences of this practice have been to create a full-time dispatcher work force approximately 50% in excess of budgeted dispatcher manpower allocations, an unnecessary compounding of division operator manpower shortages, and an increase in dispatcher manpower which frequently exceeds required levels.

In January 1978, 193 "unscheduled" shifts were utilized. For purposes of discussion, if 50% of these shifts were "dummy" shifts in that they were assigned without reference to any work requirement, about 96 shifts or 10 man-weeks could have been returned to bus driving without any cost to the RTD.

Along these lines, it should be noted that four "dummy" shifts for the entire system would ideally be the maximum in any one-week period because five "dummy" shifts would indicate that an employee could probably have performed full-time bus operator duties.

It is recommended that Extra Division Dispatcher assignments be made only to fill open regular shifts, except under the following limited circumstances:

- a. It is beneficial as an opportunity to train the extra-dispatcher on a new phase of dispatcher work.
- b. A division manager requests, in writing, and justifies temporary additional help to handle a peak work load problem.

It is further recommended that extra dispatchers be returned to operator status any time that training or division peak manpower needs do not require their retention as dispatchers.

It is further recommended that an extra-dispatcher reserve, of no more than seven operators, be maintained, unless the department can justify more.

17. Establish "Relief Dispatcher" Job Category - The Operator-Extra Division Dispatcher job category is used to provide vacation coverage for regular dispatchers, coverage for regular dispatcher absence, to maintain a reserve work force to handle work load peaks, and as a training tool for new dispatchers.

The advantage of the "extra" classification is that it provides a flexible reserve employee pool which can expand or contract according to need and is therefore well suited to meet unpredictable or unusually high manpower demands.

At the present time, however, much of the work which is covered by Operator-Extra Dispatchers is predictable and regular. Personnel requirements generated by vacations and holidays, for example, can be scheduled in advance and distributed evenly to minimize relief dispatcher requirements.

It is recommended that vacation, holiday, and sickness coverage requirements be filled by Relief Regular Dispatchers.

It is further recommended that the Extra-Dispatcher classification be used only to cover unpredictable peak work load coverage and to provide adequate training for new dispatchers.

18. Relief Coverage Requirements - The distribution of regular Division Dispatcher vacations is a major determinant of the size of the extra or reserve dispatcher work force. An uneven distribution of vacations can create unnecessary workload peaks and valleys and result in an under-utilized extra or reserve work force.

In the current year, a very uneven distribution has resulted in a range of from one to eight regular Dispatchers being scheduled for vacation on a given week. A proper, even distribution of vacations would have resulted in six Dispatchers being scheduled off each week.

An even distribution of regular Dispatcher vacations could be covered by a reserve force of six relief Dispatchers with no excesses manpower being experienced. The uneven distribution results, however, in a total excess manpower of 112 weeks or two full Relief Dispatchers.

A further requirement for relief manpower is caused by holidays and sickness. These requirements also can be predicted with acceptable accuracy.

For example, each Dispatcher is entitled to 10 holidays each year. For a regular work force of 80 regular Dispatchers, this works out to a holiday coverage requirement of 745 days allowing for partial service holidays. A Relief Dispatcher works about 230 days a year after allowing for sickness, vacation, and holidays.

By dividing relief work days into required holiday coverage, it can be seen that 3.2 reliefs are needed to cover all regular Dispatcher holidays.

Assuming an absence ratio of 10 days per year per regular dispatcher, a total of 3.5 relief shifts would satisfy all sickness coverage requirements.

It is recommended that efforts be taken to insure a proper even distribution of regular Dispatcher vacations.

It is further recommended that the following formulas be used in determining and budgeting Relief Dispatcher positions :

VACATION RELIEF FORMULA

$$\frac{\text{Total Dispatcher Vacation Weeks Earned}}{50 \text{ Weeks}} = \frac{304}{50} = 6.1$$

HOLIDAY RELIEF FORMULA

$$\frac{(\text{Full Service Holidays Times Regular Dispatchers}) + (\text{Holiday Service Holidays Times Holiday Shift Size})}{\text{Annual Relief Work Days}} = \frac{(5 \times 80) + (5 \times 69)}{230} = \frac{745}{230} = 3.2$$

SICKNESS RELIEF FORMULA

$$\frac{\text{Regular Dispatchers times 10 days}}{\text{Annual Relief Work Days}} = \frac{80 \times 10}{230} = \frac{800}{230} = 3.5$$

It can be seen from these figures that a total Relief Dispatcher force of 13 could satisfy all vacation, holiday, and sickness coverage requirements.

It is recommended that the reserve work force for vacation, holidays, and sickness be set at 13 employees.

19. Reduce Pass Sales Coverage - At the request of the Managers of Division 7 and 8, an extra dispatcher is assigned to each division from the 25th of each month to the 10th day of the following month to provide necessary coverage for bus pass sales. These requests were approved by Headquarters, apparently without a careful review of actual workload requirements.

A review of pass sales at Division 7 indicates that excess extra-dispatcher coverage is being scheduled. At Division 7, pass sale frequency, sufficient to merit additional staffing, is experienced for approximately four days, as the following table indicates:

January	Passes Sold	February	Passes Sold
25	2	1	45
26	1	2	4
27	7	3	14
28	7	4	5
29	21	5	1
30	31	6	1
31	62	7	1
		8	0
		9	1
		10	0

It is recommended that extra-dispatcher coverage for pass sales be based on an assessment of actual pass sale frequency. Based on the data from Division 7, this additional coverage should be reduced from 15 days to four days per month.

This reduction would result in a savings of 22 extra-dispatcher work days per month, 264 work days or 1.1 dispatcher man-years annually.

20. Additional Manpower Requests - At the present time a division manager who needs additional dispatcher assistance to handle a peak work load problem orally communicates this to a staff assistant at Headquarters, who forwards the request to the Superintendent of Divisions for approval.

At Divisions 7 and 8, this informal, oral procedure was used to obtain authorization for additional staffing equal to, approximately, an 8% increase in staffing, without any written justification or work load analysis.

It is recommended that division requests for additional peak work load personnel be made in writing to the Superintendent of Divisions. These requests for staff supplements should be accompanied with detailed work load documentation.

It is further recommended that dispatcher assignments for which a written request has not been filed be classified as "dummy" shifts.

21. Forms Handling - Division dispatchers work with a large number of forms, for which they must insert carbon paper and distribute to operators, on request. The requirement for these forms can contribute to a cluttered work area and also interfere with dispatchers during peak period.

It is recommended that the department consider a wall rack to hold the most frequently used forms, in order to facilitate their ready retrieval by a dispatcher.

It is also recommended that, as a matter of practice, that all forms, such as the Operators Schedule Deviation Slip (form 32-57) which require multiple copies, be carbonized.

22. Hours of Operations - Transportation Division offices are open on a 24-hour basis. During the slow hours between approximately 11 p. m. and 3 a. m., dispatchers concern themselves with such things as timekeeping, bus blocking, a wide variety of miscellaneous duties related to closing the day's business and so on, and handling problems related to operator pull-ins, such as Accident Reports and overtime slips.

To assess whether less than 24-hour coverage would be feasible, a tabulation of pull-ins between 11 p. m. and 3 a. m. was performed, the assumption being that operator-related work could be roughly projected based on pull-ins and pull-outs. There are, of course, no pull-outs between 11 p. m. and 3 a. m. in most divisions.

Table VI shows the distribution of pull-ins between 11 p.m. and 3 a.m. and the first scheduled pull-out. (See page 39)

Based on the frequency of pull-ins, a reduction in division office hours of service does not seem feasible at most divisions. At Divisions 6, 15, and 18, however, there are periods of little or no pull-in activity during which it may not be necessary to keep the office open.

In order to achieve increased dispatcher shift scheduling flexibility, it is recommended that the Transportation Department consider the following nightly closures:

Division 6	11 p.m. to 3. a.m.
Division 15	Midnight to 3 a.m.
Division 18	1 a.m. to 3 a.m.

The impact of such a re-scheduling would be to more closely relate manpower to work load.

This would require that certain very limited functions such as receiving overtime slips and Accident Reports be performed by the Maintenance Division for these operators signing off during the period Transportation was closed.

23. Dispatcher Manpower Utilization - At the present time it is very difficult to assess division dispatcher manpower utilization, due to the large numbers of extra dispatchers being assigned to work at each division, for a variety of reasons. Because there is no monitoring of internal information on the man-hours being used at each division, it is not possible for the department to relate work load to manpower or determine when work load exceeds scheduled dispatcher shifts.

It is recommended that a "Division Dispatcher Requirements" report be implemented to be used to record the use of regular, relief, and extra dispatcher manpower on a by-division basis.

This report should allow a clear distinction between the various categories of unscheduled and special dispatcher assignments, including training shifts, peak work load shifts, "dummy" shifts, and relief shifts for regular dispatcher absence or vacations.

A proposed format for this report is shown in Exhibit 6. (See page 50)

TABLE VI
 DISTRIBUTION OF WEEK-DAY PULL - INS BY DIVISION

11 p.m. to 3 a.m.

	<u>11 p - Mid.</u>	<u>Mid. - 1 a</u>	<u>1 a - 2 a</u>	<u>2 a - 3 a</u>	<u>1st Pull-Out</u>
D- 1	7	7	4	6	1:05 a
2	6	11	8	3	3:11 a
3	22	12	8	2	4:12 a
5	14	11	9	5	3:55 a
6	2	3	3	2	4:22 a
7	4	8	11	2	4:15 a
8	14	5	4	2	4:19 a
9	44	22	14	12	3:50 a
12	6	5	7	3	3:26 a
15	14	1	3	1	3:59 a
18	8	6	1	0	4:13 a

Source: Schedule Department

24. Performance Factors - Division Managers are responsible for monitoring the work load and performance of division dispatchers on a daily basis. This review frequently includes review of the working papers and documents used by dispatchers in marking the extra-board and performing window work.

In addition to this review, summary data is forwarded to Headquarters on the Weekly Division Manpower Survey (form 32-60) and the Weekly Personnel Report (form 32-76). These reports contain information on the use and assignment of division operating personnel which could be useful in gauging overall division and dispatcher performance.

The use of general performance factor which reflect key work load or performance involves improving management control over the use of manpower. The use of performance factors can facilitate effective "management-by-exception" in that potential problems can be identified for special corrective attention.

Most of the general information which could be used in developing performance indicators is recorded on the Division Manpower Survey or the Weekly Personnel Report.

It is recommended that the Division Manpower Survey be revised to reflect a distinction in the totals of incidents of mark-up VCB and OCB, and called-in VCB and OCB. It is also recommended that the Division Manpower Survey include totals of incidents in which an operator is used for less than a 3.5 hour tripper in any given work day.

It is further recommended that the following division dispatcher performance factors be implemented and monitored by the Transportation Department :

1. Manpower Situation: The Weekly Personnel Report (32-76) produces an estimate of the adequacy or inadequacy of available operators relative to projected requirements. Availability of sufficient operators is an important variable which influences the efficiency with which runs are assigned.

2. Manpower Underutilization: The Division Manpower Survey, as proposed, would contain information on incidents of extra-board operators who a) shine-out, or, b) are assigned work equal to less than 3.5 hours. Incidents of underutilized manpower represent losses of significant manpower increments of 5.5 to 8.0 hours, per incident. While it is inevitable that some instances of manpower underutilization will occur, increasing frequency may serve to highlight an excess manpower problem.

3. Shine and Premium Time: Shine and Premium Pay Hours per extra-board operator are pay hours for which no work was performed and therefore represents a non-productive expense. While shine and premium time are unavoidable, an increase in this category of pay time may signal less efficient board mark-up or window work.

4. Late or Missed Pull-Outs : Late or missed pull-outs due to dispatcher error or possible failure to allocate manpower properly impact service on the street and impair efficient manpower utilization. As it is the division dispatcher's job to insure adequate work coverage, service disruption due to a manpower shortage are included in this factor.

5. Incidents of OCB and VCB : Incidents of OCB and VCB represent very expensive measures to insure that unassigned work is filled. Some use of OCB and VCB are unavoidable, but an increase in incidents or their use in conjunction with manpower underutilization, for example, may indicate poor window work.

Several important elements should be considered in compiling performance data of this type. The following general rules should be followed:

1. No specific conclusions can be drawn based on an improvement or worsening in performance factors. Rather, the purpose of performance factors is to highlight potential or developing problems for more detailed management review and action.

2. A single performance factor should not be viewed in isolation. These factors should be fairly consistent in that an increase in manpower underutilization may be accompanied by an increase in shine and premium pay hours and fewer missed or late runs. This would suggest manpower in excess of work load requirements.
3. The selection and use of performance factors should be done flexibly. It may take several months before the implications of specific indicators or ways of strengthening the factors can be identified.
4. Performance factors can be useful in two ways: for comparisons between divisions and for comparisons of a division with itself over a period of time, that is, by identifying changes or trends.
5. Corrective action should be initiated only for indications of substandard performance over a prolonged period of time in order to avoid a disproportionate response to a minor, short-term, and unavoidable deviation.
6. Performance factors are most useful in identifying exceptions which fall outside an acceptable range of performance expectations.

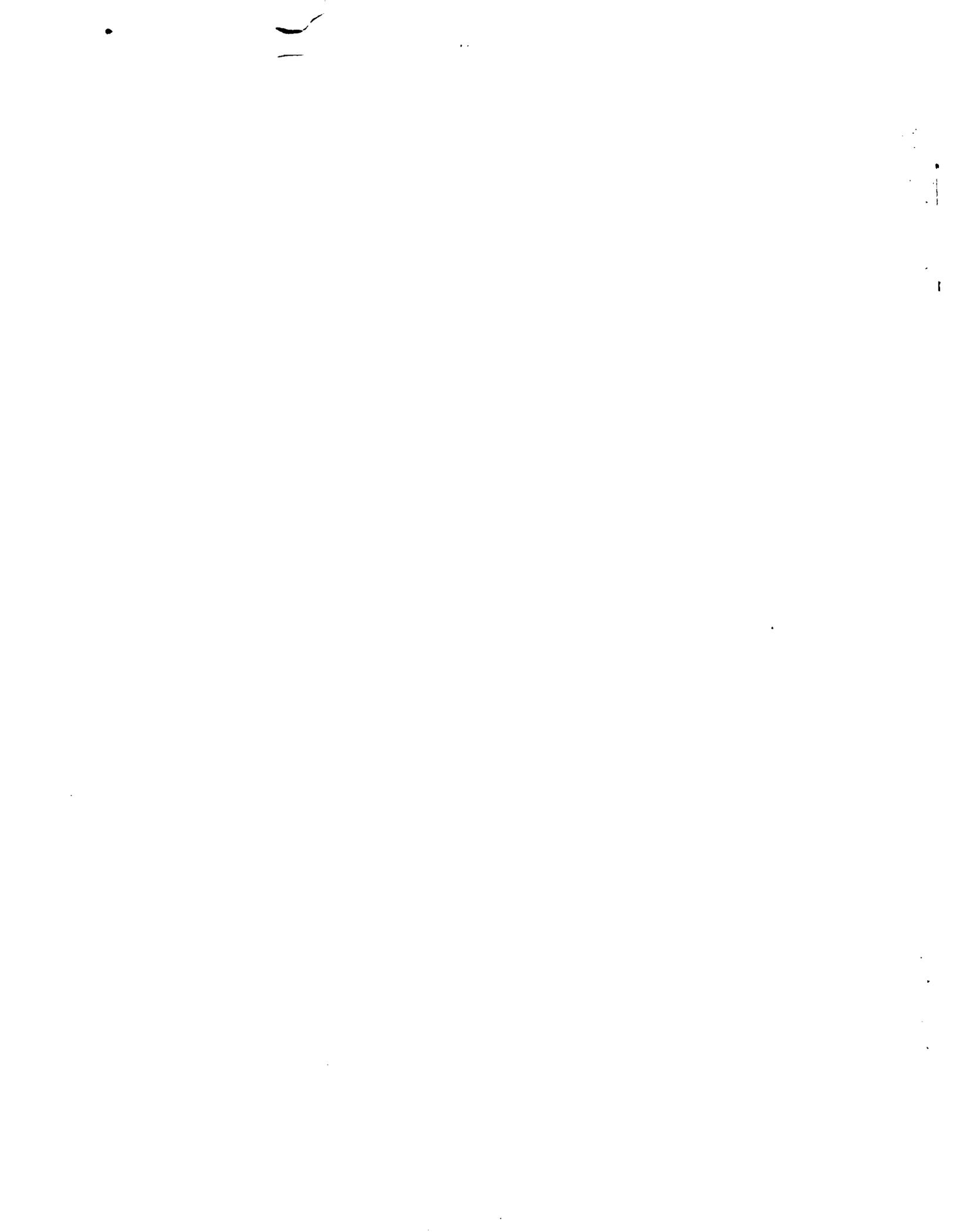
This information should be compiled on a by-division basis and recorded in a fashion such that trends and exceptions can be readily identified. A possible format for doing this is shown in Appendix C.

25. Implementing Recommendations - The implementation of recommendations in this report will significantly alter the practices and procedures of division dispatchers, many of which have been in use for many years. Thus the department will have to exercise great caution to insure that all employees recognize and understand the reasons for the proposed changes. Further, the department will have to closely monitor the implementation of changes to insure that the end result addresses the reason for the change initially.

It is recommended that the department develop a written plan for the implementation including a schedule for each phase of changes.

It is further recommended that the plan include training programs for all employees affected, covering the review of procedures and instructions on changes.

It is further recommended that the department manual be amended as a part of the implementation plan, to reflect revisions in procedure.



2

EXHIBITS

EXHIBIT 3

Proposed

"Out of Service" Card Section of Procedure Manual

The "Out of Service Card" is to be used to record absences from duty due to illness, miss-outs and absences without permission or on insufficient notice. Each operator has an "Out of Service Card" which serves as the permanent attendance record.

The cards will be filed either in the "In Service" file or the "Out of Service" file. The "Out of Service" file is divided into the following categories:

- 1) One Day Absence
- 2) Straight Sick or Absent Without Permission
- 3) Sick Over 30 Days

As an operator calls in sick or misses out, the window dispatcher will enter the necessary information in the Window Sheet. He will then remove the card from the "In Service" file and place it in the "Out of Service" file in the appropriate category.

Prior to 11 a.m., the window dispatcher is responsible to see that information, is posted to the "Out of Service" cards of all operators who are out that day. The mark-up dispatcher will review the "Out of Service" file for completeness and will use the cards as a basis for identifying runs to be filled.

The evening dispatcher will review the "Out of Service" file and will:

- 1) Tag the cards of operators who require a doctor's release prior to returning to work.
- 2) Determine which operators, if any have been ill over 30 days so that the run can be put for bid.
- 3) Return one-day sick, who are o.k to return to the In-Service File.

Cards are to be kept in the files at all times. If it is necessary to remove a card for disciplinary purposes or for forwarding to Headquarters, a temporary replacement card should be prepared noting the location of the permanent Out of Service Card. Care should be taken to insure that relevant information is transcribed to the permanent card prior to returning it to the file.

EXHIBIT 4

ACCIDENT REPORT

Date of accident										Time of accident										City										State									
Type of accident										Accident occurred at										Employee's name										Grade									
Type of vehicle										Service type										Direction										Weather									
No. of passengers										No. of vehicles										No. of injuries										No. of deaths									

DESCRIPTION OF ACCIDENT: (For additional information use 1 to 1000)

1. Nature of accident: _____

2. Details of accident: _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

DATE OF REPORT: _____

REPORT MADE BY: _____

CLASSIFICATION: _____

TRAFFIC SIGNAL IMPORTANCE: (When complete diagram of signal and how accident happened, draw symbols below, showing light status and indicating direction of travel by line of arrow of vehicles involved.)

LEFT										USE ONLY									

CLASSIFICATION USE ONLY

TRAFFIC SIGNAL IMPORTANCE: (When complete diagram of signal and how accident happened, draw symbols below, showing light status and indicating direction of travel by line of arrow of vehicles involved.)

TRAFFIC SIGNAL IMPORTANCE: _____

OTHER VEHICLE OR PROPERTY: _____

CONTRIBUTOR VEHICLE: _____

PEDESTRIAN: _____

AT TIME OF ACCIDENT: _____ WAS PART OF: _____

NOTION OF CO VEHICLE: _____

IF A FALL, GIVE LOCATION: _____

ACCIDENT REPORT

DIVISION _____
 DATE _____
 REPORT NO. _____

Date of Accident		Day of Week		Time of Accident		Accident Occurred At:				Employee's Name		Badge
mo.	date	year			a.m.	p.m.	_____ at _____, City _____					
Veh. Type		Veh. No.	Line No.	Bus Run	Time on Duty	Op. Seniority	Service Type	Direction	Weather	Est. MPH		
Bus	Car	Other			_____ hr. _____ min.		express local	co. veh. N S E W				
No. Pass.	No. Witness Cards	If Stopped, Distance of Witness from Card		ON time	how late	in service	Street Condition	Reg. Op.	Extra Board op.	Student		
		front	rear	yes no		yes no						

Accident occurred	Passenger Accidents Only
Reg. Work Day _____	Boarding <input checked="" type="checkbox"/> On Board
Reg. Day off _____	Alighting

Detail:
 Revised Section of Accident Report Form

EXHIBIT 5

Proposed

"Accident Report" Section of Procedure Manual

An Accident Report (form 32-43) must be used to report accidents or serious incidents in which damage to District equipment or property occurred.

It is the responsibility of the operator to completely and accurately fill out an Accident Report when requested to do so by the Radio Dispatcher.

It is the responsibility of the Division Dispatcher to review Accident Reports for completeness and accuracy, when an Instructor is not available.

The Accident Report is used to provide the following:

1. Documentation of the operator's account of an accident.
2. Information to the District's insurance carrier for use in assessing claims.
3. Information to assess the cause and circumstances of the accident in order to determine avoidability or non-avoidability.
4. Data necessary for the quarterly accident report and the monthly safety report.

The Accident Report is distributed to

Half Sheet: Data Processing
First Copy: Insurance Carrier
Second Copy: Safety Department
Third Copy: Operator's Personnel File

When the Division Instruction Department is open, the Dispatcher should refer a request for an Accident Form to the Instruction Department. If the Instruction Department is closed, the Dispatcher is responsible to distribute Accident Report and review them to insure accuracy and completeness.

EXHIBIT 6

DIVISION DISPATCHER REQUIREMENTS
FOR WEEK ENDING _____

REGULAR SHIFTS

- a. total weekday shifts scheduled _____
- b. total weekend shifts scheduled _____
- c. total shifts scheduled (a+b) _____
- d. shifts filled by regular dispatcher _____
- e. relief shifts required (c-d) _____

SPECIAL SHIFTS

- f. training shifts _____
- g. unscheduled workload shifts _____
- h. "dummy" shifts _____
- i. total special shifts (f+g+h) _____

TOTAL REQUIREMENT

- j. total regular shifts worked _____
- k. total relief shifts worked _____
- l. total special shifts worked _____
- m. total shifts worked (j+k+l) _____

Approved _____
Division Manager

APPENDIX

APPENDIX A

DISTRIBUTION OF PULL-OUTS - BY DIVISION
DOCS and cea units

	A.M. before 4 ⁰⁰	4 ⁰⁰ -5 ⁰⁰	5 ⁰⁰ -5 ³⁰	5 ³⁰ -6 ⁰⁰	6 ⁰⁰ -6 ³⁰	6 ³⁰ -7 ⁰⁰	7 ⁰⁰ -11 ⁰⁰	11 ⁰⁰ -11 ³⁰	11 ³⁰ -12 ⁰⁰	P.M. 12 ⁰⁰ -12 ³⁰	12 ³⁰ -1 ⁰⁰	1 ⁰⁰ -1 ³⁰	1 ³⁰ -2 ⁰⁰	2 ⁰⁰ -2 ³⁰	2 ³⁰ -3 ⁰⁰	3 ⁰⁰ -3 ³⁰	3 ³⁰ -4 ⁰⁰	4 ⁰⁰ -4 ³⁰	4 ³⁰ -5 ⁰⁰	after 5 ⁰⁰
Jan. 1	7	14	27	32	44	35	24	16	8	9	15	9	14	27	17	17	18	14	11	15
Jan. 2	2	12	28	35	44	34	30	11	13	19	10	23	25	19	27	28	34	33	14	22
Jan. 3	0	9	21	40	50	37	36	6	11	9	5	19	24	29	16	10	8	5	0	14
Jan. 5	4	10	25	57	56	43	24	6	7	18	17	28	51	28	26	13	7	7	5	15
Jan. 6	0	2	6	10	15	19	8	1	2	1	5	5	9	21	15	11	8	0	0	2
Jan. 7	0	4	9	23	33	41	28	4	7	5	10	10	22	15	34	15	10	9	1	9
Jan. 8	0	3	18	43	51	38	10	1	4	8	6	12	17	26	13	7	6	7	1	2
Jan. 9	2	9	39	67	71	51	18	5	14	24	10	8	15	10	21	22	18	14	2	3
Jan. 12	3	2	18	28	31	21	15	8	4	13	7	12	7	9	13	9	8	6	1	8
Jan. 15	1	2	15	37	32	23	19	4	7	11	16	9	17	23	9	5	4	2	2	1
Jan. 18	0	6	2	33	19	12	25	3	5	13	9	5	12	12	8	4	2	2	1	2

Source: January 1978 Roll-out Sheets

APPENDIX B

COMPARISON OF DIVISION DISPATCHER
AND BUS OPERATOR EARNINGS

	<u>Hours per Week</u>	<u>Rate</u>	<u>Earnings In One Week</u>
Dispatcher, Grade 10 A	40*	\$1492/mo.	\$344
Dispatcher, Grade 10 C	40*	\$1661/mo.	\$383
Dispatcher, Grade 10 E	40*	\$1847/mo.	\$426
Bus Operator	40	\$ 7.78/hr.	\$311
Bus Operator	45	\$ 7.78/hr.	\$350
Bus Operator	50	\$ 7.78/hr.	\$389
Proposed Dispatcher, Grade 9 C	40	\$1576/mo.	\$364
Proposed Clerk, Grade 7 C	40	\$1415 /mo.	\$327
Proposed Timekeeper, Grade 7 C	40	\$1415/mo.	\$327

*Dispatchers earn compensatory time for holidays and overtime worked.

APPENDIX C

Division _____

DIVISION DISPATCHER PERFORMANCE FACTORS

Week Of	Manpower Status	Manpower Under- Utilization	Shine and Premium Time	Late Missed Pull- Outs	Incidents of OCB - VCB

APPENDIX D

COST OF DISPATCHER STAFFING OPTIONS

	staffing level	pay grade	cost per year	savings over current
1.	93	10	\$ 1,853,676	-
2.	93	8	\$ 1,665,072	\$ 188,604
3.	62 31	10 7	\$ 1,762,164	\$ 91,512
4.	62 31	9 7	\$ 1,699,668	\$ 154,008

APPENDIX E

Increase in Division Dispatcher Manpower
Relative To Increase In Bus Operators: 1973 to 1978

	1973-74	1974-75	1975-76	1976-77	1977-78	% Increase
Dispatchers						
Extras	45	70	70	78	78	53%
Regulars	16	17	23	19	36	140%
Total	61	87	93	97	114	75%
Operators	2913	3605	4219	4829	4230	57%
Operators Per Dispatcher	41:1	41:1	45:1	50:1		

APPENDIX F

DISTRIBUTION OF DISPATCHER VACATIONS
 FY 1978

number of weeks	with	number of vacations
3		8 vacations
22		7
14		6
3		5
4		4
1		3
3		2
2		1
TOTAL	52	

Average Vacations Scheduled Per Week: 5.8
 Weeks With Underutilized Relief Force: 13
 Weeks With Insufficient Relief Force: 25

APPENDIX G

ALLOCATION OF DISPATCHER WORK TIME BETWEEN MAJOR TASKS

<u>task</u>	<u>Div. 1</u>	<u>Div. 3</u>	<u>Div. 9</u>	<u>Average</u>
Window work	31%	41%	36%	36%
Mark-up	14%	11%	14%	13%
Bus blocking	17%	16%	16%	16%
Timekeeping	14%	14%	14%	14%
Miscellaneous	23%	18%	20%	20%

Source: Division Managers