

RAILROAD INDUSTRY JOB
ANALYSIS

Transportation Clerk

Jobs which are common throughout the railroad industry have major similarities from property to property. While minor variations do exist from railroad to railroad, and sometimes from location to location on the same railroad, the underlying personnel requirements of a specific job classification tend to remain relatively constant throughout the industry. With this fact in mind, the Railroad Personnel Association has developed this job analysis consisting of three basic parts:

PART A - Duties and Responsibilities; this is a list of core tasks which are normally the "backbone" of the job.

PART B - Critical Personnel Requirements; this list defines the underlying behaviors that are required of the incumbent to perform the core tasks.

PART C - Job Setting Characteristics; this part describes the conditions under which most incumbents perform the job.

Job information was supplied by a Task Force (PART D) made up of (1) job incumbents and (2) supervisors or others intimately familiar with the job; they were drawn from several different railroads. Professional direction was provided by C. H. Lawshe, PhD, Licensed Industrial Psychologist, 1005 Vine Street, West Lafayette, Indiana 47906. General procedures used and technical data are included in Part E.

Prior to release for distribution to the railroad industry, the document was reviewed and approved by the job Analysis Project Steering Committee of the Railroad Personnel Association.

GENERAL OVERVIEW

Job Summary. Performs a combination of clerical and other duties including, but not limited to: preparing switching orders, receiving and disbursing funds, computing rates and charges, preparing billing documents, scheduling crews, and maintaining a variety of records. In larger operations, work may be specialized.

Dictionary of Occupational Titles. The DOT lists nineteen related jobs. These are listed in PART A following the Duties and Responsibilities

Job Entry. All Transportation Clerks begin their initial employment via the extra-board. Constantly on call, they receive many different assignments at various locations and for varying periods of time. While many factors influence the length of time, the majority of Transportation Clerks are on the extra-board for a minimum of two years

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PART A - DUTIES AND RESPONSIBILITIES

The statements in this part are work behaviors or actions performed to achieve the objectives of the job. They were identified by the Task Force and are sometimes called tasks or activities. The Importance Degree following each statement was assigned by the Task Force and indicates its relative importance on an industry wide basis. (5 Must Important)

While on the extra-board, a Transportation Clerk receives many different assignments for varying periods of time. These assignments consist of unique combinations of the Duties and Responsibilities listed below. Normally, essentially all incumbents will be called on to perform each Duty and Responsibility within the first two years on the job.

1. Operates alphabetic and numeric data entry equipment similar in operation to electric typewriter, to transcribe or enter data onto punchcards, paper or magnetic tape, discs, or magnetic cards, and to record data for subsequent processing by automatic or electronic data processing equipment (Importance Degree: 5)
2. Compiles, prepares, and handles transportation billing documents listing details of freight shipped (Importance Degree: 4)
3. Prepares forms and/or performs various clerical activities required for hazardous shipments, dimensional loads, international shipments, diversions and re-consignments, and other specialized situations (Importance Degree: 5)
4. Prepares switching orders or document for railroad yard switching crew or train crew (Importance Degree: 4)
5. Compiles and computes freight rates, passenger fares, and other charges for transportation services, according to rate tables and tariff regulations (Importance Degree: 2)
6. Notifies members of train, engine and yard crews and other clerks to report for duty or meetings (Importance Degree: 4)
7. Records time each train arrives and departs from station or terminal and maintains car movement records and related documents (Importance Degree: 4)
8. Verifies identity, contents, and destination of freight cars entering, departing, or moving within a yard; may physically verify or observe closed circuit video devices (Importance Degree: 4)

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9. Operates communications equipment, or talks over telephone or radio to transmit and receive train orders, messages, clearances and track car line-ups (Importance Degree: 4)
10. Compiles demurrage and detention data and/or charges using basic rates from tariffs and/or rate table (Importance Degree: 3)
11. Compiles employees' time and production records (Importance Degree: 2)
12. Assigns railroad freight cars according to type and amount of cargo to be transported, in accordance with rules and directives, and routes them to other railroad divisions or designated shippers (Importance Degree: 3)
13. Supervises and coordinates work of other clerks including making job assignments and checking work performances (Importance Degree: 3)
14. Performs a variety of clerical duties involving office equipment such as copying machines, typewriters, facsimile machines, calculators and computer components (Importance Degree: 4)
15. Operates vehicle to transport personnel, deliver mail, and perform messenger duties (Importance Degree: 2)
16. May load, secure, and unload truck trailers and/or containers on flat-cars, using prescribed equipment (piggyback) (Importance Degree: 2)
17. Weighs cars using automated or manual scales (Importance Degree: 2)
18. Installs, services, and removes car heaters and may inspect perishable freight (Importance Degree: 1)
19. Takes dictation and transcribes notes for correspondence investigations, and hearings (Importance Degree: 2)
20. Retrieves and provides car movement information for verification or in response to requests from other departments, shippers, or other railroads (Importance Degree: 3)
21. Files, arranges, and sorts a variety of documents, forms, mail, and records (Importance Degree: 2)
22. Operates a variety of remote control devices in order to control switch points, block signals, interlocking signals, and train order signals (Importance Degree: 3)

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23. Inspects damaged freight and prepares forms in response to customer claims or when otherwise required (Importance Degree: 2)
24. Receives cash from customers or employees in payment for goods or services and records transactions (Importance Degree: 1)

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25. Compiles and records information pertaining to the repair and maintenance of railroad equipment, such as materials used, types and locations of repairs made, and hours expended. NOTE: On some properties clerks in mechanical departments are on a different seniority roster
(Importance Degree: 2)
26. Performs janitorial duties (Importance Degree: 2)
27. Loads and unloads freight from cars and sometimes from trailers (Importance Degree: 2)
28. Types letters, reports, notes and documents from drafts, transcribing machines, or recorders (Importance Degree: 3)
29. Inspects the condition of passing trains and equipment and gives appropriate signal to train crews (Importance Degree: 3)

The following jobs are listed in the Dictionary of Occupational Titles. Each is in effect a specialization or "shred-out" of the generic category of transportation

Timekeeper	203.502-030 Key punch Operator	215.367-022
	209.367-054 Yard Clerk	215.563-010 Caller
Clerk	209.562-010 Clerk, general	219.462-014 Train
Clerk	211.462-010 Cashier	221.362-026 Road
Checker	211.467-030 Station Agent II	222.387-014 Car
Telegrapher	213.362-011 Console Operator	236.562-010
Telegrapher Asst.	214.362-010 Car Record Clerk	236.562-014
Agent-Telegrapher	214.362-014 Doc. Billing Clerk	910.137-038
Distributor	214.362-038 Rate Clerk	910.367-014 Car
	215.362-014 Dispatcher Clerk	

This job analysis has been prepared for use in personnel administration. It is not intended to interfere with any changes that may be made from time to time in this particular content of a position or the tasks that may be assigned to a position. It is not an agreement with any union nor is it intended to change or interpret existing contract provisions, practices, or policies.

Listings of job content, duties and responsibilities, and physical demands of the incumbent are meant to be descriptive only. They are not for the purpose of expanding or limiting existing employee rights to work or of restricting the carriers in making assignments, supervising the work force, determining physical qualifications, or fitness and ability of individual employees.

PART B - CRITICAL PERSONNEL REQUIREMENTS

Each numbered and underlined item in this part is a generic category of behavior (a) which can be observed and/or reported, (b) which is common to a variety of jobs, and (c) which was judged by the Task Force to be critical for performing this job in a safe and satisfactory manner. It is sometimes called a performance domain.

Listed under each general category is one or more specific job elements identified by the Task Force (a) as commonly occurring and (b) as representative of the category. Collectively, those under a particular category constitute an operational definition of that category and delineate a personnel requirement of the job.

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i. Understanding Printed/Written Instructions

- Reads way bills, bills of lading, and switch bills
- Reads car initials and numbers directly from car or on video screen
- Reads job procedural guides, instruction manuals, and bulletins
- Reads computer entry-code guides
- Reads updated instructions on current handling
- Reads various computer printouts including train consists
- Reads federal regulatory documents dealing with the handling of hazardous materials
- Reads various Association of American Railroad publications including: Official Railway and Equipment Register, Open and Prepaid Stations, and Commodity Code book

This performance domain is a component of each of the following "Duties and Responsibilities" listed in PART A: No's. 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 17, 19, 20, 21, 23, 24, 25, & 28

2. Performing Computer Related Activities

NOTE: Computer related activities of Transportation Clerks are normally confined to the use of computer terminals for retrieving file information and for input purposes including some of the activity detailed under Typewriting Verbal and/or Numerical Material which is No. 6 in this list. However, some individuals in this classification, normally those with seniority, move into active computer activity.

This performance domain is a component of each of the following "Duties and Responsibilities" listed in PART A: No's. 1, 2, 3, 4, 5, 7, 8, 12, 14, & 20.

3. Understanding Oral Communications

- Receives orders from customers by telephone to release or set cars
- Receives oral instructions from supervisor
- Receives oral information from other railroad personnel including: dispatcher, trainmaster, yardmaster, and chief clerk
- Receives telephone information from employees including information on layoffs and work assignments
- Receives billing information by telephone from shippers and other railroad personnel

This performance domain is a component of each of the following "Duties and Responsibilities" listed in PART A: No's. 2, 6, 9, 13, 19, 20, & 28

4. Dealing with Customers/Clients

- Handles customer inquiries regarding car movement
- Handles customer complaints on such matters as mishandled cars, car delays, bills, and shipping or property damage
- Provides customer information on request including: train schedules, rates, routes, car location, and special handling information

This performance domain is a component of each of the following "Duties and Responsibilities" listed in PART A: No's. 2, 3, 10, 12, 20, 23, 24, 25, & 28

5. Performing General Clerical Activity

- Makes out various schedules of work, production, appointments, arrivals, departures, or other matters
- Investigates, traces, or follows-up various forms, records, orders, materials, or other items
- Makes routine checks for the presence or absence of items, such as receipt of materials, supplies on hand, and the like
- Checks items to make certain that correct procedures have been followed

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5. Performing General Clerical Activity (continued)

- Marks, stamps, signs, or stencils identification, time, date, cancelled postage permits, specifications, or other data on forms, mail, stock, or other items, by hand or using a stamping machine, stencil, or similar equipment

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- Sorts various forms, mail, or other items, by hand, into predetermined groups or sequences
- Addresses forms, envelopes, cards, folders, packages, or other items by hand
- Affixes tags, labels, postage stamps, or other special forms to envelopes, folders, packages, crates, or other items by hand
- Assembles various forms, records, or other items into specific groups or sequences

This performance domain is a component of each of the following "Duties and Responsibilities" listed in PART A: No's. 1, 2, 3, 4, 5, 7, 8, 10, 11, 14, 15, 20, 21, & 28

6. Typewriting Verbal and/or Numerical Material

NOTE: While some clerks use conventional typewriters, more and more railroads are computerizing operations so that much of the same work is now done on the keyboard of a computer terminal (See No. 2 above)

- Typewrites straight copy from correct forms/draft
- Typewrites straight copy from rough draft
- Prepares routine lists of specific items, numerical and/or verbal, according to designated system using a typewriter
- Copies desired data from one form or record into the proper place on another form or record using typewriter
- Records on special forms or records all items of particular type(s) or classification(s) using a typewriter
- Sends and/or receives written telegraphic messages to and from various destinations, using a telegraphic typewriter such as a Teletype or Multiplex

This performance domain is a component of each of the following "Duties and Responsibilities" listed in PART A: No's. 1, 2, 3, 4, 10, 14, 19, 20, 25, & 28

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7. Making Oneself Understood Orally

- Calls crew members to advise them of work assignments
- Conveys information by telephone or radio to yardmasters and trainmasters including data on hazardous shipments and mis-routes
- Conveys reassignment instructions to yard personnel usually by telephone
- Notifies shippers and consignees of freight arrivals

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- Transmits billing information by telephone to other railroads

This performance domain is a component of each of the following "Duties and Responsibilities" listed in PART A: No's. 3, 6, 9, 13, 20, & 29

8, Processing Data/Information (by hand)

- Copies desired data from one form or record into the proper place on another form or record by longhand
- Makes simple or routine entries in record books or special or standard forms by longhand
- Selects and/or gathers specific data, information, or desired items, according to standard operating procedures or upon request
- Compiles lists of numerical, verbal, or other descriptive data
- Corrects or marks errors found in figures, calculations, operation forms, or record book data, by hand
- Classifies informational material, correspondence, special forms, records, orders, merchandise, or other items, following standard or accepted methods of systematized arrangement
- Sets-up files and/or codes, indexes, tabs or otherwise prepares classified material for filing or identification, using standard or accepted systems

This performance domain is a component of each of the following "Duties and Responsibilities" listed in PART A: No's. 1, 2, 3, 4, 5, 7, 8, 10, 11, 12, 17, 19, 20, 23, 24, 25, & 28

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In addition to the eight personnel requirements listed above, the Task Force identified two additional ones which, while not critical for the job in general, are nonetheless critical for specific clerk assignments or positions:

- Recognizing colors
- Operating Motor Vehicle

PART C JOB SETTING CHARACTERISTICS

Each item in this part is a job setting characteristic. It is a structural, physical or psychological condition (normally extrinsic to the work behavior itself), which impinges on the comfort, safety, or well being of the job incumbent. Included are any conditions which elicit from the incumbent affective reactions which influence productivity/job performance or which otherwise have significant impact. The Task Force identified these as normally being characteristic of the job.

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1. Job setting characteristics
 - Schedule includes both day and night hours
 - Schedule has irregular hours with possibility of extended hours/overtime
 - Schedule includes some Saturdays, Sundays, and holidays
 - Variable hours per week result in variable income level
 - Meal times vary from day to day
 2. Physical environmental characteristics
 - work is frequently performed out-of-doors involving exposure to weather conditions
 - Some environmental conditions (other than weather) exist but none is important*
 3. Job characteristics with safety implications
 - walks on irregular and/or icy surfaces which may be littered with spillage, other material, and yard obstructions*
 - performs regular duties in the presence of moving equipment*
 4. Other job setting characteristics
 - work requires frequent revisions in assignments, sometimes seemingly contradictory, due to changing priorities
 - work may require performance of duties in unfamiliar locations
 - work may need to be performed when incumbent is fatigued because of extra long or continuous hours
 - work consists of frequent routine or highly repetitive activity
 - work involves frequent interruptions, obstructions, or changes
 - work may involve great emotional pressure
 - At some locations, work is performed in isolation with little or no contact with others
 - work may require protective clothing and/or devices for certain assignments

*Items designated in this manner were identified by an earlier Task Force. Findings are presented in Consulting Report No. 55 by C.H. Lawshe, Ph.D., dated October 24, 1977 and distributed by the Association of American Railroads.

PART I) - CERTIFICATE

We, the undersigned, met at the place and on the date indicated below to develop this job analysis. After extensive discussion we developed the attached document under the general guidance of Dr. C.H. Lawshe.

We individually and collectively certify that the duties and responsibilities, the critical personnel requirements, and the job setting characteristics presented in the document accurately and fairly describe the job as we know it.

BURLINGTON NORTHERN INC.

E. Rangel, Supervisor-Compass Operations

Daulene Mattox, Chief Clerk

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Theodore Hnatow, Asst. Manager-Terminal Services

Michael F. Conway, Yard Clerk

CHICAGO AND NORTHWESTERN TRANSPORTATION COMPANY

James W. Holub, In-Bound Train Desk Clerk

ELGIN, JOLIET AND EASTERN RAILWAY COMPANY

Joh Bonnar, Supervisor-Machine Applications and Car Control

ILLINOIS CENTRAL GULF RAILROAD COMPANY

John Nurnberger, Assistant Agent

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LOUISVILLE & NASHVILLE PACIFIC COMPANY

Marshall E. Daniel, Agent Terminal Operations

MISSOURI PACIFIC COMPANY

H.M. O'Dea, Assistant Agent

R. K. Ingle, Rate Clerk

SANTA FE RAILWAY

Gwendolyn E. Ellis, Assistan Agent

Reginald Richmond, Relief Clerk

SOUTHERN RAILWAY COMPANY

S. D. Gray, Manager-Stations and Terminals

UNION PACIFIC RAILROAD

S. K. Adams, Supervisor-Program Development
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Technical Training

400 West Madison Street
Chicago, Illinois

February 4, 1981

This job analysis identifies the major duties/responsibilities, personnel requirements and job setting characteristics which are common to most railroads. It has been reviewed and approved for distribution by the Job Analysis Project Steering Committee of the Railroad Personnel Association. It is the province of individual railroads to determine the completeness and adequacy of this description for their own property.

Date

Robert L. Wilson for the Committee

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PART E - PROCEDURAL AND TECHNICAL NOTES

The first three parts of this document include all of the information provided by members of the Task Force. PART E does not contain additional data about the job itself; instead, (1) it outlines in general terms the procedures employed in generating the information and (2) it provides technical information that supports the validity of the results. More detailed information on these topics is presented in the publication, The Railroad Industry Job Analysis Project: A Final Report, distributed by the Association of American Railroads.

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Note No. 1: The Task Force

The Task Force which provided the job information for this job analysis was composed of six job incumbents and nine officers intimately familiar with the job from ten different railroads. They met February 4, 1981, at the offices of the Chicago and North Western Transportation Co., 400 West Madison Street, Chicago, Illinois.

Note No. 2: Task Analysis (PART A)

Members of the Task Force were supplied with a first draft list of tasks which had been developed in prior study of the job. In conference fashion, they reviewed and analyzed these statements. Indicated modifications and additions were made, and inappropriate ones were deleted. The resulting consensus of the group provided the 29 tasks in PART A of this document.

Importance Rating. Once the list was finalized, members of the Task Force independently rated each task in terms of its importance to the job, using a zero to five rating scale. Subsequently, individual ratings for each task were averaged and rounded; these means appear as "Importance Degree" values after the listed tasks. Reliability coefficient: $r = .88$.

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Note No. 3: Personnel Requirements Analysis (PART B)

Initial Criticality Rating. Members of the Task Force were supplied with a personnel requirements questionnaire listing the 36 "performance domains" which appear in Table 1 on the next page. They rated each of these as "C" (critical for the safe and satisfactory performance of the job), "H" (helpful but not critical), or "N" (not involved in the job). Ratings were tabulated and eight of the domains were retained for further consideration. A domain was retained if at least eleven of the fifteen members said "critical" and the remainder said "helpful." Reliability coefficient: $r = .97$.

Relative Criticality Rating. The eight performance domains which survived the initial rating process were again submitted to members of the group. Following extensive discussion, each member distributed 100 points among the eight domains based upon personal judgment of relative criticality. Individual point awards for each domain were averaged. Reliability coefficient: $r = .89$.

Table 1
Results of Task Force Criticality Ratings

Number Joba	Orig. b	Personnel Requirement	Critical	
			Yesc	No
	1	Understanding/applying mechanical principles		X
	2	understanding printed/written information	X	
	3	understanding oral communication	X	
	4	Making oneself understood orally	X	
	5	understanding quantitative information		X
	6	Understanding visual displays		X
	7	Judging condition or status of objects/parts		X
	8	understanding graphic information		X
	9	Exercising fine physical coordination/dexterity		X
	10	Recognizing sounds/changes in sounds		X
	11	Climbing and balancing		X
	12	Making logical choices and/or drawing logical conclusions		X
	13	Exercising physical strength and/or endurance		X
	14	Taking actions and/or making decisions affecting security/well being of others		X
	15	Performing mathematical computations		X
	16	Recalling information required for work activity		X
	17	Making oneself understood in writing		X
	18	Recognizing colors		X
8	19	Processing data/information (by hand)	X	
	20	Judging speed and/or distance of moving objects/parts		X
	21	Estimating quantity/size without precise information		X
	22	Understanding/applying electrical and/or electronic principles		X
	23	Using mechanical measuring devices		X
4	24	Dealing with customers/clients/public	X	

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	25	Handling money		X
	26	Using hand tools		X
	27	Operating motor vehicle		X
	28	Discriminating fine visual detail at eight inches or less		X
6	29	Typewriting verbal and/or numerical material	X	
	30	Performing stenographic activity		X
	31	Performing general clerical activity	X	
	32	Performing administrative activities		X
	33	Operating office machines/equipment		X
2	34	Performing computer related activities	X	
	35	Exercising eye-hand coordination		X
	36	Planning/directing work of others		X

- These numbers correspond to those in PART B.
- These are the numbers in the original questionnaire.
- The relative criticality of each is reflected in the graph on the next page.

Critical Personnel Requirements. Each performance domain receiving five percent or more of the total points assigned was considered to be critical to the satisfactory performance of the job. Because all met this minimum, none was eliminated. Resulting percentages are shown in the graph below and reflect the relative criticality of the critical personnel requirement.

Numbers outside the circle correspond to the numbers of the respective requirements listed in PART B.

percentage values in the segments reflect the relative criticality of the critical personnel requirements.

Operational Definition. Each performance domain is "a generic category of behavior that is common to a variety of jobs." For a particular job it needs to be "operationally defined"; that is, specific work behavior elements characterizing the performance domain need to be identified. Members of the group agreed on work behavior elements (a) which are commonly occurring in this job and (b) which are representative of the generic category. These are listed under the several performance domains in PART B.

Component Analysis. Following the operational definition of a performance domain, each member independently examined that domain against the tasks in PART A. Using an answer sheet, each member recorded "is" or "is not" a component of each of the tasks. Results were subsequently tabulated, and a domain was considered to be a component of a specific task if twelve or more of the fifteen task force members so indicated. Results are recorded after the elements for each performance domain in PART B.

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Note No. 4: Job Setting Analysis (PART C)

Those structural, physicals or psychological conditions in which or under which the job activity is performed were identified by the Task Force. This was accomplished with the aid of "a thought starter" check-list of characteristics which were extensively discussed and analyzed. Those listed in PART C represent the group consensus as to what is normally characteristic of the job.

Note No. 5: Reliability of Results

Any job analysis activity is subjective in nature in that it utilizes the judgements and/or perceptions of human beings. For this reason, the consistency of the judgements of the Task Force members was examined. Members were assigned to two sub-groups, and the various statistical value discussed in the above notes were determined separately for each group. The degree of agreement between the sub-groups was examined by computing the Pearson product-moment coefficient of correlation between the two sets of values. The resulting coefficient can range from zero (no agreement between the groups) to 1.00 (perfect agreement between the groups). A standard statistical adjustment (Spearman-Brown formula) was applied to the coefficient in order to estimate the degree of agreement between the entire group of fifteen and another group of the same size. Results obtained in this manner are reported as reliability coefficients (r) in order to estimate the degree of agreement between the entire group of fifteen and another group of the same size. Results obtained in this manner are reported as reliability coefficients (r) in Note 2 and Note 3 above. All obtained reliability coefficients (r's = .88, .97, and .81) are high and meet or exceed generally accepted professional standards. Coefficients of this magnitude indicate a high degree of rater consistency (or agreement), and lead to the conclusion that the Task Force members are either "all right" or "all wrong" in their judgements and/or perceptions about what is important in the job and what the critical personnel requirements are. With a Task Force composed of both incumbents and officers, with members drawn from several different railroad properties, and with the demonstrated high degree of agreement between their members, there is no reasonable basis upon which to refute their findings. All of these facts combine to give credibility to these job analysis results.

C. H. Lawshe, Ph.D.
Licensed Industrial psychologist

February 25, 1981
West Lafayette, Indiana