NORTH DAKOTA RAILROAD LINE SEGMENT DATABASE TECHNICAL REFERENCE

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December 1991

UGPTI Staff Paper No. 91

North Dakota Railroad Line Segment Database Technical Reference

by

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December 1991

Acknowledgement

This report has been prepared with funds provided by the Federal Railroad Administration of the United States Department of Transportation and the North Dakota Department of Transportation.

Disclaimer

The data, methods, and findings presented herein do not necessarily reflect the views or policies of any of the above agencies, and are the sole responsibility of the Upper Great Plains Transportation Institute.

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INTRODUCTION

The Railroad Industry uses a variety of information and data sources to present planners and decision makers with the best environment facilitating the decision process. The management of this information and its environment is vital to ensure that decision makers have an operational framework allowing fast, easy, and meaningful access to relevant data. Equally important is the management of the relationships inherent in the data or relationships of interest to a user within this environment. This report describes the design and implementation of such a system incorporating a relational database environment.

The North Dakota Railroad Line Segment Database is a database program designed to access and present information about railroad line segments in North Dakota. The program presents line segment information for two major descriptive categories; physical and operating data and traffic characteristics. The physical and operating data provide the physical and operational attributes of the line segment including rail, roadbed, and train operating characteristics. The traffic portion of the program presents the grain movement traffic statistics for the last three and/or five years. This data is divided into line segment and city data and provides total grain movement shipments for commodities, modes(three types of rail movements plus truck traffic), and shipment totals to various destinations.

The development of this database system provides a fundamental procedure for a Railroad Geographical Information System (GIS). This system will also be an integral part of a Rural Transportation Geographical Decision Support System (GDSS) presently under development. The GDSS will incorporate the North Dakota Railroad Line Segment Database into its geographical and transportation modeling information systems. The

application of GDSS to Railroads is an incipient process and much remains to be done to fully utilize this information technology in the Railroad Industry.

The database system is a dBASE IV Application Generator produced program and operates within a dBASE IV environment with the assumption of some moderate user familiarity with dBASE (only for limited editing functions). It is a menu-driven program presenting the user with a series of menus containing a selection of options which facilitate the displaying and editing of the underlying databases. Individual database records can be chosen by either entering the indexed name of the record or picking the record name from a list containing the indexed names of the available records. Custom designed screen formats are used to display the individual database records selected by the user. In addition to displaying the database records, editing functions are included.

INSTALLATION AND IMPLEMENTAION

The program can be copied to a dBASE IV environment (inside a dBASE IV directory or within an environment accessed by a path name including a dBASE IV directory) with a copy command from a PC disk operating system. The program is activated by entering the following command at the system prompt.

C:>dBASE NDRR

This command must be entered from within the directory containing the program.

The first screens the user sees are the dBASE IV introductory screens. These are followed by the first program screen welcoming the user to the North Dakota Railroad Line Segment Database. The program's main menu is reached by hitting ENTER (RETURN) or waiting for the welcome screen to disappear. The program is then loaded by dBASE IV. This loading operation will take a few seconds.

The main menu provides the entry point to either the physical and operating database or the traffic characteristics database. Moving the up and down cursor keys to one of the options and hitting ENTER will put the user into the selected database environment. The main menu also has an option to exit the program to the disk operating system.

The two database environments have identical bar menus at the top of the screen. The options on the bar menus include DISPLAY RECORD, UPDATE A RECORD, MAINTNCE, and EXIT. These options control pulldown menus that perform similar tasks within each environment although the Traffic database structure has more underlying databases and requires more detailed pulldown menus.

The DISPLAY RECORD pulldown menu gives the user the choice of accessing a record by two different means. The user can either enter the name of the record being sought or they may pick the record name from a "picklist" displayed on the screen. If the user decides to enter the record name the program prompts for the name before displaying the record on the formatted screen. If the user picks the record name from the list the program goes directly to the screen display. Once inside the display screen the user may find other records by using the Page Up and Page Down keys. These keys will move the display screen back and forth inside the database displaying the available records. The records will be shown in the order of the indexed data field. The display screen is exited by hitting the escape key (ESC). This will return the user to the previous environment.

Editing functions are reached through the UPDATE RECORD menu. Menu selections allow the addition, deletion, or editing of individual records in the database.

After an edit function has been done the user should back up the changes by accessing the

MAINTNCE menu and selecting the Back Up A File option. This option backs up the changed database and reindexes the database index files.

Exiting the program (application) may be done from the bar menus and from many pulldown menus. The exits are either to DOS or to the dBASE IV Control Center (the Exit Application option).

A menu selection is made by moving the green highlights bar to the desired selection and hitting enter.

EXAMPLES

The following examples are typical user queries performed by the program.

To find the physical and operating characteristics of line-segment BN009 the user would would choose the following option at the main menu:

1. PHYSICAL AND OPERATING DATA

From the UPDATE RECORD popup menu choose either

ENTER A LINEID

 \mathbf{or}

CHOOSE A LINEID

If ENTER A LINEID was selected the next screen would prompt the user for Lineid to be found. Entering a Lineid will cause the program to display the line segment data for the entered Lineid or return the message, "Record not found", if the lineid record was not found.

If CHOOSE A LINEID was selected a "picklist" containing the available Lineids in the database appears on the righthand side of the screen. By moving the green highlight bar to a Lineid and hitting ENTER the user selects a Lineid record to display.

To find the totals of various commodities shipped from Carrington the user would select the following option at the main menu.

2. TRAFFIC CHARACTERISTICS

From the DISPLAY RECORD popup menu choose

FIND COMMODITY/MODE TOTALS

From the FIND COMMODITY/MODE TOTALS popup menu choose either

ENTER A CITY

or

CHOOSE A CITY

If ENTER A LINEID was selected the next screen would prompt the user for Lineid to be found. Entering a Lineid will cause the program to display the line segment data for the entered Lineid or return the message, "Record not found", if the lineid record was not found.

If CHOOSE A LINEID was selected a "picklist" containing the available Lineids in the database appears on the righthand side of the screen. By moving the green highlight bar to a Lineid and hitting ENTER the user selects a Lineid record to display.

To find the amount of wheat shipped to Duluth from Cavalier choose option 2 in the main menu.

2. TRAFFIC CHARACTERISTICS

From the DISPLAY RECORD popup menu choose

FIND LINE TOTALS

From the FIND LINE TOTALS popup menu choose either

ENTER A LINEID

or

CHOOSE A LINEID

If ENTER A LINEID was selected the next screen would prompt the user for Lineid to be found. Entering a Lineid will cause the program to display the line segment data for the entered Lineid or return the message, "Record not found", if the lineid record was not found.

If CHOOSE A LINEID was selected a "picklist" containing the available Lineids in the database appears on the righthand side of the screen. By moving the green highlight bar to a Lineid and hitting ENTER the user selects a Lineid record to display.

DATABASE DESCRIPTIONS

DATABASE

PHYSICAL

This database contains the physical and operating characters of line segments in the database. The file is entered on the field lineid and has 37 fields of information. The backup database is PHYSBACK.

CITYALL

This database contains all the city records for commodity movements and mode totals for the last years. The index is city and there are 41 fields of information. The lineid of the city is included. The backup database is CITYBACK.JBF.

The Data elements are named as follows:

<COMMODITY><YEAR>

For example

WHEAT87

is the amount of wheat shipped in

1987.

SINGLE89

is the amount of grain that was

shipped by single car movements

in 1989

LINEALL

LINEALL contains the commodity and mode movement totals for the line segments of the past three years. The backup database is ALLBACK.

The Data elements are named as follows:

<COMMODITY><YEAR>

For example

WHEAT87

is the amount of wheat shipped in

1987.

SINGLE89

is the amount of grain that was

shipped by single car movements

in 1989

DESTALL

DESTALL contains the total amount shipped to seven destinations from the cities in the database. It covers the last three years and is indexed by city. There are 23 data fields and the backup database is DESTBACK.

The Data elements are named as follows:

<DESTINATION><YEAR>

For example

DULUTH87 is the 1987 grain movement totals to Duluth.

LINEDEST

This database holds the grain movement totals shipped to seven destinations from the available lineids in the database. It is indexed by lineid, covers the last three years, and has 22 data fields. The backup database is LDESBACK.

The Data elements are named as follows:

<DESTINATION><YEAR>

For example

DULUTH87 is the 1987 grain movement totals to Duluth.

LINETOTA

LINETOTA contains the annual grain movement totals from the available lineids in the database. It is indexed by lineid, covers the period from 1985 to 1989, and has six data fields. The backup database is TOTABACK.

The Data elements are named as follows:

YEAR<YEAR>

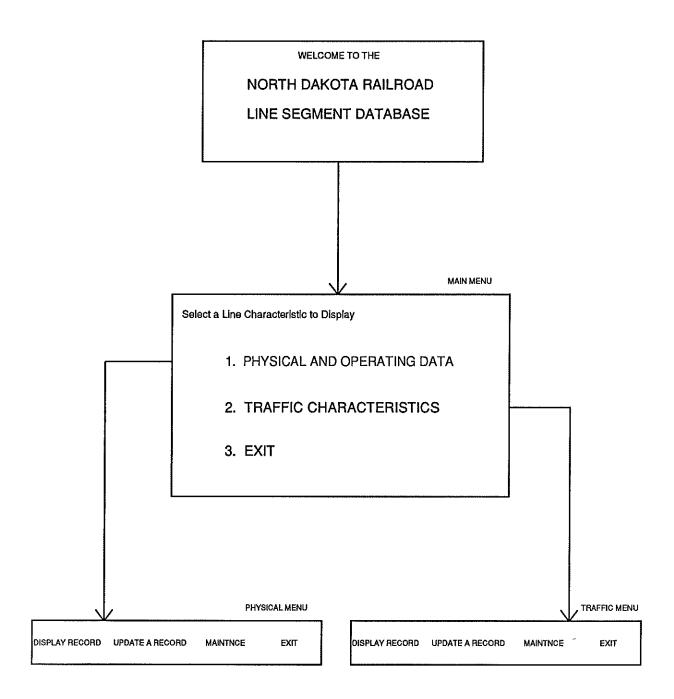
For example

YEAR1985

is the total amount shipped on the line in

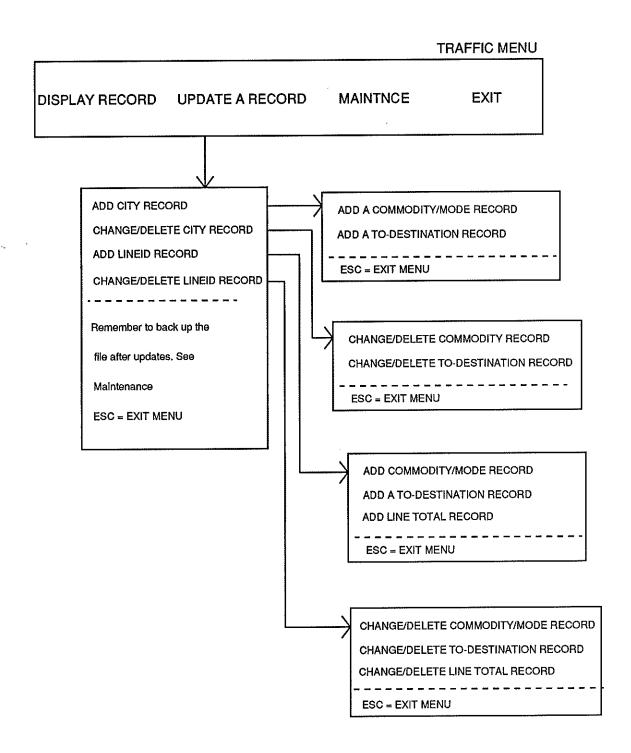
1985.

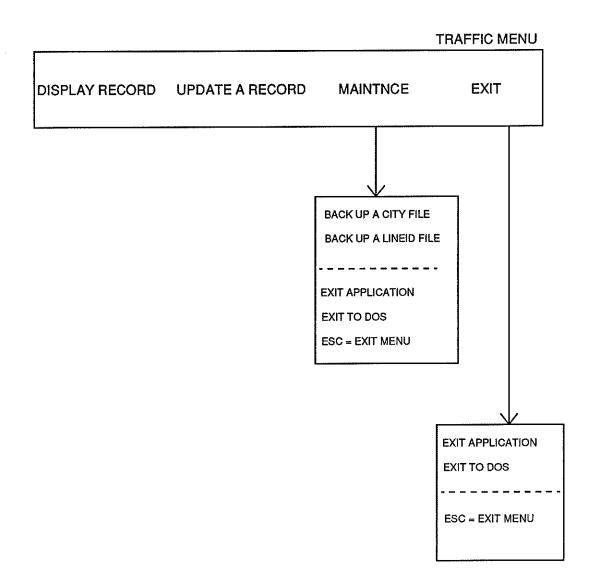
Menu Structure



PHYSICAL MENU MAINTNCE **EXIT** DISPLAY RECORD UPDATE A RECORD BACK UP A FILE ENTER A LINEID CHOOSE A LINEID **EXIT APPLICATION EXIT TO DOS EXIT APPLICATION** ESC = EXIT MENU EXIT TO DOS ESC = EXIT MENU ADD A RECORD **EXIT APPLICATION** CHANGE/DELETE A RECORD EXIT TO DOS ESC = EXIT MENU Remember to back up the file after updates. See Maintenance ESC = EXIT MENU

TRAFFIC MENU **EXIT** DISPLAY RECORD UPDATE A RECORD MAINTNCE FIND COMMODITY/MODE TOTALS ENTER A CITY FIND TO-DESTINATION TOTALS CHOOSE A CITY FIND LINE TOTALS **ENTER A LINEID CHOOSE A LINEID EXIT APPLICATION EXIT APPLICATION** EXIT TO DOS EXIT TO DOS ESC = EXIT MENU ESC = EXIT MENU ENTER A CITY CHOOSE A CITY ENTER A LINEID CHOOSE A LINEID **EXIT APPLICATION** EXIT TO DOS ESC = EXIT MENU **ENTER A LINEID** CHOOSE A LINEID EXIT APPLICATION EXIT TO DOS ESC = EXIT MENU





Physical and Operating Data Description

DEFINITIONS

Average Speed: The average speed limit over the entire length of the line.

Service Frequency: Number of train trips scheduled per week.

Maximum Trailing Tons: The maximum gross trailing tons capable of being pulled by a 2000 horsepower locomotive computed using the Davis Formula at 13 mph "Out" means in the direction away from the division point and "Back" means toward the division point.

Ruling Grade: The grade presenting the largest obstacle in both severity and length. Numbers given in percent.

FRA Class:

Percentage of the track meeting FRA standards for each particular

class.

ICC Category: Category 1: Subject to abandonment within 3 years.

Category 2: No abandonment proceedings planned.

Category 3: Abandonment pending.

Hazmat Code:

A: heavy hazardous material traffic

B: some hazardous material traffic

C: little or none hazardous material traffic

Maximum Curves: In degrees and minutes using cord definition.

Ballast:

Granite or Dresser: Crushed rock.

Pitrun: Pitrun or similar river basin rock.

Mud: Ballast which is deteriorated to the point where it could be

considered rocky dirt rather than dirty rock.

Rail Weight:

Weight of rail in pounds per yard.

Laid: Year rail was installed; This does not necessarily indicate rail age!

Weightlimit:

Maximum gross car weight in pounds.

Out of Face Maintenance:

Surface: Year at which records show out of face surface project was

completed.

Miles: The length of the last project.

Number of Ties: Total number of ties installed during last out of face tie project.

Mainline Switches:

Total number of switches on the "running" section of

track.

Total Bridge Length:

Total length of all bridges in feet.

Database Structure

Structure for database: C:\DBASE\CITYALL.DBF

Number of data records: 396
Date of last update : 05/26/90
Field Field Name Type

Date	or last update	: 00/26/90			
Field	Field Name	Type	${\bf Width}$	\mathbf{Dec}	Index
1	CITY	Character	12		Y
2	LINEID	Character	5		N
3	WHEAT87	Numeric	8		N
4	DURUM87	Numeric	8		N
5	BARLEY87	Numeric	8		N
6	SUNFLR87	Numeric	8		N
7	CORN87	Numeric	8		N
8	FLAX87	Numeric	8		N
9	OATS87	Numeric	8		N
10	BEANS87	Numeric	8		N
11	OTHER87	Numeric	8		N
	WHEAT88	Numeric	8		N
13	DURUM88	Numeric	8		\mathbf{N}
	BARLEY88	Numeric	8		N
15	SUNFLR88	Numeric	8		N
16	CORN88	Numeric	8		N
17	FLAX88	Numeric	8		N
18	OATS88	Numeric	8		N
19	BEANS88	Numeric	8		N
20	OTHER88	Numeric	8		N
21	WHEAT89	Numeric	8		\mathbf{N}
22	DURUM89	Numeric	8		N
23	BARLEY89	Numeric	8		N
24	SUNFLR89	Numeric	8		N
25	CORN89	Numeric	8		N
26	FLAX89	Numeric	8		N
27	OATS89	Numeric	8		N
28	BEANS89	Numeric	8		N
29	OTHER89	Numeric	8		N
30	SINGLE87	Numeric	8		N
31	MULTI87	Numeric	8		N
32	UNIT87	Numeric	8		N
33	TRUCK87	Numeric	8		N
34	SINGLE88	Numeric	8		N
35	MULTI88	Numeric	8		N
36	UNIT88	Numeric	8		N
37	TRUCK88	Numeric	8		N
38	SINGLE89	Numeric	8		N
39	MULTI89	Numeric	8		N
40	UNIT89	Numeric	8		N
41	TRUCK89	Numeric	8		N
** To	tal **		330		

Structure for database: C:\DBASE\DESTALL.DBF

Number of data records:	: 396		
Date of last update : 0	5/27/90	_	
Field Field Name	Type	Width Dec	
1 CITY	Character	12	Y
2 LINEID	Character	5	N
3 DULUTH87	Numeric	8	N
4 MINNSTP87	Numeric	8	N
5 ÖMIDWEST87	Numeric	8	N
6 MIDSWEST87	Numeric	8	N
7 PACNWEST87	Numeric	8	N
8 NODAK87	Numeric	8	N
9 OTHER87	Numeric	8	N
10 DULUTH88	Numeric	8	N
11 MINNSTP88	Numeric	8	N
12 OMIDWEST88	Numeric	8	N
13 MIDSWEST88	Numeric	8	N
14 PACNWEST88	Numeric	8	N
15 NODAK88	Numeric	8	N
16 OTHER88	Numeric	8	N
17 DULUTH89	Numeric	8	N
18 MINNSTP89	Numeric	8	N
19 OMIDWEST89	Numeric	8	N
20 MIDSWEST89	Numeric	8	N
21 PACNWEST89	Numeric	8	N
22 NODAK89	Numeric	8	N
23 OTHER89	Numeric	8	N
** Total **		186	
_ 0 0002			

Structure for database: C:\DBASE\LINEALL.DBF

Structure for databa		EALL, DUI		
Number of data reco				
Date of last update		TTY: 1:1	The	
Field Field Name	Type	Width	Dec Index	
1 LINEID	Character	5	Y	
2 WHEAT87	Numeric	8	N	
3 DURUM87	Numeric	8	${f N}$	
4 BARLEY87	Numeric	8	N	
5 SUNFLR87	Numeric	8	$\mathbf N$	
6 CORN87	Numeric	8	N	
7 FLAX87	Numeric	8	N	
8 OATS87	Numeric	8	N	
9 BEANS87	Numeric	8	N	
10 OTHER87	Numeric	8	N	
11 WHEAT88	Numeric	8	N	
12 DURUM88	Numeric	8	N	
13 BARLEY88	Numeric	8	N	
14 SUNFLR88	Numeric	8	N	
15 CORN88	Numeric	8	N	
16 FLAX88	Numeric	8	N	
17 OATS88	Numeric	8	N	
18 BEANS88	Numeric	8	N	
19 OTHER88	Numeric	8	N	
20 WHEAT89	Numeric	8	N	
21 DURUM89	Numeric	8	N	
22 BARLEY89	Numeric	8	N	
23 SUNFLR89	Numeric	8	N	
24 CORN89	Numeric	8	N	
25 FLAX89	Numeric	8	N	
26 OATS89	Numeric	8	N	
27 BEANS89	Numeric	8	N	
28 OTHER89	Numeric	8	N	
29 SINGLE87	Numeric	8	N	
30 MULTI87	Numeric	8	N	
31 UNIT87	Numeric	8	N	
32 TRUCK87	Numeric	8	N	
33 SINGLE88	Numeric	8	N	
34 MULTI88	Numeric	8	N	
35 UNIT88	Numeric	8	N	
36 TRUCK88	Numeric	8	N	
37 SINGLE89	Numeric	8	N	
37 SINGLESS 38 MULITSS	Numeric Numeric	8	N	
	Numeric Numeric	8	N	
39 UNIT89	Numeric Numeric	8	N	
40 TRUCK89	numeric	o 318	TA	
** Total **		910		

Structure for database: C:\DBASE\LINEDEST.DBF Number of data records: 96

Number of data records: 96					
Date of last update : 05	5/27/90				
Field Field Name	Type	Width	Dec Index		
1 LINEID	Character	5	Y		
2 DULUTH87	Numeric	8	N		
3 MINNSTP87	Numeric	8	N		
4 OMIDWEST87	Numeric	8	N		
5 MIDSWEST87	Numeric	8	N		
6 PACNWEST87	Numeric	8	N		
7 NODAK87	Numeric	8	N		
8 OTHER87	Numeric	8	N		
9 DULUTH88	Numeric	8	N		
10 MINNSTP88	Numeric	8	N		
11 OMIDWEST88	Numeric	8	N		
12 MIDSWEST88	Numeric	8	N		
13 PACNWEST88	Numeric	8	N		
14 NODAK88	Numeric	8	N		
15 OTHER88	Numeric	8	N		
16 DULUTH89	Numeric	8	N		
17 MINNSTP89	Numeric	8	N		
18 OMIDWEST89	Numeric	8	N		
19 MIDSWEST89	Numeric	8	N		
20 PACNWEST89	Numeric	8	N		
21 NODAK89	Numeric	8	N		
22 OTHER89	Numeric	8	N		
** Total **		174			

Structure for database: C:\DBASE\LINETOTA.DBF

Number of data recor	ds: 98		
Date of last update	: 05/27/90		
Field Field Name	Type	Width	Dec Index
1 LINEID	Character	5	Y
2 YEAR1985	Numeric	8	N
3 YEAR1986	Numeric	8	N
4 YEAR1987	Numeric	8	N
5 YEAR1988	Numeric	' 8	N
6 YEAR1989	Numeric	8	N
** Total **		46	

Structure for database: C:\DBASE\PHYSICAL.DBF Number of data records: 48

Number of data records			
Date of last update : 0			
Field Field Name	Type	\mathbf{Width}	Dec Index
1 LINEID	Character	5	Y
2 AVGSPEED	Character	5	N
3 SERVICEFRQ	Character	9	$\mathbf N$
4 MAXTONOUT	Character	8	N
5 MAXTONBACK	Character	8	N
6 RULINGRADE	Character	5	N
7 FRACL1PCT	Character	· 4	N
8 FRACL2PCT	Character	4	N
9 FRACL3PCT	Character	4	N
10 LINEMILES	Character	6	N
11 ICC_CATGRY	Character	2	N
12 OWNER	Character	5	N
13 HAZMATCODE	Character	2	N
14 NUM_CURVES	Character	4	N
15 MAXCURVATR	Character	5	N
16 BALLAST	Character	32	N
17 RAILWT1	Character	5	N
18 RLWT1MILES	Character	5	N
19 RLWT1YEAR	Character	5	N
20 RAILWT2	Character	5	N
21 RLWT2MILES	Character	5	N
22 RLWT2YEAR	Character	5	N
23 RAILWT3	Character	5	N
24 RLWT3MILES	Character	5	N
25 RLWT3YEAR	Character	5	N
26 RAILWT4	Character	5	N
27 RLWT4MILES	Character	5	N
28 RLWT4YEAR	Character	5	N
29 WEIGHTLIMT	Character	7	N
30 OOF_SURFCE	Character	5	N
31 SURFCEMILE	Character	5	N
32 OOF_TIES	Character	5	N
33 NUM_TIES	Character	6	N
34 TIE_MILES	Character	5	N
35 MAINSWITCH	Character	4	N
36 NUM_BRIDGE	Character	$\overline{\overset{-}{4}}$	N
37 BRIDGEFEET	Character	$\overline{6}$	N
** Total **	 	$\overset{\circ}{2}16$	
		··- <u>-</u>	

Screen Display Formats

LINEID

BN073

3:15:56 pm

LINE MILES AVERAGE SPEED SERVICE FREQUENCY

34.00 25.0 3/week

CURVES

BRIDGES

NUMBER 10 MAX CURVATURE 10.00

NUMBER 1 LINEAR FEET N/A

NUMBER OF

MAINLINE SWITCH

25

WEIGHTLIMIT 263000

RULING GRADE 0.60 BALLAST Granite

RAIL WEIGHTS

WEIGHT	110.0	112.0	77.00	0.00	
MILES	29.00	4.00	1.00	0.00	
YEAR LAID	1984	1984	1902	N/A	

Hit ESC to EXIT

FRA CLASS

PERCENT 1 0.00 PERCENT 2 100 PERCENT 3 0.00

ICC CATEGORY 2 HAZMAT CODE B

MAX TRAILING TONS

OUT 6942.00 BACK 3159.00

OUT OF FACE MAINTENANCE

SURFACE 1983 MILES 34.00 TIES 1982 MILES 34.00 NUMBER_TIES 29169

Frev/Next PgUp/PgDn

LINEID

BN001

3:25:46 p

DESTINATION	1987	1988	1989
DULUTH MINN-ST.PAUL OTHER MINN/WSC MIDLAND SOUTHWEST PACIFIC NORTHWEST NORTH DAKOTA OTHER	57752 375061 768519 134984 113598 12210	35983 156108 801035 303094 516912 842 208908	48693 466244 34467 176108 167333 11424 55038

Hit ESC to EXIT

Prev/Next PgUp/PgDn

CITY ABERCROMBIE

3:22:10 p

LINEID CM052

DESTINATION	1987	1988	1989
DULUTH	113779	84639	79937
MINN-ST.FAUL	141316	105499	96046
OTHER MINN/WSC	108987	1 <i>7</i> 590	145414
MIDLAND SOUTHWEST	0	0	0
PACIFIC NORTHWEST	0	0	O
NORTH DAKOTA	51630	91150	74581
OTHER	3720	447	0

Totals in Hundredweights

Hit ESC to EXIT

Prev/Next FgUp/FgDn

	LINEID	BN001	
COMMODITY	1987	1988	1989
WHEAT DURUM BARLEY SUNFLR CORN FLAX OATS BEANS OTHER	393602 775316 312245 3248 0 0 47786 0 32608	888081 825069 180359 2155 0 407 27214 0 99598	335409 408120 153001 15470 0 0 9561 0 37548
MODE	1987	1988	1989
SINGLE CAR MULTI-CAR UNIT TRAIN TRUCK	858199 354432 0 352177	630 558 1026117 0 366207	375817 127285 205720 250486

Hit ESC to EXIT

Totals in Hundredweight

Prev/Next PgUp/PgD

3:24:36 p

CITY ABERCROMBIE LINEID CM052 3:17:40 p

COMMODITY	1987	1988	1989
WHEAT	209292	198762	267190
DURUM	37885	2 8 30	0
BARLEY	30302	22171	21609
SUNFLR	8451	6895	10194
CORN	0	0	10930
FLAX	3018	983	179
CATS	18093	2058	3400
BEANS	112391	65629	82275
OTHER	O	0	0
MODE	1987	1988	1989
SINGLE CAR	Q	0	0
MULTI-CAR	Q	0	O
UNIT TRAIN	O	O	2479
TRUCK	419434	299328	3 9 34 99

Totals in Hundredweight

Hit ESC to EXIT

Prev/Next PgUp/PgDn

2:54:17

LINEID

YEAR	TOTAL	SHIFPED
1985		1388639
1986		2472219
1987		1564808
1988		2022884
1989		959310

BN001

Totals in Hundredweight

Hit ESC to EXIT

Frev/Next FgUp/Fg

Program Files

Volume In drive C is DRIVE_C Volume Serial Number is 4164-10D3 Directory of C:\NDRR

•	<dir></dir>	08-07-90	3:03p				
****	<dir></dir>	08-07-90	3:03p	* *************************************	TOTALO	2544 05-31-90	1:14p
ADDCITY	POP	1103 05-28-90	9:49p	LINEDEST	FMO	664 05-31-90	1:46p
ADDLINE	POP	1222 05-28-90	9:49p	LINEDEST	DBO DBO	544 05-23-90	8:21p
BACKC	BCH	1139 05-28-90	12:53p	LINEIDPR	VAL	873 05-28-90	9:29p
BACKL	BCH	1407 05-28-90	1:09p	LINEIDS	DBO	1040 05-25-90	9:13p
BACKP	BCH	837 05-28-90	12:30p	LINEPHYS	PRG	414 05-31-90	10:17a
BACKUPP	POP	1034 05-28-90	10:16p	LINETEST	DBO	668 05-31-90	11:32a
BACKUPPP	BCH	843 05-28-90	12:22p	LINETEST	FMO	1456 08-05-91	2:47p
BACKUPT	POP	1184 05-28-90	10:21p	LINETOTA	NDX	3072 05-28-90	11:47p
CATALOG	CAT	607 04-24-91	12:48a	LINETOTA	BAK	393 05-30-90	7:20p
CDCITY	POP	1080 05-28-90	9:50p	LINETOTA	PRG	396 05-30-90	7:20p
CDLINE	POP	1218 05-28-90	9:51p	LINETOTA LINETOTA	MDX	6144 05-27-90	5:31p
CHRTMSTR	DBO	38996 10-21-88	12:34a		FMT	1712 05-30-90	6:46p
CITYALL	DBO	664 04-24-91	12:47a	LINETOTA LINETOTA	POP	1162 05-28-90	10:20p
CITYALL	NDX	9216 05-25-90	5:23p	LINETOTA	SCR	1673 05-30-90	6:46p
CITYALL	PRG	398 05-31-90	1:05p	LINETOTA	DBF	4734 05-28-90	11:40p
CITYALL	DBF	132026 05-30-90	11:20a	LINETOTA	DBO	664 05-30-90	8:01p
CITYALL	BAK	398 05-31-90	1:05p	LINETOTL	POP	1162 05-30-90	8:14p
CITYALL	FMO	4028 04-24-91	12:47a	MAIN	DBO	78964 08-05-91	2:46p
CITYALL	FMT	3559 05-31-90	1:07p	MAIN	PRG	84055 05-31-90	3:54p
CITYALL	SCR	8703 05-31-90	1:07p	MAIN	POP	1200 05-30-90	5:42p
CITYALL	MDX	16384 05-25-90	3:55p 11:46a	NDRR	DIR	4527 04-24-91	12:48a
COMMODE	POP	1396 05-31-90 9216 05-27-90	6:18p	NDRR	PRG	29747 05-31-90	3:55p
DESTALL	NDX	2688 05-31-90	0:10p 11:17a	NDRR	APP	960 05-27-90	4:20p
DESTALL	FMO	74426 05-30-90	11:17a 11:20a	NDRR	DBO	29140 08-05-91	2:46p
DESTALL	DBF	16384 05-27-90	6:17p	PHYSICAL	PRG	433 05-28-90	7:12p
DESTALL	MDX	2633 05-31-90	0.11p 11:17a	PHYSICAL	MDX	4097 05-30-90	6:26p
DESTALL	FMT	664 05-28-90	7:30p	PHYSICAL	FMO	4156 05-31-90	1:25p
DESTALL	DBO	5102 05-31-90	11:17a	PHYSICAL	BAR	1061 05-28-90	11:04p
DESTALL	SCR BAK	351 05-28-90	7:09p	PHYSICAL	FMT	3694 05-31-90	1:24p
DESTALL	PRG	398 05-28-90	7:09p	PHYSICAL	DBF	11370 05-31-90	3:30p
DESTALL	POP	1398 05-28-90	10:19p	PHYSICAL	SCR	7947 05-31-90	1:25p
DESTINT	POP	1145 05-30-90	4:36p	PHYSICAL	NDX	2048 05-30-90	6:26p
DISPLAY	POP	1404 05-30-90	7:48p	PICCITYT	VAL	1011 05-31-90	2:56p
DISPLAYT	POP	926 05-28-90	10:17p	PICKLINE	VAL	963 05-31-90	2:34p
EXIT FINDERT	POP	1304 05-30-90	8:43p	PIKLINET	VAL	1042 05-31-90	3;06p
	POP	918 05-23-90	10:24p	PKDESTCY	VAL	998 05-31-90	3:08p
FINDLINE LINEALL	BAK	396 05-30-90	7:20p	PKDESTLN	VAL	1012 05-31-90	3:09p
LINEALL	DBO	660 05-30-90	7:22p	PKLINETO	VAL	1012 05-31-90	3:11p
LINEALL	DBF	31842 05-30-90	11:22a	RAILROAD	CAT	5675 05-31-90	3:31p
LINEALL	NDX	3072 05-25-90	8:26p	RETURNER	PRG	26 05-28-90	10:28p
LINEALL	SCR	8520 05-31-90	1:10p	RETURNER	DBO	168 04-24-91	12:48a
LINEALL	FMT	3592 05-31-90	1:10p	TEST	PRG	1949 05-30-90	5:51p
LINEALL	PRG	393 05-30-90	7:20p	TEST	DBO	1760 05-30-90	5:52p
LINEALL	FMO	4012 05-31-90	1:10p	TESTING	DBO	16544 05-23-90	10:25p
LINEALL	MDX	6144 05-25-90	4:01p	TESTMESG	PRG	16441 05-30-90	5:52p
LINEDEST	DBF	17442 05-28-90	11:40p	TESTMESG	DBO	15532 05-30-90	5:52p
LINEDEST	NDX	3072 05-27-90	7:06p	TODEST	POP	1396 05-30-90	8:12p
LINEDEST	MDX	6144 05-27-90	7:06p	TRAFFIC	BAR	1129 05-28-90	12:41p
LINEDEST	FMT	2522 05-31-90	1:13p	UNTITLED	\mathbf{CAT}	426 05-16-90	8:03p
LINEDEST	BAK	459 05-31-90	10:03a	UPDATE	POP	1162 05-28-90	9:36p
LINEDEST	SCR	4857 05-31-90	1:14p	UPDATET	POP	1490 05-28-90	9:46p
LINEDEST	PRG	396 05-31-90	10:03a	NDRR	PRN	0 04-24-91	12:50a

Application Generation Documentation

```
Application Documentation for System: NDRR.PRG
Application Author: UPPER GREAT PLAINS TRANSPORTATION INSTITUTE
dBASE Version....: dBASE IV APPLICATION GENERATOR
Display Application Sign-On Banner: Yes
Screen Image:
                                                                70
                                             50
                                                      60
                           30 40
                  20
         10
>....+...
00:
01:
02:
03:
04:
05:
                              Welcome to the
06:
07:
08:
                          NORTH DAKOTA RAILROAD
09:
                          LINE SEGMENT DATABASE
10:
11:
12:
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:
---
>....+...|...+...|...+...|...+...|...+...|...+...|...+...|...+...|...+...|
Main Menu to Open after Sign-On: MAIN.POP
Sets for Application:
OFF
  Bell
              OFF
  Carry
              OFF
  Centry
  Confirm
              OFF
              OFF
  Delimiters
  Display Size 25 lines
  Drive
  Escape
              ON
  Path
            ON
  Safety
```

```
Starting Colors for Application:
Color Settings:
              : W+/B
  Text
              : W/B
  Heading
              : GR+/BG
  Highlight
               : GR+/BG
  Box
              : W+/N
  Messages
              : B/W
  Information
               : N/BG
  Fields
Database/View: PHYSICAL.DBF
Index File(s):PHYSICAL.NDX
Menu/Picklist definitions follow:
Layout Report for Popup Menu: MAIN
Screen Image:
                                                             70
                                           50
                                                   60
                                   40
                          30
                 20
  10
>....+...|...+...|...+...|...+....
01:
02:
03:
04:
05:
                 Select a Line Characteristic to display:
06:
                        1. PHYSICAL AND OPERATING DATA
07:
                        2. TRAFFIC DATA
:80
                        3. EXIT
09:
10:
11:
12:
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:
>....+...|...+...|...+...|...+...|...+...|...+...|...+...|...+....|...+...|.
```

Setup for MAIN follows:

Description: This is the main menu of the North Dakota Railroad Database.

Message Line Prompt for Menu: Use the up and down cursor keys to choose an option from this menu.

Colors for Menu/Picklist:

Color Settings:

Text : W+/B
Heading : W/B
Highlight : GR+/BG Box : GR+/1
Messages : W+/N
Information : B/W
Fields : N/BG : GR+/BG

Before Menu dBASE Code MAIN:

SET STATUS OFF

SET SCOREBOARD OFF

Bar actions for Menu MAIN follow:

Bar: 1 Prompt: Select a Line Characteristic to display: Action: Text only defined for this option - NO ACTION Bar: 2 Prompt: 1. PHYSICAL AND OPERATING DATA Action: Open a Bar Menu Named: PHYSICAL New Database/View: PHYSICAL.DBF New Index File(s): PHYSICAL.NDX Bar: 3 Prompt: 2. TRAFFIC DATA Action: Open a Bar Menu Named: TRAFFIC New Database/View: CITYALL.DBF New Index File(s): CITYALL.NDX Bar: 4 Prompt: 3. EXIT Action: Quit to DOS:

Layout	Report fo	or Horizon	ntal Bar Men	u: PHYSIC	CAL		
Screen	Image: 10	20	30	40	50	60	70
>	+	.+	+ l	+	+	1	.+
	SPLAY REC	ORD	UPDATE A RE	CORD	MAINTNCE		EXIT
02: 							
04: 05:							
06:							
07: 08:							
09:							
10:							
11: 12:							
13:							
14: 15:							
16:							
17:							
18: 19:							
20:							
21: 22:					•		
23:							
24:							
>	+	+	+	.+	+	+	.+
Setup	for PHYS	ICAL follo	ows:				
Descri	.ption: Tl	his menu d	controls the	Physical	L and Operati	ng data	

Message Line Prompt for Menu: Use the left and right curcor keys to choose an option from this menu

Colors for Menu/Picklist:

Color Settings:

Text : W+/B
Heading : W/B
Highlight : GR+/BG Box : GR+/BG
Messages : W+/N
Information : B/W
Fields : N/BG

Bar actions for Menu PHYSICAL follow: ____

Bar: 1

Prompt: DISPLAY RECORD

Action: Open a Popup Menu Named: DISPLAY

Bar: 2

Prompt: UPDATE A RECORD

Action: Open a Popup Menu Named: UPDATE

Bar: 3

Prompt: MAINTNCE

Action: Open a Popup Menu Named: BACKUPP

Bar: 4

Prompt: EXIT

Action: Open a Popup Menu Named: EXIT

Layout	Report fo	or Horizontal	Bar Menu:	TRAFFIC		
Screen 0	Image: 10	20	30	40	50	60 70
>	+	.+		+.	+	+
02:	ISPLAY A H		UPDATE A		MAINTNCE	EXIT
Setup	for TRAFF	IC follows:				

Description: This menu controls access to the Traffic Characteristics

Message Line Prompt for Menu: Use the left and right cursor keys to choose an option from this menu.

Database/View: CITYALL.DBF Index File(s): CITYALL.NDX

Colors for Menu/Picklist:

Color Settings:

Text : W+/B
Heading : W/B
Highlight : GR+/BG
Box Box : GR+/BG
Messages : W+/N
Information : B/W
Fields : N/BG

Bar actions for Menu TRAFFIC follow:

Bar: 1

Prompt: DISPLAY A RECORD

Action: Open a Popup Menu Named: FINDERT

Bar: 2

Prompt: UPDATE A RECORD

Action: Open a Popup Menu Named: UPDATET

Bar: 3

Prompt: MAINTNCE

Action: Open a Popup Menu Named: BACKUPT

Bar: 4

Prompt: EXIT

Action: Open a Popup Menu Named: EXIT

Layout	Report	for Popup Me	enu: DISPLAY				
0	n Image: 10	20	30	40	50	60	70
00: 01: 02: 03: 04: El 05: Cl 06: -	NTER A LI HOOSE A I XIT APPLI XIT TO DO SC = EXI	LINEID ICATION OS F MENU	.+ +				
>	.+ for DIS	PLAY follows		!			
	<u> </u>		_				

Description: This menu gives two choices for displaying a Lineid record Message Line Prompt for Menu: Use the up and down cursor keys to choose an option from this menu.

Color Settings: : W+/B Text Heading : W/B Highlight : GR+/BG : GR+/BG Box : GR+/1 Messages : W+/N Information : B/W Fields : N/BG Bar actions for Menu DISPLAY follow: Bar: 1 Prompt: ENTER A LINEID Action: Run dBASE Program: DO LINETEST Bar: 2 Prompt: CHOOSE A LINEID Action: Open a Values Picklist Named: PICKLINE Bar: 3 Prompt: -----Action: Text only defined for this option - NO ACTION Bar: 4 Prompt: EXIT APPLICATION Action: Run dBASE Program: DO RETURNER Bar: 5 Prompt: EXIT TO DOS Action: Quit to DOS: Bar: 6 Prompt: ESC = EXIT MENU Action: Text only defined for this option - NO ACTION

Colors for Menu/Picklist:

Layout	Report	for Popup M	enu: UPDATE					
Screen	Image:	20	30	40	50	60	70	
00: 01:	+	+l	.+	+	.+	+	+	
02: 03: 04:	03: 04: CHANGE/DELETE A RECORD							
06: 07: 08: 09:			Remember t file after Maintenanc ESC = EXIT	updates. e.	the See			
10: 11: 12: 13:								
14: 15: 16: 17:								
18: 19: 20:								
21: 22: 23: 24:								
>	+	+	.+	+	.+	+	+	
Setup	for UPDA	TE follows:	-					
Descri	ption: T	his menu co	ontains the	update pr	ocesses for	a databas	ĕe	

Message Line Prompt for Menu: Use the up and down cursor keys to choose

options from this menu.

_______ Color Settings: : W+/B Text Heading : W/B Highlight : GR+/BG : GR+/BG Box : GR+/I Messages : W+/N Information : B/W Fields : N/BG Box Bar actions for Menu UPDATE follow: Bar: 1 Prompt: ADD A RECORD Action: APPEND Format File: physical.fmt Bar: 2 Prompt: CHANGE/DELETE A RECORD Action: Browse File Prompt: -----Action: Text only defined for this option - NO ACTION Prompt: Remember to back up the Action: Text only defined for this option - NO ACTION Bar: 5 Prompt: file after updates. See Action: Text only defined for this option - NO ACTION Bar: 6 Prompt: Maintenance. Action: Text only defined for this option - NO ACTION Prompt: ESC = EXIT MENU Action: Text only defined for this option - NO ACTION

Colors for Menu/Picklist:

Layout	Report	for	Popup	Menu:	BACKUPP				
Screen	10		20		30	40	50	60	70
0	10	+		+			BACK UP	.+ A FILE LICATION DOS	
24: >	+	+		+	1+	1	+	.+	+

Setup for BACKUPP follows:

Description: This menu allows the user to backup database changes.

Message Line Prompt for Menu: Use the up and down cursor keys to choose an option from this menu.

Colors for Menu/Picklist: _____ Color Settings: Text : W+/B Heading : W/B Highlight : GR+/BG : GR+/BG Box Box : GR+/N Messages : W+/N Information : B/W Fields : N/BG Bar actions for Menu BACKUPP follow: Bar: 1 Prompt: BACK UP A FILE Action: Call Batch Named: BACKP Prompt: -----Action: Text only defined for this option - NO ACTION Bar: 3 Prompt: EXIT APPLICATION Action: Run dBASE Program: DO RETURNER Bar: 4 Prompt: EXIT TO DOS Action: Quit to DOS: Bar: 5

Action: Text only defined for this option - NO ACTION

Prompt: ESC = EXIT MENU

Layout Report	for Popup Menu:	EXIT				
Screen Image: 0 10	20	30	40	50	60	70
0 10 >+ . 00: 01: 02: 03: 04: 05: 06: 07: 08: 09: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24:	+	1	.+ +.		EXIT APPLICATION DOS	ATION

Description: This menu provides an exit from this menu.

Message Line Prompt for Menu: Use the up and down cursor keys to choose an exit option.

Colors for Menu/Picklist: Color Settings: Text : W+/B Heading : W/B Highlight : GR+/BG Box : GR+/N Messages : W+/N Information : B/W Fields : N/BG : GR+/BG Bar actions for Menu EXIT follow: Bar: 1 Prompt: EXIT APPLICATION Action: Run dBASE Program: DO RETURNER ______ Bar: 2 Prompt: EXIT TO DOS Action: Quit to DOS:

Action: Text only defined for this option - NO ACTION

Action: Text only defined for this option - NO ACTION

Bar: 3

Bar: 4

Prompt: -----

Prompt: ESC = EXIT MENU

Layout	Report for	r Popup Me	nu: FINDER	T 			
Screen	Image:	20	30	40	50	60	70
> 00: 01: 02: 03: FII 04: FII 05: FII 06: 07: EX: 08: EX		TY/MODE TO TALS	OTALS	+	+	+	
	+			.+	.+	.+	+

Description: This menu opens up sub-menus which give display options.

Message Line Prompt for Menu: Use the up and down cursor keys to choose an option.

_______ Color Settings: : W+/B Text Heading : W/B Highlight : GR+/BG : GR+/BG Box : GR+/N Messages : W+/N Information : B/W Fields : N/BG Box Bar actions for Menu FINDERT follow: Bar: 1 Prompt: FIND COMMODITY/MODE TOTALS Action: Open a Popup Menu Named: COMMODE New Database/View: CITYALL.DBF New Index File(s): CITYALL.NDX Bar: 2 Prompt: FIND TO-DESTINATION TOTALS Action: Open a Popup Menu Named: TODEST New Database/View: DESTALL.DBF New Index File(s): DESTALL.NDX Bar: 3 Prompt: FIND LINE TOTALS Action: Open a Popup Menu Named: LINETOTL Bar: 4 Prompt: -----Action: Text only defined for this option - NO ACTION Bar: 5 Prompt: EXIT APPLICATION Action: Run dBASE Program: DO RETURNER Bar: 6 Prompt: EXIT TO DOS Action: Quit to DOS: Bar: 7 Prompt: ESC = EXIT MENU Action: Text only defined for this option - NO ACTION

Colors for Menu/Picklist:

Layout	Report for	Popup Menu	ı: UPDATE	T -			
Screen 0	Image:	20	30	40	50	60	70
> 00: 01: 02: 03: 04: 05: 06: 07: 08: 10: 11: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24:	+		ADD CITY CHANGE/DE ADD LINEI CHANGE/DE Remember file afte Maintenan ESC = EXI	RECORD LETE CITY D RECORD LETE LINEI to back up r updates. ce. T MENU	RECORD D RECORD the See		
	for UPDATES			T		+	

Description: This menu controls the updates to the Traffic database file Message Line Prompt for Menu: Use the up and down cursor keys to choose an option from this menu.

Colors for Menu/Picklist: _______ Color Settings: : W+/B Text Heading : W/B Highlight : GR+/BG : GR+/BG Box Box : GR+/3 Messages : W+/N Information : B/W Fields : N/BG Bar actions for Menu UPDATET follow: Bar: 1 Prompt: ADD CITY RECORD Action: Open a Popup Menu Named: ADDCITY New Database/View: CITYALL.DBF New Index File(s): CITYALL.NDX Prompt: CHANGE/DELETE CITY RECORD Action: Open a Popup Menu Named: CDCITY New Database/View: CITYALL.DBF New Index File(s): CITYALL.NDX Bar: 3 Prompt: ADD LINEID RECORD Action: Open a Popup Menu Named: ADDLINE New Database/View: LINEALL.DBF New Index File(s): LINEALL.NDX Bar: 4 Prompt: CHANGE/DELETE LINEID RECORD Action: Open a Popup Menu Named: CDLINE New Database/View: LINEALL.DBF New Index File(s): LINEALL.NDX Bar: 5 Prompt: -----Action: Text only defined for this option - NO ACTION Bar: 6 Prompt: Remember to back up the Action: Text only defined for this option - NO ACTION Bar: 7 Prompt: file after updates. See Action: Text only defined for this option - NO ACTION

Bar: 8

Prompt: Maintenance.

Action: Text only defined for this option - NO ACTION

Bar: 9

Prompt: ESC = EXIT MENU

Action: Text only defined for this option - NO ACTION

Layout Report	for Popup Menu	: BACKUPT				
Screen Image:	20	30	40	50	60	70
-	+			.+	+ A CITY FIL A LINEID F LICATION DOS	·Ε
24: >+l	+ +	+		.+	+	.+

Description: This menu backups all CITY indexed databases.

Setup for BACKUPT follows:

Message Line Prompt for Menu: Use the up and down cursor keys to choose an option from this menu.

Color Settings: : W+/B Text Heading : W/B Highlight : GR+/BG : GR+/BG Box Messages : W+/N Information : B/W Fields : N/BG Bar actions for Menu BACKUPT follow: Bar: 1 Prompt: BACK UP A CITY FILE Action: Call Batch Named: BACKC New Database/View: CITYALL.DBF Bar: 2 Prompt: BACK UP A LINEID FILE Action: Call Batch Named: BACKL New Database/View: LINEALL.DBF New Index File(s): LINEALL.NDX Bar: 3 Prompt: -----Action: Text only defined for this option - NO ACTION Bar: 4 Prompt: EXIT APPLICATION Action: Run dBASE Program: DO RETURNER Bar: 5 Prompt: EXIT TO DOS Action: Quit to DOS: Bar: 6 Prompt: ESC = EXIT MENU Action: Text only defined for this option - NO ACTION

Colors for Menu/Picklist:

Screen Image: 60 70 50 30 40 20 10 >....+....|....+....|....+....|....+....|....+....|....+....|....+....|....+....|. ||XXXXXXXXXXXXX 01: 02: 03: 04: 05: 06: 07: 08: 09: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: >....+....|....+....|....+....|....+....|....+....|....+....|....+....|. Setup for PICKLINE follows:

Description: This is a list of the available Lineids

Layout Report for PICKLINE

Message Line Prompt for Menu: Use the up and down cursor keys to choose a Lineid record to display.

Colors for Menu/Picklist:

Color Settings:

Text : W+/B
Heading : W/B
Highlight : GR+/BG
Box : GR+/BG
Messages : W+/N
Information : B/W
Fields : N/BG

Picklist specification for PICKLINE follows:

Values Picklist

Field to List Values for: LINEID

Prompt: XXXXXXXXXXXXXX

Action: Insert the following dBASE code:

SET BELL OFF

Position Record Pointer by: SEEK LISTVAL

Message Line Prompt for Item: Use the up and down cursor keys to choose a LINEID. Hit ESC to EXIT.

Before dBASE Code for this item:

set format to physical edit noedit nomenu

```
Multiple Action Summary for Batch Object: BACKP
Screen Image:
                                                    50 60
                                                                         70
                               30 40
                     20
          10
>....+....|....+....|....+....|....+....|....+....|....+....|....+....|....+....|.
00:
01:
02:
03:
04:
05:
                           COPY PHYSICAL.DBF TO PHYSBACK.DBF
06:
                           PACK PHYSICAL.DBF
07:
08:
09:
10:
11:
12:
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:
>....+....|....+....|....+....|....+....|....+....|....+....|....+....|.
Setup for BACKP follows:
Description: This process backups the PHYSICAL database.
Colors for Menu/Picklist:
 Color Settings:
   : W+/B
Heading
   Highlight
                  : GR+/BG
                  : GR+/BG
   Box
   Messages : W+/N
Information : B/W
Fields : N/BG
```

Batch actions for Menu BACKP follow: Batch Action: 1 Prompt: COPY PHYSICAL.DBF TO PHYSBACK.DBF Action: Copy Records to File physback _____ Batch Action: 2

Prompt: PACK PHYSICAL.DBF

Action: Pack Current File

Screen 0	Image: 10	<u>,</u> 20	30	40	50	60	70
> 00: 01: 02: 03: 04: 05: 06: 07: 08: 09: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24: >	ENTER A CHOOSE A ENTER A CHOOSE A	CITY A CITY LINEID A LINEID PLICATION DOS		+.	+.	+.	.
Setup	for COMM	ODE follows:					

Layout Report for Popup Menu: COMMODE

Description: This menu gives choices for displaying a record.

Message Line Prompt for Menu: Use the up and down cursor keys to choose an option from this menu.

Colors for Menu/Picklist: ________ Color Settings: : W+/B Text Heading : W/B Highlight : GR+/BG : GR+/BG Box Messages : W+/N Information : B/W Fields : N/BG Bar actions for Menu COMMODE follow: _____ Bar: 1 Prompt: ENTER A CITY Action: Run dBASE Program: DO CITYALL New Database/View: DESTALL.DBF ______ Bar: 2 Prompt: CHOOSE A CITY Action: Open a Values Picklist Named: PICCITYT New Database/View: DESTALL.DBF New Index File(s): DESTALL.NDX Bar: 3 Prompt: ENTER A LINEID Action: Run dBASE Program: DO LINEALL New Database/View: LINEDEST.DBF New Index File(s): LINEDEST.NDX Bar: 4 Prompt: CHOOSE A LINEID Action: Open a Values Picklist Named: PIKLINET New Database/View: LINEDEST.DBF New Index File(s): LINEDEST.NDX Bar: 5 Prompt: -----Action: Text only defined for this option - NO ACTION Prompt: EXIT APPLICATION Action: Run dBASE Program: DO RETURNER Bar: 7 Prompt: EXIT TO DOS Action: Quit to DOS:

```
Bar: 8
 Prompt: ESC = EXIT MENU
Action: Text only defined for this option - NO ACTION
Layout Report for Popup Menu: TODEST
Screen Image:
                                                                   70
                                                50 60
                           30 40
                   20
      10
>....+....|....+....|....+....|....+....|....+....|....+....|....+....|....+....
00:
01:
02:
03:
04:
05:
      ENTER A CITY
06:
      CHOOSE A CITY
07:
08:
       ENTER A LINEID
       CHOOSE A LINEID
09:
10:
       EXIT APPLICATION
11:
       EXIT TO DOS
12:
       ESC = EXIT MENU
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:
>....+...|...+....|...+....|....+....|....+....|....+....|....+....|....+....|.
Setup for TODEST follows:
```

Description: This menu gives choices for displaying a record.

Message Line Prompt for Menu: Use the up and down cursor keys to choose an option from this menu.

Colors for Menu/Picklist: Color Settings: Text : W+/B Heading : W/B Highlight : GR+/BG Box : GR+/BG Messages : W+/N Information : B/W Fields : N/BG Bar actions for Menu TODEST follow: Bar: 1 Prompt: ENTER A CITY Action: Run dBASE Program: DO DESTALL New Database/View: DESTALL.DBF Bar: 2 Prompt: CHOOSE A CITY Action: Open a Values Picklist Named: PKDESTCY New Database/View: DESTALL.DBF New Index File(s): DESTALL.NDX Bar: 3 Prompt: ENTER A LINEID Action: Run dBASE Program: DO LINEDEST New Database/View: LINEDEST.DBF New Index File(s): LINEDEST.NDX Bar: 4 Prompt: CHOOSE A LINEID Action: Open a Values Picklist Named: PKDESTLN New Database/View: LINEDEST.DBF New Index File(s): LINEDEST.NDX Bar: 5 Prompt: -----Action: Text only defined for this option - NO ACTION Bar: 6 Prompt: EXIT APPLICATION Action: Run dBASE Program: DO RETURNER Prompt: EXIT TO DOS

Action: Ouit to DOS:

```
Bar: 8
 Prompt: ESC = EXIT MENU
 Action: Text only defined for this option - NO ACTION
Layout Report for Popup Menu: LINETOTL
Screen Image:
                             30 40 50 60
                                                                     70
                   20
         10
>....+...|....+....|....+....|....+....|....+....|....+....|....+....|....+....|.
00:
01:
02:
03:
04:
05:
06:
       ENTER A LINEID
07:
08:
       CHOOSE A LINEID
09:
10:
       EXIT APPLICATION
       EXIT TO DOS
11:
      ESC = EXIT MENU
12:
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:
>....+...|....+....|....+....|....+....|....+....|....+....|....+....
Setup for LINETOTL follows:
```

Description: This menu provides selections for displaying Line totals.

Message Line Prompt for Menu: Use the up and down cursor keys to choose an option. Hit ESC to exit.

Database/View: LINETOTA.DBF Index File(s): LINETOTA.NDX

_____ Color Settings: : W+/B Text Heading : W/B Highlight : GR+/BG : GR+/BG Box Messages : W+/N Information : B/W Fields : N/BG Bar actions for Menu LINETOTL follow: Bar: 1 Prompt: ENTER A LINEID Action: Run dBASE Program: DO LINETOTA Bar: 2 Prompt: CHOOSE A LINEID Action: Open a Values Picklist Named: PKLINETO Bar: 3 Prompt: -----Action: Text only defined for this option - NO ACTION Bar: 4 Prompt: EXIT APPLICATION Action: Run dBASE Program: DO RETURNER _________ Bar: 5 Prompt: EXIT TO DOS Action: Quit to DOS: . Prompt: ESC = EXIT MENU Action: Text only defined for this option - NO ACTION

Colors for Menu/Picklist:

Layout	Report	for Popup	Menu: ADD	CITY				
Screen 0	Image:	20	30		40	50	60	70
00: 01: 02: 03:	+	+ l	+	+		.+	+	.+
04: 05: 06:				11		OITY/MODE R	18	
07: 08: 09:				ESC =	EXIT 1	MENU		
10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24:								
				+		.+	+	.+
Setup 	for ADDO	CITY follow	7S: 					
Descri	ption: 5	This menu a	ıllows opt	ions f	or add	ing a CITY	indexed re	ecord.
Messag record	e Line l /databas	Prompt for se for addi	Menu: Use	e the u	p and	down cursor	keys to	choose a
		w: CITYALL.): CITYALL.		•				

Colors for Menu/Picklist: _______ Color Settings: : W+/B Text Highlight : GR+/BG Box Messages : W+/N Information : B/W Fields : N/BG Bar actions for Menu ADDCITY follow: Bar: 1 Prompt: ADD A COMMODITY/MODE RECORD Action: APPEND Format File: cityall.fmt ______ Bar: 2 Prompt: ADD A TO-DESTINATION RECORD Action: APPEND Format File: destall.fmt New Database/View: DESTALL.DBF New Index File(s): DESTALL.NDX Bar: 3 Prompt: -----Action: Text only defined for this option - NO ACTION

Action: Text only defined for this option - NO ACTION

Bar: 4

Prompt: ESC = EXIT MENU

				•			
Screen 0	Image: 10	20	30	40	50	60	70
00: 01: 02: 03: 04:	+ +.	+.		+	1	+	+
05: 06: 07:			CH CH	IANGE/DELETE IANGE/DELETE	COMMODIT TO-DESTI	Y/MODE NATION	RECORD RECORD
08: 09: 10:			ES	SC = EXIT ME	NU		
11: 12: 13: 14: 15: 16: 17: 18: 19:							
20: 21: 22: 23: 24:							
>	+ + .	+.		++		+	+
Setup	for CDCITY f	ollows:					

Layout Report for Popup Menu: CDCITY

Message Line Prompt for Menu: Use the up and down cursor keys to choose

Description: This menu allows changing or deleting a record.

an option from this menu.

Colors for Menu/Picklist:

Color Settings:

Text : W+/B
Heading : W/B
Highlight : GR+/BG
Box : GR+/BG
Messages : W+/N
Information : B/W
Fields : N/BG

Bar actions for Menu CDCITY follow:

Bar: 1

Prompt: CHANGE/DELETE COMMODITY/MODE RECORD

Action: Browse File

New Database/View: CITYALL.DBF

Bar: 2

Prompt: CHANGE/DELETE TO-DESTINATION RECORD

Action: Browse File

New Database/View: DESTALL.DBF New Index File(s): DESTALL.NDX

Bar: 3

Prompt: -----

Action: Text only defined for this option - NO ACTION

Bar: 4

Prompt: ESC = EXIT MENU

Action: Text only defined for this option - NO ACTION

Screen	Image:	20	30	40	50	60	70
>			AI AI ES	DD COMMODITY DD TO-DESTII DD LINE TOTE CC = EXIT MI	Y/MODE RECC NATION RECC AL RECORD ENU	PRD PRD	
	for ADDLINE						

Layout Report for Popup Menu: ADDLINE

Description: This menu allows the addition of LINEID indexed records.

Message Line Prompt for Menu: Use the up and down cursor keys to choose an option from this menu.

Colors for Menu/Picklist: Color Settings: : W+/B Text : W/B : GR+/BG : GR+/BG Heading Highlight Box Messages : W+/N Information : B/W Fields : N/BG Bar actions for Menu ADDLINE follow: ______ Bar: 1 Prompt: ADD COMMODITY/MODE RECORD Action: APPEND Format File: lineall.fmt New Database/View: LINEALL.DBF New Index File(s): LINEALL.NDX _____ Bar: 2 Prompt: ADD TO-DESTINATION RECORD Action: APPEND Format File: linedest.fmt New Database/View: LINEDEST.DBF New Index File(s): LINEDEST.NDX ______ Bar: 3 Prompt: ADD LINE TOTAL RECORD Action: APPEND Format File: linetota.fmt New Database/View: LINETOTA.DBF New Index File(s): LINETOTA.NDX _____ Bar: 4 Prompt: -----Action: Text only defined for this option - NO ACTION Bar: 5 Prompt: ESC = EXIT MENU Action: Text only defined for this option - NO ACTION

Screen 0	Image: 10	20	30	40	50	60	70
> 00: 01: 02: 03: 04: 05:	+	+		÷ +	+ .	+	
07: 08: 09: 10:			CHA	ANGE/DELETE ANGE/DELETE ANGE/DELETE	TO-DESTINA	TION RECORI)
11: 12: 13: 14:			ESC	C = EXIT MEN	NU		
15: 16: 17: 18:							
19: 20: 21: 22: 23: 24:	·						
>	+	+		+	+ .	+	
Setup :	for CDLINE for	ollows:					

Layout Report for Popup Menu: CDLINE

Description: This menu allows the changing or deleting of LINEID records.

Message Line Prompt for Menu: Use the up and down cursor keys to choose an option from this menu.

Colors for Menu/Picklist: Color Settings: Text : W+/B
Heading : W/B
Highlight : GR+/BG
Box : GR+/BG
Messages : W+/N
Information : B/W
Fields : N/BG Bar actions for Menu CDLINE follow: ______ Bar: 1 Prompt: CHANGE/DELETE COMMODITY/MODE RECORD Action: Browse File New Database/View: LINEALL.DBF New Index Files(s): LINEDEST.NDX Bar: 2 Prompt: CHANGE/DELETE TO-DESTINATION RECORD Action: Browse File New Database/View: LINEDEST.DBF New Index File(s): LINEDEST.NDX Prompt: CHANGE/DELETE LINE TOTAL RECORD Action: Browse File New Database/View: LINETOTA.DBF New Index File(s): LINETOTA.NDX Bar: 4 Prompt: -----Action: Text only defined for this option - NO ACTION Bar: 5

Action: Text only defined for this option - NO ACTION

Prompt: ESC = EXIT MENU

```
Multiple Action Summary for Batch Object: BACKC
Screen Image:
                                                        60
                                                                      70
                              30
                                        40
                                                  50
                    20
          10
>....+....|....+....|....+....|....+....|....+....|....+....|....+....|....+....
01:
02:
03:
04:
                          COPY CITYALL.DBF TO CITYBACK.DBF
05:
                          PACK CITYALL.DBF
06:
                          COPY DESTALL.DBF TO DESTBACK.DBF
07:
                          PACK DESTALL.DBF
08:
09:
10:
11:
12:
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:
>....+...|....+....|....+....|....+....|....+....|....+....|....+....
Setup for BACKC follows:
 Description: This backups all CITY indexed databases.
Colors for Menu/Picklist:
______
 Color Settings:
                  : W+/B
   Text
   Heading
                 : W/B
                 : GR+/BG
   Highlight
                  : GR+/BG
   Box
                 : W+/N
   Messages
   Information : B/W
   Fields
                  : N/BG
```

Batch actions for Menu BACKC follow:

Batch Action: 1

Prompt: COPY CITYALL.DBF TO CITYBACK.DBF Action: Copy Records to File cityback

New Database/View: CITYALL.DBF New Index File(s): CITYALL.NDX

Batch Action: 2

Prompt: PACK CITYALL.DBF Action: Pack Current File

New Database/View: CITYALL.DBF New Index File(s): CITYALL.NDX

Batch Action: 3

Prompt: COPY DESTALL.DBF TO DESTBACK.DBF Action: Copy Records to File destback

Batch Action: 4

Prompt: PACK DESTALL.DBF Action: Pack Current File

New Database/View: DESTALL.DBF New Index File(s): DESTALL.NDX

Multip	le Action S	Summary fo	or Batch Ob	ject: BACKI			
Screen	Image: 10	20	30	40	50	60	70
> 00: 01: 02: 03: 04:	+ +		+	+l -	+	+	+
05: 06: 07: 08: 09: 10: 11:			PACK LINEA COPY LINED PACK LINED	EST.DBF TO EST.DBF OTA.DBF TO	LINEBACK.	DBF	
12: 13: 14: 15: 16: 17: 18:							
19: 20: 21: 22: 23: 24:							
>	+		+	+	+	+	.+1.
Setup 	for BACKL f	Follows:					
Descr	iption: Thi	s process	s backups a	11 LINEID :	indexed da	tabases.	
Colors	for Menu/F	Picklist:					
Tex Hea Hig Box Mes	ding hlight sages ormation	: W+/B : W/B : GR+/BG : GR+/BG : W+/N : B/W : N/BG		•			

Batch actions for Menu BACKL follow: Batch Action: 1 Prompt: COPY LINEALL.DBF TO ALLBACK.DBF Action: Copy Records to File allback New Database/View: LINEALL.DBF New Index File(s): LINEALL.NDX Batch Action: 2 Prompt: PACK LINEALL.DBF Action: Pack Current File New Database/View: LINEALL.DBF New Index File(s): LINEALL.NDX Batch Action: 3 Prompt: COPY LINEDEST.DBF TO LINEBACK.DBF Action: Copy Records to File lineback New Database/View: LINEDEST.DBF New Index File(s): LINEDEST.NDX Batch Action: 4 Prompt: PACK LINEDEST.DBF Action: Pack Current File New Database/View: LINEDEST.DBF New Index File(s): LINEDEST.NDX ______ Batch Action: 5 Prompt: COPY LINETOTA.DBF TO TOTABACK.DBF Action: Copy Records to File totaback New Database/View: LINETOTA.DBF

Batch Action: 6

Prompt: PACK LINETOTA.DBF Action: Pack Current File

New Database/View: LINETOTA.DBF New Index File(s): LINETOTA.NDX

New Index File(s): LINETOTA.DBF

Layout Report for PICCITYT

Screen 0	Image: 10	20	30	40	50	60	70
>1 00: 01: 02: 03: 04:		+ +.	+.		+ xxxxxxxxxx		1.
05: 06: 07: 08: 09:							
10: 11: 12: 13: 14:							
15: 16: 17: 18: 19: 20:					·		
21: 22: 23: 24:							•
>		+	+.	+.	+	+	

Setup for PICCITYT follows:

Description: This lists the available cities to choose in displaying a record

Message Line Prompt for Menu: Use the up and down cursor keys to find a city. Hit enter to display record.

Database/View: CITYALL.DBF Index File(s): CITYALL.NDX

```
Colors for Menu/Picklist:
_____
Color Settings:
             : W+/B
  Text
  Heading : W/B
Highlight : GR+/BG
              : GR+/BG
  Box
  Messages : W+/N
Information : B/W
: N/BG
  Fields
              : N/BG
Picklist specification for PICCITYT follows:
______
Values Picklist
_____
Field to List Values for: CITY
Prompt: XXXXXXXXXXXXX
Action: Insert the following dBASE code:
 _____
  SET BELL OFF
Position Record Pointer by: SEEK LISTVAL
Message Line Prompt for Item: Use the up and down cursor keys to choose a
CITY. Hit ESC to EXIT.
Before dBASE Code for this item:
  SET FORMAT TO CITYALL
  EDIT NOEDIT NOMENU
Layout Report for PIKLINET
______
Screen Image:
            20 30 40 50 60 70
0 10
>....+...|....+....|....+....|....+....|....+....|....+....|....+....
00:
                                         XXXXXXXXXXXX
01:
02:
03:
04:
05:
06:
07:
08:
09:
10:
11:
```

```
12:
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:
>....+...|....+....|....+....|....+....|....+....|....+....|....+....
Setup for PIKLINET follows:
Description: This menu lists the available Lineids for displaying a
record.
Message Line Prompt for Menu: Use the up and down cursor keys to choose a
Lineid for displaying a record.
 Database/View: LINEALL.DBF
 Index File(s): LINEALL.NDX
Colors for Menu/Picklist:
___________
 Color Settings:
                 : W+/B
   Text
  Heading : W/B
Highlight : GR+/BG
                  : GR+/BG
   Box
   Messages
   Messages : W+/N
Information : B/W
Fields : N/BG
Picklist specification for PIKLINET follows:
Values Picklist
  Field to List Values for: LINEID
 Prompt: XXXXXXXXXXXXXX
 Action: Insert the following dBASE code:
```

SET BELL OFF

Position Record Pointer by: SEEK LISTVAL Message Line Prompt for Item: Use the up and down cursor keys to choose a LINEID. Hit ESC to EXIT. Before dBASE Code for this item: _____ SET FORMAT TO LINEALL EDIT NOEDIT NOMENU Layout Report for PKDESTCY ______ Screen Image: 50 60 20 30 40 70 10 >....+...|....+....|....+....|....+....|....+....|....+....|....+.... 00: 01: || xxxxxxxxxxxxx 02: 03: 04: 05: 06: 07: 08: 09: 10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21: 22: 23: 24:

>....+...|....+....|....+....|....+....|....+....|....+....|....+....|....+....|.

Setup for PKDESTCY follows:

Description: This pick list allows the user to choose a city to display.

Message Line Prompt for Menu: Use the up and down cursor keys to choose a city. Hit Esc to exit.

Database/View: DESTALL.DBF Index File(s): DESTALL.NDX

Colors for Menu/Picklist:

Color Settings:

Text : W+/B
Heading : W/B
Highlight : GR+/BG
Box : GR+/BG
Messages : W+/N
Information : B/W
Fields : N/BG

Picklist specification for PKDESTCY follows:

Values Picklist

Field to List Values for: CITY

Prompt: XXXXXXXXXXXXXX

Action: Insert the following dBASE code:

SET BELL OFF

Position Record Pointer by: SEEK LISTVAL

Message Line Prompt for Item: Use the up and down cursor keys to choose a CITY. Hit ESC to EXIT.

Before dBASE Code for this item:

SET FORMAT TO DESTALL EDIT NOEDIT NOMENU

Layout Report for PKDESTLN Screen Image: 60 70 30 40 50 20 10 >....+...|....+....|....+....|....+....|....+.... 00: 01: || XXXXXXXXXXXX 02: 03: 04: 05: 06: 07: 08: 09: 10: 11: 12: 13: 14: 15:

>....+...|....+....|....+....|....+....|....+....|....+....|....+....|....+....|.

Setup for PKDESTLN follows:

16: 17: 18: 19: 20: 21: 22: 23:

Description: This list provides the user with a selection of lineids to dis.

Message Line Prompt for Menu: Use the up and down cursor keys to choose a Lineid. Hit ESC to exit.

Database/View: LINEDEST.DBF Index File(s): LINEDEST.NDX

```
Colors for Menu/Picklist:
______
Color Settings:
  Text : W+/B
Heading : W/B
Highlight : GR+/BG
BOX
  Box : GR+/N
Messages : W+/N
Information : B/W
Fields : N/BG
                : GR+/BG
Picklist specification for PKDESTLN follows:
Values Picklist
 Field to List Values for: LINEID
 Prompt: XXXXXXXXXXXXXXX
Action: Insert the following dBASE code:
  SET BELL OFF
Position Record Pointer by: SEEK LISTVAL
Message Line Prompt for Item: Use the up and down cursor keys to choose a
LINEID. Hit ESC to EXIT.
Before dBASE Code for this item:
 ______
  SET FORMAT TO LINEDEST
  EDIT NOEDIT NOMENU
Layout Report for PKLINETO
Screen Image:
                   20 30 40 50 60 70
0 10
>....+...|....+....|....+....|....+....|....+....|....+....|....+....
00:
01:
02:
                                              ||xxxxxxxxxxxxxx
03:
04:
05:
06:
07:
08:
09:
10:
11:
```

```
12:
13:
14:
15:
16:
17:
18:
19:
20:
21:
22:
23:
24:
Setup for PKLINETO follows:
Description: This lists the available Lineids to select for displaying
recd.
Message Line Prompt for Menu: Use the up and down cursor keys to choose a
Lineid. Hit ESC to exit.
Database/View: LINETOTA.DBF
Index File(s): LINETOTA.NDX
Colors for Menu/Picklist:
______
Color Settings:
  Text
              : W+/B
  Heading : W/B
Highlight : GR+/BG
              : GR+/BG
  Box
  Messages
              : W+/N
  Information : B/W
  Fields
              : N/BG
Picklist specification for PKLINETO follows:
______
Values Picklist
______
 Field to List Values for: LINEID
 Prompt: XXXXXXXXXXXXXXX
Action: Insert the following dBASE code:
```

SET BELL OFF

Position Record Pointer by: SEEK LISTVAL

Message Line Prompt for Item: Use the up and down cursor keys to choose a LINEID. Hit ESC to EXIT.

Before dBASE Code for this item:

SET FORMAT TO LINETOTA
EDIT NOEDIT NOMENU

End of Application Documentation