

Detroit, Toledo
and
Ironton Railroad
Company



TIME TABLE

26

EFFECTIVE 12:01 AM
SUNDAY, OCTOBER 26, 1980

FOR THE INFORMATION AND
GOVERNMENT OF EMPLOYEES ONLY

READ THE INSTRUCTIONS

DESTROY PREVIOUS TIME TABLES



E. R. ADAMS
Vice President
Operations

WM. B. PORTER
Superintendent

To All Employees:

SAFETY is the First Rule in the book for one reason, it is the most important. All other Rules are for the safe operation of the Railroad. Safety is important to each individual and his family, because their health and happiness are at stake.

OFFICERS

J. E. Waldecker	Asst. to the Superintendent	Flat Rock
C. H. Fairchild	Terminal Superintendent	Flat Rock
E. E. Lamb	Asst. Terminal Superintendent	Flat Rock
R. P. O'Brien	Asst. Terminal Superintendent	Flat Rock
H. W. Everly	Admin. Asst. to Terminal Superintendent	Flat Rock
C. D. Domigan	Terminal Trainmaster	Flat Rock
J. R. Abercrombie	Terminal Trainmaster	Flat Rock
T. L. Schlosser	Terminal Trainmaster	Flat Rock
D. W. Dumas	Terminal Trainmaster	Flat Rock
J. S. Greer	Terminal Trainmaster	Wyandotte
M. A. Wilson	Asst. Terminal Trainmaster	Flat Rock
L. E. Walls	Asst. Terminal Trainmaster	Flat Rock
R. C. Domigan	Asst. Terminal Trainmaster	Flat Rock
N. F. Ortolan	Asst. Terminal Trainmaster	Flat Rock
J. C. Lyon	Road Foreman of Engines	Flat Rock
W. A. Hutchinson	Trainmaster	Flat Rock
R. R. Shoults	Trainmaster	Lima
R. B. Billingsley	Assistant Trainmaster	Lima
D. H. Finrock	Assistant Trainmaster	Lima
R. B. Beavers	Asst. Superintendent Southern District	Springfield
C. W. Shy	Trainmaster-Road Foreman of Engines	Springfield
G. D. Collins	Asst. Trainmaster-Road Foreman of Engines	Cincinnati
W. E. Hyer	Assistant Trainmaster	Springfield
W. C. Mell	Chief Train Dispatcher	Flat Rock
J. M. Hyatt	Asst. Chief Train Dispatcher	Flat Rock

TRAIN DISPATCHERS

W. C. Rendon	Flat Rock
R. E. Petticrew	Flat Rock
W. D. Lustig	Flat Rock
D. V. Gebard	Flat Rock
L. L. Sands	Flat Rock

PHONE LIST

Main Office, Dearborn	(313) 336-9600
Train Dispatcher's Office	(313) 782-2677
Flat Rock Hump Tower	(313) 782-3531
South Yard	(313) 388-8540
Ford Yard	(313) 284-5455
Rouge Yard	(313) 336-9600
Woodhaven	(313) 479-2195
Toledo (Temperance Yard)	(419) 476-5387
Napoleon	(419) 592-0831
Lima (Ford Park)	(419) 229-1010
Springfield	(513) 323-8695
Jackson	(614) 286-2823

INDEX

NUMBER		PAGE
1015	Air Brakes	8
1016	Air Brake Leakage Test	8
1072	Ambulance Service	32
1074	Automatic & Semi-automatic Interlockings	33-34
1042	Blocking Public Highways	15
1005	Bulletin Boards	6
1008	Clearance Card Station	6
1068	Close Clearance	30
1071	Company Surgeons	31-32
1041	"CS" Signs — Instructions	14-15
1029	Double Track — Opposing Movements	12
1013	Electric Locked Hand-Operated Switches	7
1046-1061	Equipment and Locomotive Restrictions	17-22
1019	Flagging Distance	9
1030	Flat Rock Special Instructions	12
1031	Ford Park Special Instructions	12
1034-1035	Foreign Railroad Operations	13
1033	Glen Jean Special Instructions	13
1037-1040	Grade Crossing Protection	13-14
1062	Hazardous Materials	22-26
1063	Hazardous Materials Chart	27-28
1022	Hot Box Detectors	10-11
1064-1070	Injuries and Accidents, Instructions	29-30
1017	Inspection of Freight Cars	8
1018	Inspection of Trains	8-9
1031A	Maitland Special Instructions	13
1026	Manual Block	11-12
1020	Markers	9-10
1014	Non-Electric Locked Switches - T.C.S.	7
1002	Notice	5
1075	Railroad Crossings and Governing Signals	34
1011	Railroad Radios	6
1023	Right-of-Way Fires	11
1009	Scales	6
1032	South Charleston Special Instructions	13
1021	Spacing of Trains	10
1044	Speed Indicator - Checking	16
1043	Speed - Maximum Authorized	15-16
1045	Speed - Table	17
1012	Spring Switches	7
1003	Standard Clocks	5
1024	Superiority of Trains	11
1025	T.C.S. Rules and Special Instructions	11
1001	Time Table Symbols	5
1076	Tonnage Ratings	35
1073	Track Cars	33
1036	Train Orders in Turnaround Service	13
1007	Train Register Stations	6
1006	Turntable	6
1027	Wyandotte Special Instructions	12
1028	Wyandotte-Trenton Special Instructions	12
1010	Wyles	6
1004	Yard Limits	5

Accounting Code No.	Train Order Station	Interlocking	Radio Channel	Distance from Detroit	MAIN LINE Stations	Connections	Capacity of Sidings 50' Cars	Phone Locations
2		X		1.7	Short Cut	Bridge		Tower
3	DPN	X	R2	3.2	South Yard		Yard	Office Box—N
		X		4.8	Mill	CRC		CRC Phone Mill
7			R2	7.4	Wyandotte			
			R2	8.5	Ford	WT-WS	Yard 48	Office Box—N
11	DN	X		11.1	Trenton	CRC		Tower—Box
						DTSL		
17	DN		R1	15.2	D&I Jct.	GTW	Hump Yd	Office N—S
		CP		17.2	Flat Rock Yd			Box
		CP		19.2	Huron			Box
				22.8	Karl		88	Box N—S
24	DN	X		23.5	Carleton Sdg. Carleton	CO		Tower Box
		X		29.1	Field			N—S
		X		31.5	Maybee Sdg.		192	Box
32		X		31.6	Doty			Box N—S
		X		31.8	Maybee		S-25	Box
		X		31.8	Maybee Stg.		243	Box N—S
		X		38.1	Mex			Box
40	DN	X	R2	39.8	Nth Sdg. Diann	AA	142	Box N
				39.8	Diann			Tower
44				39.8	Sth Sdg. Diann		96	Box S
				43.4	Petersburg		145	Booth—S
		X		51.8	Riga		S-5	Box N
61				60.7	Metamora		131	Booth—S
68				67.9	Fulton		S-6	Box
74			R2	74.3	Delta	NW-CRC	138	Box—Hill
		X		82.6	Liberty Center			Booth Box—N
				84.5	Maumee		84	Booth—S
				89.1	Nth Sdg.—Malinta		109	Box N—S
90				90.3	Malinta		Yard	
				90.3	Sth Sdg.—Malinta		50	Box S
97	DN	X	R2	97.6	Hamler	BO	87	Tower—Box S
103		X		102.5	Prentiss		S-15	
106		X		106.0	Leipsic	NW	W-68	
		X		107.3	XN Tower	BO	E-65	Box N—S
		X		128.3	DT&I Jct.	BO		BO Box—Booth
131			R2	130.5	Ford Park		Yard	B&O Box
		X		131.0	Morris	NW	130	Box N
	DN	X	R2	132.0	Sugar St.	CRC	Yard	Box—Loop Trk.
133				132.7	Lima		Yard	Tower
143				142.5	Unioptis		22	
145				145.5	St. Johns		S-12	Box N—S
154				153.4	Jackson Center		139	Booth
158				158.0	Maplewood		S-5	Box N—Booth S
164	DN	X	R2	164.4	Quincy	CRC	130	Box
170				169.9	Rosewood		S-7	Tower—Box S
				176.7	St. Paris		S-8	Box
177				182.4	Thackery		S-10	Booth
182				188.2	Tremont		58	Booth
188				190.8	Eagle City		145	Booth
190				193.2	Maitland		S-3	Box
193		X		194.0	Bechtel Avenue	CRC	S-4	Booth N
				197.7	Lagonda		S-28	
200	DN		R1	200.5	Springfield-Junction	CRC	Yard	Office
204				204.3	Thorps	CRC		
210				209.3	Shy			
210		X		210.1	So. Charleston	CRC	E-59	CRC Box
				216.0	So. Solon		S-37	Bell M/W Off.
216				222.4	Jeffersonville		52	Bell Box N
222							33	Bell-Station

Accounting Code No.	Train Order Station	Interlocking	Radio Channel	Distance from Detroit	MAIN LINE Stations	Connections	Capacity of Sidings 50' Cars	Phone Locations							
228	D	X	R2	227.7	Heglers	BO	S-7	Station—Box							
234				234.3	Washington CH		S-126								
241				241.1	Good Hope		S-5								
				245.4	Blue Rock		20								
248				247.8	Greenfield		29		Bell—Booth S						
249				248.8	Thrifton										
259				259.1	Bainbridge		88		Bell—Booth N						
264				264.2	Storms		46		Bell—Box S						
271				271.1	Summit		Yard		Bell—Booth						
				278.1	Peck		26								
278				DPN					282.0	Waverly	NW	46	Station		
282									282.7	Glen Jean		31	NW Booth		
283									X				Yard		
									286.0	Greggs					
286		Beaver				Yard			Bell Bldg.						
294						25									
	298.7	Cove				S-10									
299	DPN					304.0		Sharon	CO	S-15		Station			
304						306.3		Jackson		S-17					
307						306.6		B&O Jct		Yard					
				330.0	Bloom Jct										
330															
335					Andre		S-8								
337					Bondclay		S-43								
341					Superior		S-100			Bell—Hill					
347					Lawco		7			Bell—Box					
349					Cannons Creek		S-12								
350		Pedro		S-78		Bell—Box									
352		Royersville		18		Bell—Booth N									
358	X			357.8	Iron-ton	Tunnel NW	Yard	Bell—M/W Scale Bldg. Bell Box 8th Street							
Accounting Code No.	Train Order Station	Interlocking	Radio Channel	Distance from Detroit	TOLEDO Station Trackage Over AA & TT	Connections	Capacity of Sidings 50' Cars	Phone Locations							
765	DPN		R2	60.2	Temperance Yd.	TT	Yard	Office							
Accounting Code No.	Train Order Station	Interlocking	Radio Channel	Distance from Detroit	OTTAWA Industrial Loop Stations	Connections	Capacity of Sidings 50' Car	Phone Locations							
112		X		111.0	Kleman	BO	Yard Yard	Box Booth Box Box							
114				112.1	Ottawa										
		X		113.7	Ottawa Beet Trk	BO									
				114.9	South Ottawa										
Accounting Code No.	Train Order Station	Interlocking	Radio Channel	Distance from D&I Jct.	DEARBORN Branch Stations	Connections	Capacity of Sidings 50' Cars	Phone Locations							
401		CP	R2	0.0	D&I Jct	CRC	Yard	Booth Office Box							
		X		2.3	Fordhaven										
				2.5	Woodhaven										
		X		4.4	Penn										
		CP		6.0	Penford Sdg										
406		X	9.2	Penford Park		132	Box—Eureka Rd. Tower								

Accounting Code No.	Train Order Station	Interlocking	Radio Channel	Distance from D&I Jct.	DEARBORN Branch Stations (Continued)	Connections	Capacity of Sidings 50' Cars	Phone Locations
410		CP X		9.2	Park Oakwood Jct Schaefer Twr Rouge Yard Fordson] DT	NW	Yard Yard	Box Box N—S Tower Office
414		X	10.3					
415			13.5					
		R2	13.6					
				15.3		CO-CRC DT		
Accounting Code No.	Train Order Station	Interlocking	Radio Channel	Distance from Malinta	NAPOLEON Branch Stations	Connections	Capacity of Sidings 50' Cars	Phone Locations
90				0.0	Malinta		Yard	Box N
507	DN	X	R1	7.1	Napoleon	NW	Yard	Office— Dieselhouse
		Accounting Code No.	Distance from Flat Rock	OFF-LINE Stations	Trackage Rights	Connections		
		001A	26.0	Windsor, Ont.	CRC-CP	CP-ET		
		002A	25.0	Ferndale, Mi.	CRC-GTW	GTW		
		760	43.0	Toledo, O.	AA	CRC-AA		
		690	300.0	Cincinnati, O.	CRC	CRC		
		694	313.0	Decoursey, Ky.	CR-LN	LN		
		696	313.0	Cincinnati, O.	CRC-NW-SOU	SOU		

TIME TABLE SYMBOLS

1001.

D — Train Order Station	— Day
DN — Train Order Station	— Continuous
DPN — Train Order Station	— Day and part night
X — Interlocking	
CP — Controlled Point	
R — Radio Location and Channel No.	
S — Car Capacity	— Stub
E — Car Capacity	— East
W — Car Capacity	— West
NO — Car Capacity	— North
SO — Car Capacity	— South
N — Phone Location	— North
S — Phone Location	— South
TCS — Traffic Control System	
DT — Double Track	

NOTICE

1002. The Officers of this Company direct that the Time Table, Book of Rules, General Orders and Bulletin Orders must be rigidly observed, and no excuse will be accepted for violation of same.

Note carefully that important changes have been made in this time table.

GENERAL INSTRUCTIONS LOCATIONS OF STANDARD CLOCKS

1003.

Flat Rock Dispatcher's Office	Napoleon
South Yard Office	Maitland (Crew Building)
Flat Rock Yard Office	Springfield Jct. Yard Office
Flat Rock Hump Tower	Jackson
Ford Park — Lima	

YARD LIMITS Main Line

1004.

STATION	MILE POST
South Yard to Trenton inclusive	2.0 to 11.9
Flat Rock Yard	14.1 to 19.2
Delta	73.2 to 76.3
Leipsic	104.1 to 107.2
Ford Park-Lima	128.5 to 135.4
Maitland	191.1 to 194.5
Junction	199.0 to 202.7
Washington C.H.	231.6 to 236.2
Summit	270.2 to 272.0
Waverly-Glen Jean	281.5 to 282.7
Jackson	304.5 to 307.0
Ironton	357.5 to 361.0

BRANCHES

Flat Rock Yard	19.2 to D2.8
Park—Fordson	D9.1 to Fordson
Toledo (Temperance Yard)	Inclusive
Ottawa Industrial Loop	Inclusive
Malinta to Napoleon, inclusive	M0.0 to M8.2

BULLETIN BOARDS**1005.**

South Yard Office	Ford Park-Lima
Ford Yard Office	Maitland
Flat Rock Yard Office	Springfield Jct. Yard Office
Flat Rock Trim Office	Jackson Station
Flat Rock Hump Tower	Jackson Train & Enginemen's Building
Napoleon Diesel House	Rouge Yard Office

TURNTABLE**1006.**

Flat Rock Yard

TRAIN REGISTER STATIONS**1007.**

South Yard	Jct. (Springfield Yard)
Flat Rock Yard	Jackson

CLEARANCE CARD STATIONS**1008.**

Bridge—CRC (Southward trains destined to DT&I at Mill)	
Flat Rock Yard	
Hamler	Southward—B&O
Sugar Street Tower	Northward and Southward DT&I
	Northward—B&O
Cold Springs (Trains destined to DT&I at Maitland)	
Springfield Junction Yard Office	
Jackson	

SCALES**1009.**

Flat Rock Hump (Automatic)	Jackson
Old Lima Yard	Ironton*
Springfield Junction Yard	Napoleon
Washington C.H.	

*Limited to not more than 100,000 pounds gross.

WYES**1010.**

Short Cut	Quincy
D&I Junction	Springfield Junction Yard
Leipsic	Jackson
Ford Park-Lima	Temperance Yard—Toledo

RAILROAD RADIOS

1011. Base stations, engines, cabooses, track equipment, vehicles and M of W forces so equipped will set railroad radios on specified channels between specified points as outlined below. This excludes Flat Rock Hump operations.

Between — Short Cut and Flat Rock	Channel 2
Between — Fordson and King Rd.—D&I	Channel 2
Between — King Rd. — D&I and Carleton	Channel 1
Between — Carleton and Maitland	Channel 2
Between — Maitland and Thorps	Channel 1
Between — Thorps and Ironton	Channel 2
Between — S.R. 108 Napoleon and S.R. 109 Malinta	Channel 1

When practicable, head end employes will advise the flagman by radio when approaching trackmen, signalmen, or other employes to be on the alert for hand signals.

SPRING SWITCHES

1012. Crews of trains trailing through Spring Switches must observe clearing of signal governing reverse movement where signal is provided.

In the application of Rule 104, signals indicating the position of Spring Switches are located at Huron just south of Spring Switch; north end of Ford Park just north of Spring Switch; south end of Ford Park just south of Spring Switch.

These signals are for the purpose of checking the position of Spring Switches only and do not indicate track occupancy.

When a trailing movement through a Spring Switch is stopped before passing entirely through the switch, the movement must not be reversed until the switch has been properly set by hand.

LOCATION	SPEED — MPH
Huron—End Double Track	30
Karl	15
Ford Park—North End Siding	30
Ford Park—South End Siding	15
Fordhaven—End Double Track	30
Penn	15
Park—End Double Track	30

OPERATION OF ELECTRICALLY LOCKED HAND-OPERATED SWITCHES

1013. Authority to use electric-locked switch which is under control of the Operator must be given verbally to member of crew by train dispatcher or Operator. The period of time the switch and track may be used and designated limits must be clearly stated and understood.

Instructions for operating electric-locked switches are posted inside the telephone box near each of these switches.

The following hand-operated switches are equipped with electric locks; permission to unlock must be obtained from Operator before switch padlock is removed from keeper:

Main Line

LOCATION	TRACK	CONTROLLED BY
Trenton	McLouth Hi Line	Trenton
Carleton	Reiser Lumber	Diann
Maybee	North-end Storage	Diann
Maybee	South-end Storage	Diann
Maitland	Springfield Container	Cold Springs—CRC

Dearborn Branch

Woodhaven	Crossover—North end	Penford
Penford	Crossovers—Eureka Rd.	Penford

1014. The following hand-operated switches within TCS territory are NOT equipped with electric lock:

Main Line

LOCATION	TRACK
Maybee	Team Track

Dearborn Branch

D—4.7	Chrysler-North
D—4.8	Chrysler-South
D—6.9	R. W. Trucking

In TCS territory trains are prohibited from clearing in a track not equipped with an electric lock switch.

AIR BRAKES

1015. Enginemen and trainmen are responsible for knowing that the prescribed test of train brakes has been made before starting from terminal stations, or from any point where consist of train has been changed in strict compliance with the provisions of the current power brake law.

AIR BRAKE LEAKAGE TEST — ROAD SERVICE

1016. Upon receiving proper signal to apply brakes for test, the brake pipe pressure must be reduced 15 pounds by the automatic brake valve. After the service exhaust stops exhausting, the brake valve must be lapped or cut out, and then one minute allowed to permit pressure equalization. On the second minute, observe brake pipe pressure and note that leakage does not exceed 5 pounds per minute.

INSPECTION OF FREIGHT CARS

1017.

- I. Movement of defective cars where a designated inspector (Car Inspector) is on duty.
 - A. The conductor of a train shall be notified in writing of any defective car or cars to be moved in his train and he must inform all other crew members of the defective car or cars and also shall advise them of the maximum speed and other restrictions, if any. The defective car must be properly carded on both sides.
- II. Movement of defective car or cars at a location where a designated inspector (Car Inspector) is **NOT** on duty.
 - A. At each location where a freight car is placed in a train and a person designated under S215.11 (Car Inspector M/E) is not on duty for the purpose of inspecting freight cars, the freight car shall, as a minimum, be inspected for the imminently hazardous conditions listed below that are likely to cause an accident or casualty before the train arrives at its destination. These conditions are readily discoverable by a train crew member in the course of a customary inspection.
 1. **Car Body**
 - a. Leaning or listing to side.
 - b. Sagging downward.
 - c. Positioned improperly on truck.
 - d. Object dragging below.
 - e. Object extending from side.
 - f. Door insecurely attached.
 - g. Broken or missing safety appliance.
 - h. Lading leaking from a placarded hazardous materials car.
 2. Insecure coupling.
 3. Overheated wheel or journal.
 4. Broken or extensively cracked wheel.
 5. Brake that fails to release.
 6. Any other apparent safety hazard likely to cause an accident or casualty before the train arrives at its destination.
 - B. At location when there is no qualified inspector the options for handling defective care are limited to:
 1. Setting the car out or,
 2. Calling in a designated inspector to either repair the car or properly tag it for movement for repairs.

INSPECTION OF TRAINS

1018. Trainmen, while standing, must inspect the running gear, brake and draft rigging and be alert for hot journal boxes of the cars in their train.

Train and engine crews must observe their train at every opportunity while in motion for defective equipment or hot journals. They will also observe passing trains for defective equipment and signal members of such train if a dangerous condition is discovered.

When a journal is found overheating en route, train **MUST BE STOPPED** and examination made. If cause of heating cannot be corrected or car cannot be moved to next terminal through use of cooling compound, car should be set out. Report must be made on prescribed form and forwarded to operator at first open station.

Water or snow should not be used for cooling hot journals except in emergency; and when used, should be cooled as slowly as conditions will permit.

When cars with hot journals are set out where inspectors do not take immediate charge, precaution must be taken to know that journal is left in condition to avoid damage to car by fire.

Cars with hot journals must not be left on any track in close proximity to buildings or where flammable commodities are loaded or unloaded.

When meeting or passing other trains and passing train order offices, or other stations, and points where trackmen, bridgemen, or other employes are working, train and engine crews on moving trains must be on the lookout for signals, and when practicable, exchange signals.

A trainman must be positioned on the rear platform of the caboose when passing train order offices, stations or sidings, through interlockings, and when passing or meeting trains.

When two or more employes are present, they will station themselves, when practicable, so that both sides of the train can be observed.

FLAGGING DISTANCES

1019. When necessary to provide rear or head end flag protection as outlined in Rule 99 in non-signaled territory, the flagman must go out not less than the following distance:

Location	Distance
Flat Rock and South Yard	1500 ft.
Diann and Leipsic	5200 ft.
Lima and Springfield	5200 ft.
Springfield and Storms	5200 ft.
Storms and Glen Jean	2600 ft.
Glen Jean and Jackson	5200 ft.
Jackson and Ironton	2600 ft.
Malinta and Napoleon	1500 ft.

When necessary to provide rear end flag protection in signaled territory, the flagman must go back not less than 1500 feet.

When necessary to provide head end flag protection against opposing movements, as prescribed by Rule 270, the flagman must go forward not less than one (1) mile where the Maximum Authorized Speed is 30 MPH or less and not less than two (2) miles where the Maximum Authorized Speed is more than 30 MPH.

MARKERS

1020. Rule 19 is modified to read:

When a train is occupying a main track during the hours of one hour before sunset until one hour after sunrise and also when visibility is restricted to one-half mile or less on tangent track, a single red or orange-amber marker light, either flashing or burning constantly and reflectorized banner markers, one on each side, will be displayed on the

last car of a train to indicate the rear of the train. During all other hours a red flag or red reflectorized banner will be displayed on the rear of the last car to indicate the rear of the train. When train is clear of the main track to be passed by another train, reflectorized markers will show green or yellow to the rear.

During the hours the marker is required to operate, the train crew at each crew change point must inspect the marker to assure that it is in proper operating condition. The marker light will be turned out when train is clear of the main track.

EXCEPTIONS:

Marker Light(s) will not be turned out when train is clear of the main track to meet an opposing train.

When an engine is on the rear of a train on a main track, the trailing headlight will be displayed "Dim" at all times and will serve as the marker light.

A marker is not required for a train, cars or an engine on the main track where Rule 93 is in effect. Markers do not indicate the track on which a train is standing or moving.

A lighted marker light is not required for defective equipment that must be handled behind the caboose for movement to a terminal where repair facilities are located. The rear of such train will be identified by a white light, a red flag or by car number.

When a marker light becomes inoperative enroute, the train may be moved (after displaying a white light to indicate the rear of the train) to the next location where the marker may be repaired or replaced. Immediately upon arrival at the relieving terminal for the crew, or sooner when practical without delay to the train, the inoperative marker light will be reported to the Train Dispatcher or Yardmaster.

SPACING OF TRAINS

1021. In application of Rule 91, trains must be spaced not less than 15 minutes apart at Summit in either direction and southward trains leaving Quincy. Crews will be advised by Train Dispatcher or Operator as to location of preceding train.

HOT BOX DETECTORS

1022.

DETECTOR LOCATIONS		Minimum Readout Speed	
Diann	M.P. 36.4 West Side	10 mph	Diann
Indicator	M.P. 54.5 Northward Movements		
Riga-Metamora	M.P. 57.3 West Side	10 mph	Diann
Indicator	M.P. 59.5 Southward Movements		
Liberty Center	M.P. 80.1 West Side	10 mph	Hamler
Prentiss	M.P. 102.2 East Side	10 mph	Hamler
Quincy	M.P. 161.2 East Side	10 mph	Quincy

When a hot box is detected, a rotating white beacon signal located on each equipment house and a flashing white light on the wayside indicators at Riga-Metamora site, will be actuated. In this event, the train will be brought to a stop after moving completely over the detector site and the tower operator at the readout station contacted by radio or other means of communication to determine the hot box location. Upon observation and no exception is taken to the reported defective car, a crew member will be responsible for observing the journal conditions of two cars ahead and two cars behind the reported car. Crew members must observe the designated signals and take necessary action to stop train if detector indicates a hot box. Employees receiving hot box indi-

cation shall also be governed by Time Table Instruction No. 1018.

NOTE: The wayside indicators located at the Riga-Metamora site in addition will display a steady white light to indicate the hot box detector is functioning.

NOTE: Dragging equipment detectors are in service in conjunction with hot box detectors at Riga M.P. 57.3 and Liberty Center M.P. 80.1.

RIGHT OF WAY FIRES

1023. Train crews will use every precaution when using lighted fuses in the discharge of their duties. They will refrain from throwing lighted cigars or cigarettes, or other lighted articles on the right of way which may start a fire. **ANY FIRES ON RIGHT OF WAY MUST BE REPORTED IMMEDIATELY** to the Train Dispatcher.

SPECIAL INSTRUCTIONS

1024. NORTHWARD TRAINS ARE SUPERIOR BY DIRECTION TO TRAINS OF THE SAME CLASS IN THE OPPOSITE DIRECTION.

TCS RULES AND SPECIAL INSTRUCTIONS

1025. TCS Rules in effect on main track between Huron and Diann and on Dearborn Branch between Fordhaven and Park.

SPECIAL NOTE:

A train or engine must "stop clear" of a block signal indicating "stop" (Rule 274B). A train or engine may pass a block signal indicating "stop" on verbal instructions or hand signals from the Train Dispatcher or Operator to:

- (1) Return to train with engine or cars.

Procedure:

The Operator must first lock interlocking plant in proper manner to prevent any opposing or conflicting movements before permission to pass stop signal can be granted to train crew to return to train with engine or cars.

- (2) Dispatch relief engine to handle disabled train or train that is tied up under the Hours of Service Law.

Procedure:

The train Dispatcher or Operator must have contact with the Conductor or the Engineer of the disabled train and must advise them that the train must not be moved until relief engine arrives.

The name of the Conductor or Engineer, the location of train, time advised, and engine number must be recorded on train sheet and block sheet by the Train Dispatcher and Operator.

After the above has been complied with, the relief engine may pass stop signal on verbal permission authorized by the Train Dispatcher and proceed at restricted speed to location of the disabled train. The direction of the disabled train will be the established direction for handling in accordance with current TCS Rules.

MANUAL BLOCK SYSTEM

1026. A Manual Block System is in service over that portion of the main track between Short Cut and the north end of South Yard. This portion of main track, indicated by Manual Block signs, is under the jurisdiction of the block operator at Short Cut. Verbal permission from the block operator must be obtained for northward trains or engines to use this track.

All northward movements from South Yard requiring the use of

this Manual Block territory must obtain permission at either the yard office or at the north end of yard before leaving South Yard.

Southward movements may proceed on fixed signal indication at Short Cut in lieu of verbal permission.

When any movement clears the main track, in this territory at South Yard or at any intermediate point, the Conductor, or a crew member who has been properly instructed by the Conductor must call block operator at Short Cut and report clear and must not re-enter or foul main track until after receiving further block permission to do so.

No train or engine will be permitted to enter this territory while it is occupied by another train or engine unless authorized by the Superintendent.

1027. At Wyandotte, northward trains destined to Conrail at Mill will proceed when indicator, located at M.P. 7.5 displays a lunar white indication. If the lunar white indication is not displayed, trains with more than 25 cars will stop clear of indicator, then call South Yard for instructions and be governed accordingly. Indicator does not convey condition of track between indicator and approach signal for Mill. Its only purpose is to permit trains being operated via the Conrail at Mill to proceed without stopping or stop and call for instructions.

1028. Crews must ascertain location of trains before fouling main track in the Wyandotte-Trenton territory and use extreme caution around reverse curves at Wyandotte.

1029. Movements of trains against the current of traffic between Vreeland Road and Huron, between Hall Road and Fordhaven, and between Park and Oakwood Boulevard, may be made on verbal permission from an operator who must obtain this authority from the train dispatcher. Movements between Oakwood Boulevard and Rouge Yard will be made by authority of the yardmaster at Rouge Tower.

1030. At Flat Rock Yard, Southward movements on Southward Main Track will be governed by Signal No. 183 located at M.P. 18.5.

If signal displays an aspect other than Rule 281 trains having more than 40 cars must stop short of "CS" sign located 300 feet north of Signal No. 183. Highway crossing protection will time out in 60 seconds.

When the stopped train receives signal aspect Rule 281 permitting it to proceed, movement will be governed by rule 1041.

Trains having 40 cars or less will proceed according to signal aspect.

1031. At Ford Park, unless otherwise provided, all southward trains will use main track and all northward trains will use the siding as running tracks. Reverse movements may be made on verbal permission from the Operator at Sugar Street Tower who must obtain this authority from the Train Dispatcher. Southward trains must not leave Ford Park without permission from Operator at Sugar Street Tower who must obtain this authority from Train Dispatcher.

At Ford Park, northward trains will stop in clear on siding and will not foul north switch when setting out or picking up when approach signal is displaying **STOP signal** Rule 292. If signal is displaying Rule 282 or 285, train may, after contacting B&O Dispatcher to ascertain locations of opposing trains, pass approach signal in performance of work. When ready to depart, inform B&O Dispatcher of expected leaving time, then be governed by instructions and signal indication.

1031A. At Maitland, northward trains entering the DT&I at Maitland must receive permission from the DT&I train dispatcher through an operator before train and/or engine can enter the main track.

At Maitland, southward trains entering Conrail at Maitland must receive permission from the CRC train dispatcher through an operator before train and/or engine can enter the CRC main track.

1032. At South Charleston, permission must be received from the train dispatcher via the operator at Springfield Yard before trains and/or engines leaving CRC tracks can enter the DT&I main track at Shy.

1033. At Glen Jean, N&W will use DT&I main track from N&W eastbound main line switch to the main line switch leading to the south end of the DT&I interchange track to pick up their cars. All DT&I trains or engines will approach and move over this portion of main track with caution, expecting to find N&W trains or engines moving unprotected in either direction.

At Glen Jean, all southbound trains or engines (except through movements) must obtain permission from N&W train dispatcher to occupy circuit between home signal and N&W eastbound main.

If a train or engine should clear the circuit after having been used, crew member must advise N&W dispatcher of this fact and again obtain permission to occupy the circuit. Permission must be obtained regardless of signal indication, but it must be understood that trains or engines will be governed by signal indication.

1034. DT&I trains operating over foreign railroads will be governed by the current Time Table, Operating Rules, and/or Special Instructions of that railroad.

Every employe whose duties are in any way prescribed by these rules must always have a copy of them when on duty unless otherwise specified.

1035. Trains and engines of other railroads operating over DT&I trackage will be governed by DT&I Time Tables, Operating Rules, and Special Instructions and must have a copy with them while on duty.

Mill Street and Flat Rock Yard	GTW
Sugar Street Tower and Lima	CRC
Short Cut and South Yard	GLS
MA-2 (M.P. 6.3) and Ford	WT

1036. Train orders received by trains in turnaround service remain in effect on southward and northward trips unless fulfilled, superseded, or annulled.

GRADE CROSSING PROTECTION

1037. All train and engine movements over the following street crossings must be preceded by a member of the crew who will act as flagman until crossing is occupied by train movement, unless crossing is protected by a known employe.

Main Line

Trenton	King Road-Quarry Lead
Riverview	Jefferson Avenue
Washington C.H.	Elm Street (switching movement only)
Jackson	Bridge Street
Jackson	Athens Street
Ironton	Second Street

Napoleon Branch

Napoleon Oakwood Avenue

1038. Laskey Road, Toledo, protected by highway flashing light signals at both tracks crossing Laskey Road, Temperance Yard. Controllers are located near tracks on either side of highway.

All trains and engines must stop before fouling crossing and a member of crew will insert switch key in "START" slot on controller and turn to the right. After flashers have been operating for at least 20 seconds, the movement may proceed. Flashers will stop when track circuit is cleared.

Should flashers be started and train does not enter track circuit, insert switch key in "STOP" slot and turn to the right.

1039. Main Street, Leipsic, is protected by a switch key controller for operating highway flashing light signals when making switching movements on the McDonald and Reid tracks. Highway crossing must not be fouled during switching movements until a member of the crew activates crossing flashers by operating the key controller marked "START" located on the north side of the road crossing. When movements over the crossing are completed, flashers must be shut "OFF" at the key controller.

1040. When cars are pushed by an engine, except when shifting or making up trains in yards, a trainman must take a conspicuous position on the front of the leading car.

When cars are pushed over crossings either protected or not protected by flashers, a crew member must protect crossing before it can be occupied with car or cars.

In the movement of engines, with or without cars, when switching over highway grade crossings, unless there is a watchman on duty or the crossing is protected by a member of the crew, highway traffic must be protected by sounding prescribed signals preceding each movement. Trains and engines moving through sidings or industrial tracks and across highway grade crossings which are protected by flashers, and such tracks do not operate flashers, crossing must be protected by a member of the crew until crossing is covered, unless the crossing is being protected by a known employe.

INSTRUCTIONS REGARDING "CS" SIGNS

1041. At various locations, apparatus is provided to automatically interrupt the operation of automatic highway crossing protection. A sign reading "CS" in black letters on white background will indicate the point beyond which engines and cars will operate automatic highway crossing protection after the protection has been interrupted.

At such locations, all movements approaching at slow speed, shifting movements, and approaching movements after having stopped must be prepared to stop before passing over the crossing unless it is known that the automatic protection is operating. If the automatic protection is not operating, the movement must not be made over the crossing until protection has been provided as prescribed by Rule 103.

On tracks other than main track where the automatic highway crossing protection is not approach operated, the "CS" sign will indicate the limits of track circuit extending through the crossing only. At such locations trains or engines must stop on track circuit extending between the "CS" sign and the crossing. Automatic protection must be allowed to operate for 20 seconds before proceeding over the crossing.

When a train or shifting movement passes entirely over a highway crossing equipped with automatic protection, it must not move in the opposite direction over the crossing until automatic protection is provided or as prescribed by Rule 103.

1042. Train crews must not permit a train to block a public highway longer than the allotted time prescribed by law.

MAXIMUM AUTHORIZED SPEED

1043.

Main Line

LOCATION	LOCATION RESTRICTIONS	MPH
Short Cut to South Yard		20
Bridge—Short Cut Canal		6
South Yard to Flat Rock Yard		40
Ecorse—Jefferson Avenue (Ordinance)		10
Ecorse—High Street (Ordinance)		10
Wyandotte—Ecorse Creek to Pennsylvania Ave. (Ordinance)		25
Between home signals of all interlocking between South Yard and Flat Rock, and reverse curves at Trenton		20
Flat Rock to Huron		20
Huron to Diann Tower		55
Carleton—Grafton Rd. to Maxwell Rd. (Ordinance)		35
Maybee—Doty Rd. to Baldwin Rd. (Ordinance)		50
Diann Tower to XN		49
Leipsic—N&W crossing to XN (Ordinance)		35
Leipsic—Northward trains XN through N&W interlocking		20
XN—Entering B&O		20
Ottawa Industrial Loop		20
Kleman—Entering or leaving B&O		10
South Ottawa—Entering or leaving B&O		5
DT&I Jct. to Maitland		49
Entering or leaving B&O		15
Lima—Morris to M.P. 134.1		20
Quincy M.P. 164.0 to M.P. 165.0 (Ordinance)		35
Maitland to Junction		20
Lagonda—CRC Crossing		8
(After crossing Diamond is occupied, train speed can then be increased from 8 mph to maximum authorized speed—not to exceed 20 mph.)		
Junction to M.P. 239.5		49
Jeffersonville—M.P. 222.1 to M.P. 222.9 (Ordinance)		35
Washington C.H.—M.P. 232.8 to M.P. 234.5		20
Good Hope—M.P. 239.5 to M.P. 258.0		25
M.P. 258.0 to M.P. 265.5		49
M.P. 261.0 to M.P. 262.0 over bridge		30
M.P. 265.5 to Summit		20
M.P. 265.4 to M.P. 279.2 Southward trains (Except light locomotives)		15
M.P. 279.2 to M.P. 271.3 Northward trains (Except light locomotives)		15
Summit to Glen Jean		30
Between home signals at Glen Jean		15
South connection to N&W RR, Glen Jean to C&O Bridge— M.P. 284.4		20
C&O Bridge—M.P. 284.4 to Greggs—M.P. 285.7		30
Greggs—M.P. 285.7 to Jackson—M.P. 304.5		40

Dearborn Branch

D&I Junction to Park		40
Park to Schaefer Rd.		20

Ironton Branch

LOCATION	LOCAL RESTRICTIONS	MPH
Bloom Junction to M.P. 346.4		25
Bridge 344.9		6
M.P. 346.4 to Ironton		25
Royersville Tunnel		6
Ironton—Floodwall south (Ordinance)		10

Napoleon Branch

Malinta to Napoleon		20
Napoleon—within city limits (Ordinance)		8

ADDITIONAL SPEED RESTRICTIONS

Diann—connecting track DTI No. 4 to AA No. 3	5
Delta—yard lead	10
Springfield—Burt Street crossing	5
York Street crossing	5
East Street crossing	5
Lima leg of wye	10
Carney—CRC crossing	10
Six axle locomotives	40
Wreck derrick No. 99402	25
Locomotive crane No. 99754	30
Jordan spreader No. 99467	25
Mineral freight (40 cars or more)	40
Scale Test Car No. 99425	30
Track cars and M/W machinery	25
Over grade crossings, interlockings, switches, and frogs	6
on curves 10 degrees or over	10
Movement on tracks other than main tracks—Restricted Speed	10
Through crossovers, entering and leaving sidings	
except spring switches	10
Ore cars (loads or empties)	35
Hot metal trains (loads or empties)	15
Hot metal trains entering and leaving turnouts	10

UNLESS OTHERWISE PROVIDED, SPEED RESTRICTIONS APPLY TO THE ENTIRE LENGTH OF THE TRAIN.

CHECKING SPEED INDICATOR**1044.**

At locations where measured test mile signs are erected, enginemen will check the accuracy of speedometer on controlling unit against lapse of time while equipment is being operated at constant speed and be governed accordingly. In other areas, Mile Posts will be used for the check. Any inaccuracy will be recorded on Work Report Form No. 7292 noting the speed at which check was made and miles per hour, slow or fast.

LOCATION	MILE POSTS
Maybee	33.4 to 34.4
Delta	67.4 to 68.4
Maitland	189.3 to 190.3
South Charleston	212.5 to 213.5
Bainbridge	262.8 to 263.8
Jackson	303.5 to 304.5

TABLE OF SPEEDS

(Minutes and seconds per mile,
in terms of miles per hour.)

1045.

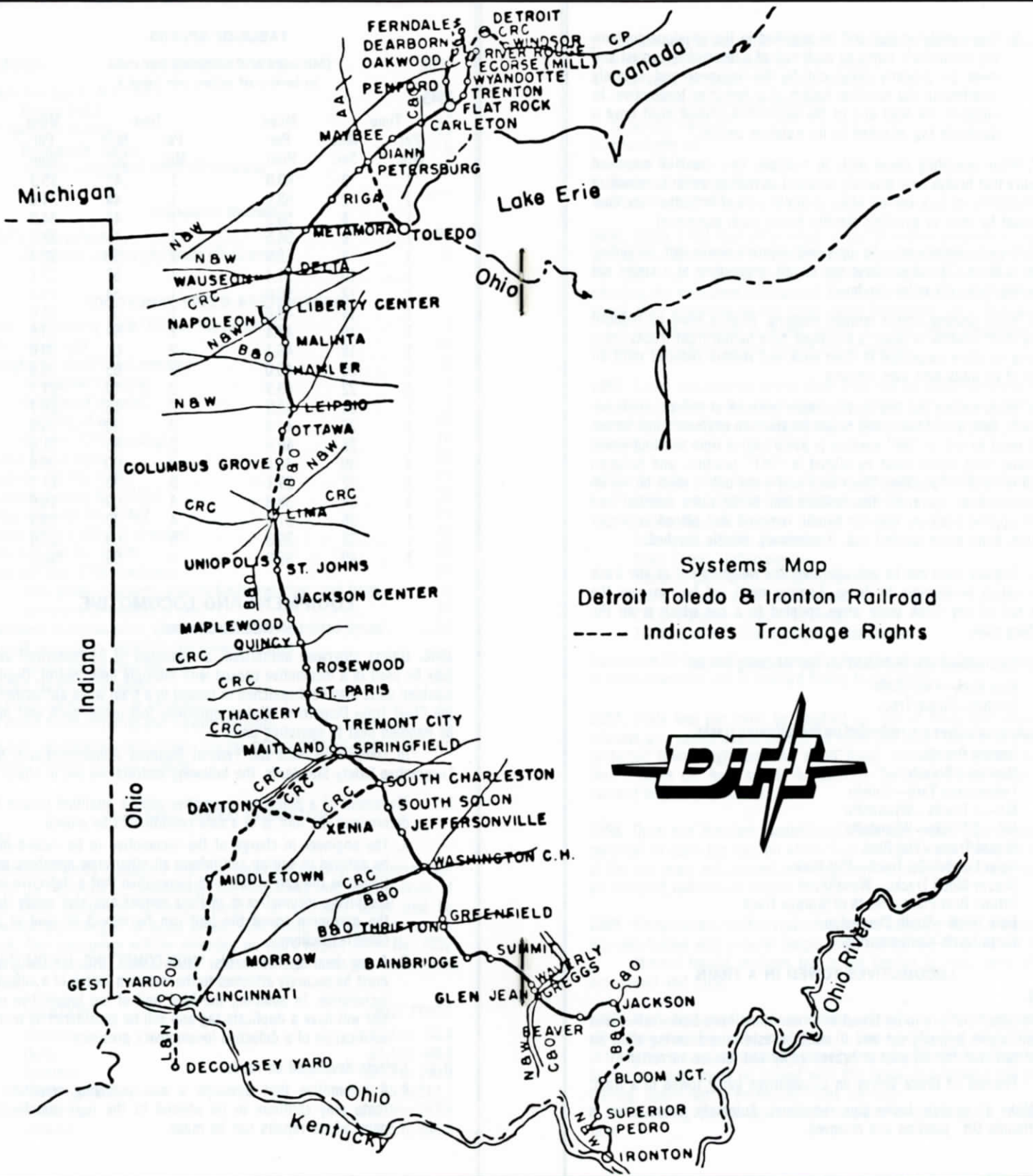
Time			Miles			Time			Miles		
Per	Mile	Miles	Per	Mile	Per	Per	Mile	Miles	Per	Mile	Per
Min.	Sec.	Hour	Min.	Sec.	Hour	Min.	Sec.	Hour	Min.	Sec.	Hour
1	0	60.0	1	42	35.3						
1	2	58.0	1	44	34.6						
1	4	56.2	1	46	34.0						
1	6	54.5	1	48	33.3						
1	8	52.9	1	50	32.7						
1	10	51.4	1	52	32.1						
1	12	50.0	1	54	31.6						
1	14	48.6	1	56	31.0						
1	16	47.4	1	58	30.5						
1	18	46.1	2	00	30.0						
1	20	45.0	2	05	28.8						
1	22	43.9	2	10	27.7						
1	24	42.9	2	15	26.7						
1	26	41.9	2	30	24.0						
1	28	40.9	2	45	21.8						
1	30	40.0	3	00	20.0						
1	32	39.1	3	30	17.1						
1	34	38.3	4	00	15.0						
1	36	37.5	4	30	13.3						
1	38	36.8	5	00	12.0						
1	40	36.0	6	00	10.0						

EQUIPMENT AND LOCOMOTIVE RESTRICTIONS

1046. Unless otherwise authorized, a maximum of 24 motorized axles may be used in a locomotive consist with multiple unit control. Dead or disabled units may be dispatched or moved in a train when authorized by the Chief Train Dispatcher. Unless otherwise instructed, such unit must be handled next to operating units.

In compliance with the Federal Railroad Administration's New Locomotive Safety Standards, the following instructions are in effect.

- I. Movement of a defective locomotive after a qualified person has determined the unit is in a safe condition to be moved.
 - A. The engineer in charge of the locomotive to be moved must be notified in writing and inform all other crew members positioned in the cab of the lead locomotive that a defective non-complying locomotive is in their consist and also notify them the maximum speed the unit can be moved at, and of any other restrictions.
 - B. A tag bearing the words "NON-COMPLYING LOCOMOTIVE" must be securely attached to the isolation switch of a defective locomotive. In addition, the lead unit of the locomotive consist will have a duplicate tag and will be considered as written notification of a defective locomotive's presence.
- II. Defects developed en route.
 - A. A locomotive that develops a non-complying condition en route may continue to be utilized to the next maintenance point where repairs can be made.



Systems Map
 Detroit Toledo & Ironton Railroad
 --- Indicates Trackage Rights



- B. Non-complying tags will be supplied in the envelope containing conductor's forms on each unit of a locomotive consist and must be properly filled out by the engineer and securely attached to the isolation switch of a defective locomotive. In addition, the lead unit of the locomotive consist must have a duplicate tag attached to its isolation switch.

1047. When operating diesel units in multiple, care must be exercised to insure that brakes have properly released on trailing units. To minimize the possibility of jack-knifing when multiple consist is backed up, caution must be used in handling throttle during such movement.

1048. Diesel engines may be operated through water not exceeding depth of three (3) inches above top of rail, proceeding at a speed not exceeding three (3) miles per hour.

1049. When passing over a railroad crossing, throttle must be reduced to the third position or lower a sufficient time before front trucks enter crossing to allow amperage to drop back and remain reduced until all trucks of all units pass over crossing.

1050. When setting out live units enroute because of defects, malfunction, etc., control and fuel pump circuit breakers on engineer's instrument panel must be left in "ON" position to avoid engine from shutting down. Generator field switch must be placed in "OFF" position, and isolation switch in "START" position. When such unit is set out, it must be set up for independent operation, the independent brake valve inserted and left in applied position, reverser handle removed and placed in proper location, hand brake applied and, if necessary, wheels chocked.

1051. Engines must not be operated over the weighing rail of any track scale unless permissible to do so. Engines must not be run over the dead rail of any track scale when coupled to a car which is on the weighing scale.

1052. Locomotives are restricted on the following tracks:

Blue Rock—Over scale
Ironton—Tipple Track

Six-axle locomotives are restricted on the following tracks:

Ironton Branch
Napoleon Branch
Temperance Yard—Toledo
MA—1 Tracks—Wyandotte
MA—2 Tracks—Wyandotte
Bryant Track—Flat Rock
Heier Lumber Co. Track—Flat Rock
Socony Mobil Tracks—Woodhaven
Ottawa Beet Plant—North of Storage Track
Hole Track—South Charleston
Glaze Track—Jeffersonville

LOCOMOTIVES TOWED IN A TRAIN

1053.

Locomotives that are to be towed in a train must have brake valves and cut out cocks properly set and it must be ascertained during train air brake test that the locomotive brakes apply and release correctly.

Position of Brake Valves on Locomotives being towed in a train:

1. (Make a complete brake pipe reduction). Automatic Brake valve in "Handle Off" position and removed.

2. Independent brake valve handle in "Release" position and removed.
3. Brake valve cut-off valve in "Out" position.
4. M.U. valve in "Open" or "Lead" position.

Position of electrical switches:

1. Generator Field off.
2. Headlights off.
3. Engine Run on.
4. Control and fuel pump on.
5. Reverser removed.

1054. When a flat spot on a wheel of car or engine develops en route, and upon inspection by a member of the crew it is determined that the flat spot is not in excess of 2 1/2 inches in length and no other defect affecting the movement is observed, the train may continue at authorized speed after reporting to the Chief Train Dispatcher. If a flat spot of 2 1/2 inches or larger is found, report to Chief Train Dispatcher and request instructions before moving car or engine.

1055. Camp cars and the wreck diner must not be moved in trains without authority from the Chief Train Dispatcher. When camp cars are moved in trains, they must be placed at the rear of train next ahead of caboose.

1056. "Hi-cube" box cars and all other long cars with 64 foot or over truck centers are restricted on following tracks:

Ironton Branch
Hole Track—South Charleston
Glaze Track—Jeffersonville
National Cash Track—Washington C.H.
C.R.C. Transfer (Hill Track)—Lima
C.R.C. Transfer—Sugar St., Lima
Tracks 8 and 8A Socony Mobil—Woodhaven

Equipment 60 feet or longer cannot be handled through double crossover to move from one end of Penford Siding to the other.

1057. Scale test car must be handled on rear of train next ahead of caboose at a speed not to exceed 30 miles per hour. The car should be protected from rough handling at all times. Impacts of greater speed than 2 miles per hour should be avoided. Switching of car should be avoided whenever possible.

1058. Open end flat cars loaded lengthwise with poles, pipe or similar material, or open top cars on which such lading extends above the ends of the car, must not, except in emergency, be placed in a train next to an occupied caboose or engine.

1059. Except where further restricted, trains handling 40 or more open-top cars loaded with mineral freight must not exceed 40 miles per hour. Mineral freight includes but is not limited to coal, coke, stone, ore, gravel and sand.

1060. Work equipment such as cranes, shovels, or similar equipment other than wrecking outfit moving on its own wheels must not be placed in trains for movement without authority from the Chief Train Dispatcher. Such equipment must be moved with the heavy end forward and boom trailing. Speed not to exceed 30 miles per hour.

Wrecking derrick must not be handled in excess of 25 miles per hour.

FLAMMABLE COMPRESSED GASES**1061.**

1. Cars loaded with Flammable Compressed Gases shall be handled in accordance with the Department of Transportation regulations under "Position in Train of Loaded placarded tank cars" as outlined on Pages 25 and 26.
2. Trains handling subject cars must not exceed a speed of 15 MPH through villages and towns.
3. Tank cars containing Flammable Compressed Gas shall not be cut off in motion. (Shove to rest.)
 - (A) Car or cars moving under their own momentum shall not be allowed to strike tank cars containing Flammable Compressed Gas.
 - (B) Car or cars shall not be coupled into tank cars containing Flammable Compressed Gas with more force than is necessary to complete the coupling.
4. Cars loaded with Flammable Compressed Gases will not be humped.

SPECIAL NOTE:

- (A) Loaded cars can be identified by a notation on the Waybill which will read, "Flammable Compressed Gas"; this notation will dictate the above handling procedure.
- (B) The conductor and/or the agent or clerk will advise the Chief Dispatcher's office when a car is to be moved and the dispatcher will issue necessary instructions regarding speed restrictions through villages and towns.

15 M.P.H. Speed Restrictions for cars containing FLAMMABLE COMPRESSED GASES applies at the following locations:

Flat Rock Yard to Short Cut	Quincy
Carleton	Maitland to Springfield
Scotfield and Maybee	South Charleston
Hamler	Jeffersonville
Leipsic	Washington C.H.
Ottawa	Waverly
Columbus Grove	Jackson
Lima	Ironton
Jackson Center	

Branches: Dearborn (Flat Rock to Rouge)
Napoleon

HAZARDOUS MATERIALS

1062. HANDLING CARS "PLACARDED" — "EXPLOSIVES A", "EXPLOSIVES B", "POISON GAS", "FLAMMABLE SOLID", "RADIOACTIVE", "FLAMMABLE GAS", "COMBUSTIBLE", "FLAMMABLE SOLID", "OXIDIZER", "ORGANIC PEROXIDE", "CORROSIVE", "DANGEROUS", AND "EMPTY".

Definitions

"ENGINE" means locomotive propelled by and form of energy used by a railroad.

"OCCUPIED CABOOSE" means a rail car being used to transport non-passenger personnel.

"PERSON" means an individual, firm, co-partnership, corporation, company, association, or joint-stock association, and includes any trustee, receiver, assignee, or personal representative thereof.

"PLACARDED CAR" means a rail car which is placarded in accordance with the requirements of Part 172 of this sub-chapter except those cars displaying only the FUMIGATION placards.

"RAILROAD" means a person engaged in transportation by rail.

"RAIL FREIGHT CAR" means a car designed to carry freight or non-passenger personnel by rail, and includes a box car, flat car, gondola car, hopper car, tank car, and occupied caboose.

"TRAIN" means one or more engines coupled with one or more rail cars, except during switching operations or where the operation is that of classifying and assembling rail cars within a railroad yard for the purpose of making or breaking up trains.

SWITCHING OF CARS CONTAINING HAZARDOUS MATERIALS

(a) **Switching of cars containing hazardous materials.** In switching operations where the use of hand brakes is necessary, a loaded placarded tank car, or a draft which includes a loaded placarded tank car, may not be cut off until the preceding car or cars clear the ladder track and the draft containing the loaded placarded tank car, or a loaded placarded tank car, shall in turn clear the ladder before another car is allowed to follow. In switching operations where hand brakes are used, it must be determined by trial whether a loaded placarded car, or a car occupied by a rider in a draft containing a placarded car, has its hand brakes in proper working condition before it is cut off.

(b) A placarded "EXPLOSIVES A" or "POISON GAS" may not be cut off while in motion or coupled into with more force than is necessary to complete the coupling. No car moving under its own momentum shall be allowed to strike any car placarded "EXPLOSIVE A" or "POISON GAS."

(c) When transporting a car placarded "EXPLOSIVES A" in a terminal yard, or on a side track, or siding, it must be separated from the engine by at least one non-placarded car.

(d) The doors of each closed car placarded "EXPLOSIVES A" must be closed, securely fastened, and the lading securely braced before it is moved.

SWITCHING OF FLATCARS CARRYING PLACARDED TRAILERS OR CONTAINERS

(a) **Switching of flatcars carrying placarded trailers or containers.** A placarded flatcar or a flatcar carrying a placarded trailer or freight container that bears any placard prescribed by Part 172 of this subchapter may not be cut off while in motion.

(b) No rail car moving under its own momentum may be permitted to strike any placarded flatcar or any flatcar carrying a placarded trailer or freight container.

(c) No placarded flatcar or any flatcar carrying a placarded trailer or freight container may be coupled into with more force than is necessary to complete the coupling.

F.R.A. EMERGENCY ORDER NO. 5

(a) F.R.A. Emergency Order No. 5. DOT specification tank cars 112A and 114A that are not equipped with head shields required by 49 CFR 179.100-23, transporting flammable compressed gas requiring "FLAMMABLE GAS" placards, shall not be cut off in motion. No car moving under its own momentum shall be allowed to strike any DOT 112A or 114A tank car containing flammable compressed gas that is not equipped

with head shields required by 49 CFR 179.100-23, nor shall any such car be coupled into with more force than is necessary to complete the coupling.

(b) The shipping paper for each specification DOT 112A or 114A tank car (without head shields) containing a flammable compressed gas must contain the notation, "DOT 112A" or "DOT 114A" as appropriate, and either "Must be handled in accordance with FRA E.O. No. 5" or "Shove to rest per E.O. No. 5."

(c) Railroad employes must be informed of the presence of these cars and instructed to handle them in accordance with the requirements of this order.

**PLACEMENT OF FREIGHT CARS PLACARDED
"EXPLOSIVES A" IN YARDS, ON SIDINGS,
OR SIDE TRACKS**

Placement of freight cars placarded "EXPLOSIVES A" in yards, on sidings, or side tracks. A rail car placarded "EXPLOSIVES A" while in a yard or on a siding or side track must be placed so that it will be safe from all probable danger of fire. A car so placarded may not be placed under a bridge or overhead highway crossing, not in or alongside a passenger shed or station except for loading or unloading purposes.

**PLACARDED CARS PROHIBITED IN PASSENGER
TRAINS, LIMITED IN MIXED TRAINS**

(a) **Placarded cars prohibited in passenger trains, limited in mixed trains.** A placarded rail car may not be transported in a passenger train. However, it may be transported in a mixed train, but only at such times and between such points that freight train service is not in operation and subject to the following limitations:

(1) A placarded car (other than one placarded "COMBUSTIBLE") may not be transported next to an occupied caboose or a car carrying passengers in mixed trains, except a car occupied by technical escorts and authorized personnel accompanying shipments;

(2) When a car containing hazardous materials requiring labels is moved in a mixed train and it is not occupied by an employee of the carrier, placards must be applied to the car.

**POSITION IN TRAIN OF CARS PLACARDED
"EXPLOSIVES A" OR "POISON GAS" WHEN
ACCOMPANIED BY CARS CARRYING GUARDS OR
TECHNICAL ESCORTS**

Position in train of cars placarded "EXPLOSIVES A" or "POISON GAS" when accompanied by cars carrying guards or technical escorts. A rail car placarded "EXPLOSIVES A" or "POISON GAS" in a moving or standing train must be next to and ahead of any car occupied by the guards or technical escorts accompanying this car. However, if a car occupied by guards or technical escorts is equipped with a lighted heater or stove, it must be the fourth car behind any car requiring "EXPLOSIVES A" placards.

**POSITION IN TRAIN OF CARS PLACARDED
"EXPLOSIVES A"**

Position in train of cars placarded "EXPLOSIVES A". In a moving or standing train, a car placarded "EXPLOSIVES A" may not be placed nearer than the sixth car from the engine or occupied caboose. However, when the length of the train will not permit this car to be so placed, it must be placed as near the middle of the train as possible, but not less than the second car from the engine or occupied caboose.

**POSITION IN TRAIN OF CARS PLACARDED
"RADIOACTIVE"**

Position in train of cars placarded "RADIOACTIVE." In a moving or standing train, a car placarded "RADIOACTIVE" may not be placed next to any other loaded placarded car (other than on placarded "COMBUSTIBLE"), an engine, occupied caboose, or carload of undeveloped film. Cars placarded "RADIOACTIVE" may be placed next to each other.

**SEPARATING CARS PLACARDED "EXPLOSIVES A" or
"POISON GAS" FROM OTHER CARS IN TRAINS**

(a) **Separating cars placarded "EXPLOSIVES A" or "POISON GAS" from other cars in train.** In a moving or standing train, a car placarded "EXPLOSIVES A" or "POISON GAS" may not be placed next to:

- (1) A passenger car or combination car that may be occupied except a car occupied by technical escorts and authorized personnel accompanying shipments;
- (2) Any loaded placarded car other than a car placarded with the same placard or one placarded "COMBUSTIBLE";
- (3) An engine;
- (4) A wooden underframe car (except on narrow gauge railroads);
- (5) A loaded flatcar, except that loaded cars placarded "EXPLOSIVES A" may be placed next to each other. A flatcar equipped with permanently attached ends of rigid construction is considered to be an open-top car. (See subparagraph (6) of this paragraph.)
- (6) An open-top car when any of the lading protrudes beyond the car ends or when any of the lading extending above the car ends is liable to shift so as to protrude beyond the car ends;
- (7) A car with automatic refrigeration or heating apparatus in operation, or a car with open-flame apparatus in service, or with an internal combustion engine in operation;
- (8) A car containing lighted heaters, stoves, or lanterns;
- (9) A car occupied by any person, including any attendant for the cargo contained therein; or
- (10) An occupied caboose, except a car occupied by technical escorts and authorized personnel accompanying shipments;

(b) In a moving or standing train, a car placarded "EXPLOSIVES A" may not be placed next to a car placarded "POISON GAS."

**POSITION IN TRAIN OF LOADED PLACARDED TANK
CAR OTHER THAN CAR PLACARDED "COMBUSTIBLE"**

Position in train of loaded placarded tank car other than car placarded "COMBUSTIBLE." Except for a tank car placarded "COMBUSTIBLE" a loaded placarded tank car in a moving or standing train may not be nearer than the sixth car from the engine, occupied caboose, or passenger car. However, when the length of the train will not permit a loaded placarded tank car to be so placed, it must be placed as near the middle of the train as possible and not nearer than the second car from the engine, occupied caboose, or passenger car.

**SEPARATING LOADED PLACARDED TANK CARS
OTHER THAN CARS PLACARDED COMBUSTIBLE
FROM OTHER CARS IN TRAINS**

(a) **Separating loaded placarded tank cars other than cars placarded "COMBUSTIBLE" from other cars in trains.** In a moving or standing

train a loaded placarded tank car, other than one placarded "COMBUSTIBLE", may not be placed next to:

- (1) A passenger car or combination car, other than a car occupied by technical escorts and authorized personnel accompanying shipments;
- (2) Any car placarded "EXPLOSIVES A", "RADIOACTIVE", or "POISON GAS."
- (3) An engine or occupied caboose;
- (4) A wooden underframe car (except on narrow gauge railroads);
- (5) A loaded flatcar, other than a specially equipped car in trailer-on-flat-car or container-on-flatcar service or a flatcar loaded with vehicles secured by means of a device designed for that purpose and permanently installed on the flatcar, and of a type generally accepted for handling in interchange between railroads subject to the following:
 - (i) A flatcar equipped with permanently attached ends of rigid construction is considered to be an open-top car (see paragraph (a) (6) of this section); and
 - (ii) This exception for cars in trailer-on-flatcar service does not apply to loaded flatbed trucks, loaded flatbed trailers, loaded open-top trailers, or loaded trucks or trailers without securely closed doors;
- (6) An open-top car when any of the lading protrudes beyond the car ends or when any of the lading extending above the car ends is liable to shift so as to protrude beyond the car ends;
- (7) A car with automatic refrigeration or heating apparatus in operation or a car with open-flame apparatus in service or with an internal combustion engine in operation;
- (8) A car occupied by any person, including any attendant for the cargo contained therein.

POSITION IN TRAIN OF EMPTY PLACARDED TANK CARS

Position in train of empty placarded tank cars. In a moving or standing train, empty placarded tank cars, except empty tank cars last containing combustible liquid, may not be placed nearer than the second car from the engine or occupied caboose.

NOTICE TO TRAIN CREWS OF PLACARDED CARS

- (a) A member of the train crew of a train transporting hazardous materials must have in his possession a copy of the shipping papers for the shipment of hazardous materials being transported showing the information required by && 172.202 and 172.203 of this subchapter.
- (b) The train crew must have a document indicating the position in the train of each loaded placarded car containing hazardous materials, except when the position is changed or the placarded car is placed in the train by a member of the train crew. A train consist may be used to meet this requirement.
- (c) At each terminal or other place where trains are made up or switched by crews other than train crews accompanying the outbound movement of cars, the carrier shall execute consecutively numbered notices showing the location in each train of each rail car placarded EXPLOSIVES A or POISON GAS. A copy of each notice must be delivered to the train and engine crew concerned, and a copy thereof showing delivery to the train and engine crew must be kept on file by the Carrier at each point where the notice is given. At points where train or engine crews are changed, the notice must be transferred from crew to crew. See paragraph (5) of this section for other placarded cars.

1063.

POSITION IN TRAIN OF
PLACARDED CARS
CONTAINING HAZARDOUS
MATERIALS

RESTRICTIONS

Must not be nearer than the sixth car from the engine or occupied caboose

When train length does not permit, must be placed near the middle of train but not nearer than the second car from the engine or occupied caboose

		Cars placarded Explosive 'A'	Cars placarded Poison Gas	Cars placarded Radioactive	Loaded tank cars placarded Corrosive-Poison-Chlorine-Organic Peroxide-Oxidizer-Oxygen-Flammable-Flammable Solid-Non-Flammable Gas-Flammable Gas-Flammable Solid W	Cars placarded Combustible	Empty tank cars placarded Corrosive-Poison-Chlorine-Organic Peroxide-Oxidizer-Oxygen-Flammable-Flammable Solid-Non-Flammable Gas-Flammable Gas-Flammable Solid W-Poison Gas	Loaded cars other than tank cars placarded Dangerous - Corrosive-Flammable Solid-Oxidizer-Organic Peroxide-Chlorine-Flammable Gas-Non-Flammable Gas-Poison-Oxygen-Flammable Solid W-Flammable-Explosive 'B'
M U S T N O T B E N E X T T O	Engine	X	X	X	X		X	
	Loaded flat car (1)	X	X		(3) X			
	Open top car (1)	X	X		X			
	Car with automatic refrigeration or heating apparatus in operation, or a car with open flame apparatus in service, or with an internal combustion engine in operation	X	X		X			
	Car containing lighted heaters, stoves or lantern	X	X		X			
	Occupied car	(4) X	(4) X		X			
	Occupied caboose	(4) X	(4) X	X	X		X	
	Explosives 'A'		X	X	X			X
	Poison Gas	X		X	X			X
	Radioactive	X	X		X			X
	Undeveloped film			X				
	Any loaded placarded car (other than combustible)	X	X	X				

***NOTE: CARS WITH SAME PLACARDS MAY BE PLACED NEXT TO EACH OTHER.

- (1) A flat car equipped with permanently attached ends of rigid construction is considered to be an open top car.
- (2) A loaded flat car, other than a specially equipped car in trailer-on-flat-car or container-on-flat-car service or a flat car loaded with vehicles secured by means of a device designed for that purpose and permanently installed on the flat car, and of a type generally accepted for handling in interchange between railroads. This exception for cars in trailer-on-flat-car service does not apply to loaded flatbed trucks, loaded flatbed trailers, or loaded trucks or trailers without securely closed doors.
- (3) An open top car when any of the lading protrudes beyond the car ends or when any of the lading extending above the car ends is liable to shift so as to protrude beyond the car ends.
- (4) A rail car placarded "EXPLOSIVES 'A' or POISON GAS" in a moving or standing train must be next to and ahead of any car occupied by the guards or technical escorts accompanying this car. However, if a car occupied by guards or technical escorts is equipped with a lighted heater or stove, it must be the fourth car behind any car requiring "EXPLOSIVES 'A' placards."

PLACARD Examples

**SAFETY**

is of first importance in the discharge of duty

INSTRUCTIONS REGARDING INJURIES AND ACCIDENTS

1064. In event of injury to an employee, while on duty, which does not require ambulance service, a company surgeon should be seen as soon as possible. For all injuries requiring ambulance service, the company surgeon nearest the place of accident should be called and advised as to what hospital the injured party is being taken.

Cover the wounds with sterile gauze. Do not use waste, rags, towels, handkerchief, etc.

Do not use soap or water, salves, oils or other home remedies on open wounds.

In case of profuse bleeding, apply tourniquet and keep the bleeding body member elevated as much as possible. Apply the tourniquet three (3) inches above the wound.

Immobilize fractures by means of a board, cardboard, or other suitable splint securely tied to the body member. In case of broken ribs, relief may be had by applying a wide bandage tightly about the chest.

In case of burns or scalds, apply unguentine or paste made of baking soda and water.

In cases of Fatal Accidents to employes or others, a company surgeon at the closest point should be notified, and the medical examiner or coroner of the County in which the death occurs should also be notified. If the body is interfering with the movement of trains or vehicular traffic PERMISSION MUST BE OBTAINED, from the medical examiner or coroner, to mark the exact location and position and move the body. The body can then be moved and left in charge of a company representative until the medical examiner or coroner arrives.

In case of injuries, the company surgeon nearest the place of the accident should be called. In the event a company surgeon cannot be reached, another doctor should be called, but he should handle the case only until a company surgeon is available.

The company will not pay for the services of outside doctors, except services of specialists, consultants, etc., called by the Company Surgeon, unless it is necessary to call an outside doctor on an emergency case.

1065. Employee injured while on duty will be expected to go to the company surgeon's office for treatments, except when their disability will not permit.

The company will not pay for medical treatment rendered trespassers injured on the property, except for first aid.

1066. Employes sustaining personal injury will verbally report to a supervisor as soon as practicable. Verbal report is to be made to the supervisor in charge at point where employe is injured. If a supervisor is not available at location where employe is injured, verbal report must be made to supervisor in charge of area or terminal.

An employe sustaining an injury must complete Form 7027 in accordance with General Safety Rule 1 before leaving company premises when physically able to do so. If physically unable, Conductor and/or Engineer will report immediately to the proper authority.

ALL CASES OF PERSONAL INJURY, ACCIDENT, OR DAMAGE TO PROPERTY MUST BE REPORTED ON PROPER FORM AS SOON AS PRACTICABLE OR BEFORE LEAVING COMPANY PROPERTY.

1067. Employees must exercise care to avoid injury to themselves or others. They must observe the condition of equipment and the tools which they use in performing their duties and when found defective, will, if practicable, put them in safe condition, reporting defects to the proper authority.

1068. At locations where "close clearance" signs are posted, trainmen and other employes are prohibited from riding on side of moving equipment.

They must know the locations of structures or obstructions where clearances are close.

They must expect the movement of trains, engines, or cars at any time, on any track, in either direction.

They must not stand on the track in front of an approaching engine or car for the purpose of boarding the same.

Employes are prohibited from riding or walking on the roof of any moving car.

1069. When reporting vehicular accidents at street or road crossings, secure names and addresses of all persons present at the scene, whether or not they admit having seen the accident.

When an accident occurs at a crossing protected by a flasher or other signals, a test of such signals should be made with the train involved as soon as possible after the accident and, if it can be arranged in the presence of outside witnesses, their names and addresses should be obtained.

Careful note should be made of the exact location of any movable objects, such as freight cars on side tracks and automobiles parked on street or highway, which in any way restricted the view of the driver of the vehicle or in any other manner figured in the accident. Measurements, such as the height and width of such objects, the distance from the track, and the distance from the highway should be made if possible.

Record must be made of the condition of the pavement as to ice or snow and whether wet or dry. The roadway should be examined for skid marks and a record made of their exact location and length.

When taking the license number of a vehicle, be sure to show state and year of issue, and make and model of car.

1070. Whenever employes or other persons are injured on or about cars or engines, the equipment must be immediately inspected by the person in charge, or by regular inspectors, if available, to ascertain condition. In cases of serious injury to persons between cars, there must be, in addition to the inspection, an immediate coupling and uncoupling test and the crew handling the cars in making the test must use and examine the levers and all parts of the coupling apparatus and be prepared to make a statement showing their condition. Report must be made to the general claim agent by wire and confirmed in writing by first mail. The inspection and tests must be made before the cars or engine leave the place of accident, and afterwards, regular inspection must be made by two inspectors at the first division terminal, unless otherwise directed. Inspectors must keep suitable record of such inspection, which shall include the names of those injured, date, and place of accident, the manner of its occurrence, and the result in detail of the inspection of the equipment. When injury is caused by the breaking of machinery, tools, or any appliance, the broken parts must be so marked as to be readily identified and immediately turned over to the proper authority.

1071.

COMPANY SURGEONS

LOCATION	NAME AND ADDRESS	PHONE
Dearborn, Mi.	Dearborn Medical Center (Dr. Karl Seitam) 10151 Michigan Avenue	(313) 584-1171
Romulus, Mi.	Metro Industrial Clinic 7845 Middlebelt Road	(313) 326-0800
Lincoln Park, Mi.	Lynn Clinic 25700 W. Outer Drive	(313) 383-7844
Flat Rock, Mi.	Flat Rock Medical Center (Dr. R. F. Proud) 26151 Huron River Drive	(313) 782-2431
Trenton, Mi.	Trenton Medical Center (Dr. John W. Hillyer) 3700 West Road	(313) 675-1330
Monroe, Mi.	Dr. W. S. Middleton 219 West Front Street Monroe, Mi. 48161	(313) 241-0366
Delta, Ohio	Delta Clinic (Dr. Ben H. Reed, Jr.) Office: Main at Adrian Res.: 303 Fernwood	(419) 822-3132 (419) 822-3153
Napoleon, Ohio	Dr. R. C. Soriano 158 East Maumee Ave.	(419) 599-1826
Lima, Ohio	Dr. R. L. Holladay Office: 2609 Breese Rd. Res.: 2609 Breese Rd.	(419) 991-0015 (419) 991-5906
Jackson Center, Ohio	Dr. G. F. Aukerman Office: West Pike Street Res.:	(513) 596-6282 (513) 596-6285
Springfield, Ohio	Dr. G. Thomas Fazio Office: 1355 S. Fountain Ave. Dr. Leroy V. Goodson Office: 351 Doctor Ct. W. Yellow Springs Clinic 1001 Xenia S. Yellow Springs, Ohio	(513) 322-7698 (513) 325-8782 (513) 767-7394 (513) 878-9631
Waverly, Ohio	Dr. A. M. Shrader Office: 196 E. Emmt Ave. Res.: 207 E. Second St.	(614) 947-2964 (614) 947-4090

LOCATION	NAME AND ADDRESS	PHONE
Jackson, Ohio	Jackson Medical Clinic (Dr. Carl J. Greever) Office: 35 Vaughn St. Res.:	(614) 286-2116 (614) 286-3201
Alternate:	Holzer Medical Center Clinic Branch (Dr. John W. Zimmerly) 35 Vaughn Street	(614) 286-2308
Ironton, Ohio	Dr. Harry Nenni Office: 124 South 6th Street	(614) 532-5353

1072.

DIRECTORY OF EMERGENCY AMBULANCE SERVICE

LOCATION	NAME AND ADDRESS	PHONE
Detroit, Mi. and Vicinity	American Ambulance Co. 1050 Trumbull, Detroit	(313) 963-2000 (313) 863-2000
River Rouge Ecorse Wyandotte Trenton, Mi.	Superior Ambulance Service Fort Highway, Southgate	(313) 282-3550 (313) 422-0424
Dearborn, Mi.	AA Ambulance Accommodation Co. 4559 Chovin, Detroit Dearborn Fire Department	(313) 581-6500 (313) 846-4100
Flat Rock, Mi. and Vicinity	Superior Ambulance Service Noble Ambulance Service Monroe	(313) 282-3500 (313) 242-8000
Toledo, Ohio	Birkenkamp Ambulance Service 3219 Tremainsville Rd. Aids Ambulance Service 2015 Mulberry	(419) 479-5377 (419) 243-2183 (419) 244-4891
Lima, Ohio	Lima Ambulance Service 125 West North Street Lima Fire Department Rescue Bath Township Rescue (Ford Park) 1787 Old North Dixie Hwy.	(419) 224-4075 (419) 227-2345 (419) 227-1221
Springfield, Ohio	Austin Richards Funeral Home 838 East High Street Herbert Littleton Funeral Home 830 N. Limestone Street Baker & Sons Ambulance Service 2431 East Main	(513) 325-1564 (513) 323-6439 (513) 322-4822
Jackson, Ohio	Mayhew Funeral Home 135 Broadway	(614) 286-4161

TRACK CARS

1073. Upon receipt of line-up, track car driver will give operator his name, car number, direction he is to move, points between which movement is to be made, and time required to make the movement. If line-up permits the car to move as requested, operator will enter the necessary data on his train record and allow the car to proceed. It is to be understood that track cars may operate in either direction between the specified points but must obtain permission from the operator to go beyond.

Train dispatcher will determine expiration time for each line-up issued, and a new line-up must be obtained for any track movements after a line-up has expired.

When trains other than those shown on line-up are to be operated over his territory, the train dispatcher will:

- (A) Fully advise such trains of the circumstances.
- (B) Instruct those trains, by train order, to proceed not to exceed 15 miles per hour, keeping close lookout for the track car and to use whistle frequently.

Trains will be restricted in the same manner when running in advance of time shown on line-up and when track car has failed to report clear of track.

Track car drivers at unattended stations will secure line-up by contacting the nearest open office by telephone. Dispatcher is to be called only in case of emergency.

Due to the very few train movements on the Tecumseh and Ironton Branches, operators will not record track car movements in these territories.

Push trucks will not be operated under track car rules. Such movements will be made only under flag protection.

Operators must use great care to see that these rules are strictly complied with. Always notify the advance station when a car enters the territory, also when it is reported clear of the main track.

Track car drivers, likewise, must adhere strictly to these rules. Do not place car on the track until after your line-up has been read and thoroughly understood, and permission has been given by the operator. When clearing between stations, always obtain permission from the nearest operator before again occupying the main track.

Good judgment must be used by both operators and track car drivers in order to avoid costly train delays due to the operation of track cars.

RAILROAD CROSSINGS AND GOVERNING SIGNALS

1074. Trains approaching automatic and semi-automatic interlockings and finding home signal at stop, which does not clear up within three minutes, will be governed by instructions posted at crossing.

DT&I trains may cross CRC tracks at Lagonda (Springfield) without stopping, under the following conditions. Trains must not exceed a speed of eight (8) miles per hour passing caution signals which are installed 500 feet each side of the CRC Crossing, expecting to find the pole target in stop position. It will not be necessary to restore pole target for CRC movement.

1075.

STATION

CROSSINGS

GOVERNING SIGNALS

Main Line

Short Cut	CRC Canal Bridge	Interlocking
South Yard—		
Track No. 47	CRC	Green DTI Proceed
Mill	CRC	Interlocking
Wyandotte—M A No. 2	CRC Spur	Semi-automatic Interlocking
Wyandotte—M A No. 1	CRC Spur	Semi-automatic Interlocking
Riverview—		
Firestone Yard	CRC Spur	Semi-automatic Interlocking
Trenton	CRC, D&TSL	Interlocking
Carleton	C&O	Interlocking
Diann	AA	Interlocking
Riga	CRC	Automatic Interlocking
Liberty Center	N&W	Automatic Interlocking
Hamler	B&O	Interlocking
Leipsic	N&W	Automatic Interlocking
XN Tower	B&O	Interlocking
C.G. Tower	B&O	Interlocking
DT&I Jct.	B&O	Interlocking
Morris	N&W	Automatic Interlocking
Lima—Sugar St.	CRC	Interlocking
Quincy	CRC	Interlocking
Maitland	CRC	Interlocking—Remote Control
Lagonda	CRC	Target Vertical—Proceed
Carney	CRC	Interlocking—Remote Control
East St.	CRC	Interlocking—Remote Control
South Charleston	CRC	Interlocking—Remote Control
Washington C.H.	B&O	Target Vertical—Proceed
Washington C.H.	B&O	Interlocking
Glen Jean	N&W	Interlocking—Remote Control
Jackson	C&O	Gate
B&O Junction, Jackson	B&O	Target Horizontal—Proceed
Bloom Junction	B&O	Target Horizontal—Proceed
Ironton	N&W	Interlocking—Remote Control

Dearborn Branch

Schaefer Tower	CRC	Interlocking
Oakwood Junction	N&W	Interlocking—Remote Control
Penford	CRC	Interlocking

Napoleon Branch

Napoleon	N&W	Semi-automatic Interlocking
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1076.

TONNAGE RATING

		Southward		
FROM	TO	GP7 GP9 (1 unit)	GP35 GP38 GP40 (1 unit)	SD38 (1 unit)
Flat Rock	Toledo	3300	3500	3840
Flat Rock	Junction	2500	3000	3340
Junction	M.P. 230	2200	2700	3040
M.P. 230	Storms	3000	3500	3840
Storms	Summit	1050	1250	1590
Glen Jean	Jackson	2000	2200	2540
Jackson	Bloom Jct.	2500	3000	
Bloom Jct.	Pedro	3500	4000	
Pedro	Royersville	1175	1400	
Royersville	Ironton	3500	4000	

		Northward		
Ironton	Royersville	1000	1250	
Royersville	Jackson	2700	3000	
Jackson	Greggs	2750	3000	3365
Greggs	Glen Jean	3450	4000	4365
Glen Jean	Peck	2500	2800	3165
Peck	Summit	1250	1400	1765
Bainbridge	Washington CH	2500	2800	3165
Washington CH	Junction	3500	4000	4365
Junction	St. Paris	2750	3200	3565
St. Paris	Petersburg	3500	4000	4365
Petersburg	Flat Rock	7000	7000	7000
Toledo	Flat Rock	2500	2700	3065

TOWARD THE FUTURE

Year	Population	Area	Notes
1950	1,000,000	100 sq. mi.	...
1951	1,050,000	105 sq. mi.	...
1952	1,100,000	110 sq. mi.	...
1953	1,150,000	115 sq. mi.	...
1954	1,200,000	120 sq. mi.	...
1955	1,250,000	125 sq. mi.	...
1956	1,300,000	130 sq. mi.	...
1957	1,350,000	135 sq. mi.	...
1958	1,400,000	140 sq. mi.	...
1959	1,450,000	145 sq. mi.	...
1960	1,500,000	150 sq. mi.	...
1961	1,550,000	155 sq. mi.	...
1962	1,600,000	160 sq. mi.	...
1963	1,650,000	165 sq. mi.	...
1964	1,700,000	170 sq. mi.	...
1965	1,750,000	175 sq. mi.	...
1966	1,800,000	180 sq. mi.	...
1967	1,850,000	185 sq. mi.	...
1968	1,900,000	190 sq. mi.	...
1969	1,950,000	195 sq. mi.	...
1970	2,000,000	200 sq. mi.	...
1971	2,050,000	205 sq. mi.	...
1972	2,100,000	210 sq. mi.	...
1973	2,150,000	215 sq. mi.	...
1974	2,200,000	220 sq. mi.	...
1975	2,250,000	225 sq. mi.	...
1976	2,300,000	230 sq. mi.	...
1977	2,350,000	235 sq. mi.	...
1978	2,400,000	240 sq. mi.	...
1979	2,450,000	245 sq. mi.	...
1980	2,500,000	250 sq. mi.	...
1981	2,550,000	255 sq. mi.	...
1982	2,600,000	260 sq. mi.	...
1983	2,650,000	265 sq. mi.	...
1984	2,700,000	270 sq. mi.	...
1985	2,750,000	275 sq. mi.	...
1986	2,800,000	280 sq. mi.	...
1987	2,850,000	285 sq. mi.	...
1988	2,900,000	290 sq. mi.	...
1989	2,950,000	295 sq. mi.	...
1990	3,000,000	300 sq. mi.	...
1991	3,050,000	305 sq. mi.	...
1992	3,100,000	310 sq. mi.	...
1993	3,150,000	315 sq. mi.	...
1994	3,200,000	320 sq. mi.	...
1995	3,250,000	325 sq. mi.	...
1996	3,300,000	330 sq. mi.	...
1997	3,350,000	335 sq. mi.	...
1998	3,400,000	340 sq. mi.	...
1999	3,450,000	345 sq. mi.	...
2000	3,500,000	350 sq. mi.	...
2001	3,550,000	355 sq. mi.	...
2002	3,600,000	360 sq. mi.	...
2003	3,650,000	365 sq. mi.	...
2004	3,700,000	370 sq. mi.	...
2005	3,750,000	375 sq. mi.	...
2006	3,800,000	380 sq. mi.	...
2007	3,850,000	385 sq. mi.	...
2008	3,900,000	390 sq. mi.	...
2009	3,950,000	395 sq. mi.	...
2010	4,000,000	400 sq. mi.	...
2011	4,050,000	405 sq. mi.	...
2012	4,100,000	410 sq. mi.	...
2013	4,150,000	415 sq. mi.	...
2014	4,200,000	420 sq. mi.	...
2015	4,250,000	425 sq. mi.	...
2016	4,300,000	430 sq. mi.	...
2017	4,350,000	435 sq. mi.	...
2018	4,400,000	440 sq. mi.	...
2019	4,450,000	445 sq. mi.	...
2020	4,500,000	450 sq. mi.	...

AVOID DAMAGE — SWITCH CUSTOMERS CARS CAREFULLY

JUDGING SPEED

Accurate judgment of coupling speed depends upon correct timing. An excellent way to get accurate timing without a watch is to count "one hundred and thirty-one, one hundred and thirty-two" and so on as the car passes a stationary point. With a little practice counting can be done at the rate of one a second.

Ability to closely estimate speed at time car strikes is extremely important because impact force builds up as the square of the speed. This means that impact delivered by a car coupled at 8 mph is not four times that at 2 mph but 16 TIMES AS GREAT. Damage to freight and car can be avoided by always keeping coupling speed within the safe range—NOT OVER 4 MILES PER HOUR—A BRISK WALK.

Impact Force At Various Striking Speeds	Car Coupled at	mph	Units of Destruction
Safe	1	"	1
	2	"	4
	3	"	9
	4	"	16
	5	"	25
Damaging	6	"	36
	7	"	49
	8	"	64
	9	"	81
	10	"	100

To Find Coupling Speed of 40 Foot and 50 Foot Cars
Sight vertical end of car body on a fixed point and note the number of seconds it takes car to pass. Speed in miles per hour is shown opposite.

Seconds	Car Miles Per Hour 40 Foot	Car Miles Per Hour 50 Foot
1	28	35
2	14	17.5
3	9.3	11.6
4	7	8.7
5	5.6	7
6	4.7	5.9
7	4	5
8	3.5	4.4
9	3.1	3.9
10	2.8	3.5
11	2.5	3.1
12	2.3	2.9
13	2.15	2.7
14	2	2.5

Damage as a result of Rough Handling makes up a large part of the claim bill for Loss and Damage to Freight. From the Railroad standpoint it is the major item in the expense. We all know that Rough Handling can be reduced, often eliminated. It is hoped that this table will be helpful in your efforts to Prevent Rough Handling.

Switch crews must function as a team. Clear signals properly given are mighty important; talk it over... Prevent Rough Handling... It can be done.

TO ALL EMPLOYEES:

Performing our work without being injured is something we all want, but our success is largely dependent on how much effort each of us puts forth to avoid accidents and injury.

Much needless suffering can be avoided if each employ accepts his personal responsibility in preventing injury to himself and assisting others in avoiding injury.



**IN CASE OF DOUBT OR UNCERTAINTY
THE SAFE COURSE MUST BE TAKEN**



**MAKE
SAFETY
YOUR
POLICY**