



Dolpin Bulletin

# ELECTRIC RAILWAYS of

# FOREWORD:

Another year has rolled around and we again present the efforts of the publication committee of the Central Electric Railfans' Association and of the many friends of CERA who have made information and photographs available for another bulletin in our series of electric railways of the states.

Our subject, Iowa, is of course a favorite with all electric railway students. The hardy nature of Iowa's interurban railways preserved them far longer than their counterparts in most other states. Mason City, Charles City and Waterloo are yet in operation at press time, with Cedar Rapids and Des Moines only slightly over the horizon.

We thought a few words describing the method of preparation of CERA bulletins might be of interest. Most of our readers know that CERA is a not-for-profit group incorporated for historical purposes in the State of Illinois. Beyond this, we sometimes think they may picture a fine office with an expert full-time staff with many modern facilities at their disposal. Actually, everyone concerned with CERA publications (except the contractor who does the actual printing) is compensated only by the satisfaction they receive from the pursuit of their hobby. All work on the bulletin is done after members of the staff have put in a full day's work in their respective fields. But then, this is exactly the same basis on which all other CERA activities are conducted.

Publication work begins each year just as soon as the previous year's publication is in the mail. Subjects which have been under discussion for months or even years before are narrowed and a final choice is made by the publication director, with the advice and concurrence of the CERA board as a whole.

First steps are the accumulation of photos, timetables and other data from basic sources such as the railway journals and the collections of some of the well-known "old-timers" in the hobby. Calls go out to anyone having unusual material and lists are compiled showing the data on hand as well as shortages that need to be covered. Sorting and cataloguing places material at fingertip control.

Office quarters for a regular work time for the publication committee are next arranged. So far we have been fortunate in securing even the use of drawing tables in after-hour periods without cost to CERA. Maps, drawings and rosters are the next order of business. Compilation into usable form takes a surprisingly large amount of time even when excellent basic data is submitted. Meantime another group of three are working on the thumbnail descriptions - one composing paragraphs, a second rough typing for a third finish typing on CERA's own electromatic typewriter.

Then comes the interesting job of assembly, with its problems of selection and its many compromises between sizes, quantities and arrangements. When space runs out, should size reductions be resorted to, or should some material be rejected? When photos are poor, but the only ones available on a particular subject should we risk criticism of poor reproduction, should we attempt retouching, or should we suffer incompleteness by omission? If the lettering on a map or roster is not up to standards is there time to redo the whole job?

Finally come the captions, credits and the page arrangements, followed by the makeup dummy and the conference with the printer. There's many a booby trap in this phase of the job, and we often wish there were much more time to recheck all these steps several additional times, but by now we're already late for the next year's beginning and the job load now transfers to others.

These are the distribution people, the members who are responsible for getting a copy safely into the hands of each member at home or abroad. They also have the year-round job of supplying copies to the many new friends we develop each year, whose support thru purchase of back issues makes possible the next year's work.

We hope this brief description gives you a better idea of how TROLLEY SPARKS comes into being. If we do not, at times, seem as professional in treatment as you would like, it will be thru lack of experience rather than for any lack of desire to please, for after all, the organization is a hobby group. We cannot expect to demand from the same officers and members year after year, and the new officers of each year earnestly request your support and forbearance of their human shortcomings.

For index and credits, please refer to page 146.







# DAVENPORT:

A franchise, restricting motive power to "animal power", was granted to the Davenport City Railway in April 1867, marking the beginning of the street railway history of the tri-cities of Davenport, Rock Island and Moline. Operation began March 1, 1869 over  $3\frac{1}{2}$  miles of line. Several other companies built horse car lines in the period up to 1887.

In August 1888 the first electric railway line was operated in Davenport with five cars. During the next five years various companies competed bitterly, building duplicating lines with resulting financial embarrassment and abandonment of the more obviously superfluous lines.

By 1895 the Davenport & Rock Island Railway Company acquired all lines including the line across the government bridge spanning the Mississippi. The company was not a financial success and was sold at foreclosure to the Tri-City Railway Company. Another competing company, the Davenport & Suburban Railway built some track in 1902 and was acquired in 1907. In 1912 the operation passed under the control of the United Light & Railways syndicate and the capital and management know-how of the large parent organization greatly improved the property and techniques of operation.

With World War I, the force at the government Arsenal on the island in the Mississippi was expanded from 1,200 to 18,000. The company ran short of rolling stock and purchased a number of cars from Chicago some of which were operated as permanent-coupled two-car trains. After the war most of this equipment was surplus and was not suited to normal service in the area.

One-man operation was introduced with modern double-truck safety cars in the 1920s. Weekly permitcardawere introduced. With the introduction of buses, the street car declined in importance.











Tri-Cities' old timers were all of the monitor-roof variety,
with the 600-series arch-roofers their only equipment designed and built for one-man operation....Clam-shell
work car #58 shown below carries the lettering "THE
UNITED LIGHT AND POWER ENG. CONST.
CO. ".... Locomotive #66 of the Riverside Power Mfg.
Co., another UL&P subsidiary, was equipped with third-rail as well as trolley pole collecting devices.







# CLINTON-DAVENPORT-MUSCATINE (Condensed from CERA B-36)

The Clinton Davenport & Muscatine Railway came into existence with the merger of two companies. The earlier one, the Iowa & Illinois Railway Company, was chartered on September 17, 1901 to build between Clinton and Davenport and commenced operation on November 20, 1904. The Davenport & Muscatine Railway began life on February 15, 1910 and ran its first car for a party of officials on July 28, 1912, with regular service commencing August 1st.

During 1912 the United Light & Railways Company acquired the D&MRy and several city properties, and in 1913 it took over the Iowa & Illinois. In 1916 the interurban roads were merged as the Clinton Davenport & Muscatine Railway.

The Clinton line was 36 miles in length, 33 of which were on private right-of-way while the remainder were on city streets. Track was made up of 70 lb. rail in 30 ft. lengths with staggered joints, oakties and crushed rock ballast. Except for the 2% grades on the approaches to the overpass crossing the C&NWRy at Comanche, the ruling grade was 1% at Pinneo Hill, where a cut 25 ft. deep furrowed thru the top of the hump. Across the Wapsie bottoms the railway was carried on a trestle 3100 ft. in length, of which about 2300 ft. were eventually filled. Overhead construction was direct suspension with 0000 trolley wire. Power was fed in at 650 volts from substations at 3rd Street (Davenport). Pleasant Valley, Princeton and Camanche. The latter two were automatics, with a rectifier at Princeton. All were fed from a 13.2 kv 60 cycle transmission line carried on the railway poles.

The Muscatine line was 30 miles in length, with 25 miles of private right-of-way, 3 miles in the streets of Davenport and 2 miles on streets in Muscatine. It, too, was laid with 70 lb. steel on oak ties with rock ballast, and with a maximum grade of only 1%. There was a tangent 4 miles long just west of Blue Grass station. Overhead distribution was the General Electric 5-point catenary system with 7/16" messenger and 0000 trolley suspended from 45 ft. poles on 150 ft. centers. Power was fed in at 1200 volts DC from substations at Muscatine and Davenport. To accommodate city car operations in Muscatine, the substation there was equipped to feed the trolley in town at 600 volts and interurban cars ran no faster than half-speed while west of the section insulator at Muscatine city limits. The substations were fed by a 33 kv 60 cycle transmission line.

Passenger train service reached its peak frequency in the early days, with 14 trains each way on the I&I in June 1905. In 1910 the company instituted a service of limited and local trains in order to squeeze more trips out of the same number of cars and crews. Express service also began in June 1905 and gradually blossomed out into carload freight service as well in 1912.



The 1920s brought a rapid decline in passenger business which the company met by some reductions in frequency of service and by installing lightweight one-man cars, on the Muscatine line in 1923, and on the Clinton line in 1924. Tho efficient, the lightweight cars did not revive passenger traffic and the line became primarily a freight hauler. In 1934 its freight business amounted to 10,000 cars annually, 3500 of them handled as an intermediate carrier.

Passenger service on the Muscatine line ended November 8, 1938; freight ended the following week. Service on the Clinton line ended March 31, 1940 and the line was torn up except for 13.8 miles between Mound St., Davenport, and LeClaire purchased by the DRI&NW steam road. Locomotive #77 was sold to Capital Transit, hopper cars 701-708 were taken over by the Riverside power plant and the portable sub went to the Mason City & Clear Lake Railroad. All remaining equipment was scrapped.





Graceful arch windows characterized the original heavy interurban equipment of C D & M 's predecessor companies. Early Iowa & Illinois Railway cars were built by John Stephenson at Elizabeth, New Jersey, while Davenport & Mus catine obtained its initial lot of cars from the Niles plant in Ohio.



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ACCIDENTS AND PERSONAL INJURY

## EMPLOYEES TO RENDER ASSISTANCE

In case of accident, however slight, to per-sons or property in connection with or caused by any train, the trainmen in charge of same by any train, the trainment in charge of same will render all assistance necessary and practic-able. In no case will they go away, leaving in-jured persons without first having seen that they are cared for.

#### IMMEDIATE REPORT

Conductors and motormen will make imme . conquerors and motormen will make imme-diate telephone report to the dispatcher, the main office, or to the Superintendent, of any accident, blockade, or serious mishap of any kind, using the public telephone if necessary.

## MEDICAL ASSISTANCE

Trainmen will not authorize medical as sistance except for the first visit in severe cases of personal injury, nor will they visit injured persons at any time afterward, unless specially instructed to do so by the Superintendent.

## COMPLETE REPORT

373. A full and complete report of every accident no matter how the second seco A full and complete report of every acci-dent, no matter how trivial, apparently, and whether on or near the train, will be made by the conductor upon the prescribed forms. In all cases full data must be obtained and stated in the report. Accidents sometimes considered as not worth reporting are the most serious, troublesome, and expensive.

#### EXTENT OF INJURIES

374. Ascertain carefully the extent of injuries or damages, if any, before leaving the place of ac-

cident. Be guided also by Rules 375 to 379, both in-

## DAVENPORT

First-Dr. Gco. M. Midleton. Office, 812 First National Bank Bell Phone, Kur 242. Residence, 1024 E. Locust St. Bell Phone, Ken 252. Second-Dr. P. A. Benützen. Office Davenport Bank Bdg Bell Phone, Ken 2532. Bell Phone, Ken 2532. Residence, 204 Prospect Tr. Bell Phone, Ken 2532

# MUSCATINE

First-Dr. A. J. Oliver. Office, 203 East Second St. Hell Phone, 151. Residence, 316 Walnut Street. Bell Phone, 153.

#### GENERAL RULES

Train order signals are located at Davenport and Muscatine passenger stations.

Trains making meets either by time card or by train order at double ended side tracks, commonly called "turnouts", will use the switches of the east end of such turnouts.

All trains must approach meeting or passing points under full control and must not attempt to pass until switches and signals are seen to be right and the train or trains to be met or passed are clear of the main track.

During or after heavy storms or continued wet spells, cars will be operated with caution; and slowed down at all points where there is any possible charace between Hersel and Caweizell, the cut west of Schrodier, slide west of Scherfey, and the point at which Mad Creek has started to cut into the fill just cast of Richman, crossing at which water drains across the track, in all cuts and on fills, and at all water ways, should be understood by all that safety is the first should be understood by all that safety is the first consideration.

Trains running into Blue Grass from the west will be slowed down to five (5) miles per hour before crossing the road west of the station.

When the breaker at any substation has been pulled, motorman should shut off controllers long enough to allow substation attendants subficient time to get their machines and breakers properly adjusted. It is almost impossible to throw in breakers at sub-stations while a load is on the lise.

The following persons may be allowed to ride in the front vestibule without a permit: B. J. Denman, Vice-President: B. J. Smith, Gen. May: C. S. Cleven-tine, Gen. Supt.; Wm. Prater, Roadmaster; Geo. Farrier; C. E. Ewen, Section foreman inspecting line or other purpose by order of C. E. Ewen or Geo. Parieri

#### LAW LIMITING THE HOURS THAT EM-PLOYEES IN TRAIN SERVICE ARE PERMITTED TO REMAIN ON DUTY

1. Trainmen are permitted to remain on duty a total of sixteen (16) hours in any twenty-four hour period.

2. After sixteen (16) consecutive hours on duty,

2. After sixteen (16) consecutive nours on auty, they are required to have ten (10) consecutive hours off duty, and after sixteen (46) hours i. the aggregate on duty in any twenty-lour hour period, they are re-quired to have at least eight (8) consecutive hours off duty.

TIME TABLE NO. 12-EFFECTIVE MAY 10, 1933 Setween Clinton and Davesport-Going West-Read Down Between Davenport and Clinton-Going East-Read Up. B ? A 3 1 CarCap. Desire 7mm Bully Bully Dally Bully Bully Cracks Chables Detates 2 4 6 8 10 117 Ben Bernell Bully Bully Bully Bully Bully Ceech Ceech Ceech 25 25 21 Bully Sully Bully Coach Caach Caach 30 22 24 Judy Budy Budy STATIONS 9.30 6.30 3.30 12.30 9.30 6 45 OD CLINTON ANBIYE 36.91 9.20 12.16 3.16 6.27 9.16 12.16 5.10 2.00 8.00 2 46 10 46 4.46 8.20 2.10 8.10 9.40 8.40 3.40 12.40 9.40 6.55 10 7.34 10.37 4.37 Penios 3.6 . 5. 30.21 9.06 12.00 3.00 s.10 9.00 12.00 7.27 10.30 4.30 8.26 2.16 8.15 8.44 8.46 3.46 12.44 9.46 7.00 30 8.70 CAMANCHE Rock Creek 8 64 OAKES SIDING ... 5.31 2.21 8.21 9.51 6.51 3.51 12.81 9.51 7.05 15 7.21 10 23 4.23 6.34 2.24 8.24 9.54 8.50 11.50 7.18 10 20 4.20 Wapsle West Public Highway 2.33 7.12 10.16 416 6.39 2.29 8.29 7.07 10.12 4.12 8.44 2.34 8.84 L45 2.38 8.35 10.05 7.05 4.05 1.05 10.05 7.18 11 15.15 PRINCETON ..... T. O. 19.76 8.49 11.41 2.41 8.51 8.41 11.41 2.06 10.11 4.11 **\*\***b 7.03 10.08 4.08 6.48 2.38 8.38 10.08 7.06 4.06 1.06 10.08 7.20 14 17.68 MIDDLE SWITCH T. 0. 18.23 8.47 11.38 2.38 5.48 8.34 11.34 10.13 7.13 4.13 1.13 10.18 7.28 13 00.37 37 00 57 K VDs. T. O. 16 64 845 11.33 8.33 8.43 8.33 11.33 V. Martinetter V. Martine LAS 2.43 8.43 6.68 10.03 403 Street 1.33 14.21 841 11.51 2.31 8.31 11.31 8.56 10.01 4.01 8.55 2.45 8.45 8.41 10.15 7.15 4.14 1.15 10.18 2.27 2 21.20 LE CLAIRE. Baren Saltar Saltar Salta Saltar 4.00 2.50 8.50 10.20 7.20 4.22 1.20 10.20 7.33 8 24.78 TILE WORKS 11.15 8 56 11.26 2.36 8.36 8.81 9.86 3.84 Hitlerest Alta Ripe Country Club 1023 723 426 1.33 1028 736 84.36 28 50 PIZAS VALEY...T.O.S. 94.1 832 1123 2.33 833 833 1123 8.48 9.53 3.83 4.03 2.83 8.83 8.27 11.17 2.17 8.27 8.17 11.17 Frank 2.91 RTYPESIDE Parme Plant T.S. 6.08 2.88 3.55 6.09 2.89 8.59 10.28 7.28 4.32 3.28 10.28 7.41 12 7.29 4.33 1.29 10.29 7.42 7 8.42 9.47 3.47 6.42 9.47 3.47 10.29 29.41 JOWANA 6.60 8.26 11.17 2.17 5.27 6.17 11.17 10.22 7.22 4.24 1.0 10.27 7.46 11 10.02 Notice 1.0 10.22 7.24 4.36 1.22 10.22 7.46 11 10.02 DAVIS GARDENS, T.O. 509 5.23 11.16 2.16 5.26 8.14 11.16 New 12 22New 11 6.39 9.44 3.44 6.12 3.02 9.02 6.14 3.04 9.04 6.57 9.42 3.42 6.86 9.41 3.41 6.82 9.37 3.37 6.15 3.05 9.05 1.55 8-17 11.07 2.07 8.17 8.07 11.07 6.19 3.09 9.09 SALESSES. 00 8.10 11.00 2.00 5.10 8.00 11.00 10.46 7.46 4.60 1.46 10.46 8.00 35.91 DAVENPORT 6,25 9 20 3.30 6.26 3.16 9.15 Bully Bully Bully Bully Bully . Pull Pully July 20 32 24 Judy Judy Judy 25 23 21 ROTICE-Ears Iraiss, when as single track operated jointy with the TriCity Majury Co. or the Clisics Street Kallway Co. with the rest under absolute control when here is the single of cars of these companies. It must proof be assumed that such track is clear, because require cars at these companies may be late or they may be operating attes core without inform

# **CLINTON** DAVENPORT & MUSCATINE RAILWAY COMPANY

MUSCATINE DIVISION

Time Table No. 10

Effective Wednesday, May 10, 1933 at 5:00 a.m.

For the information and guidance of employees, and not for the public

R. J. SMITH, General Manager

## LIST OF STATIONS AND FLAG STOPS ON RIGHT OF WAY

Black Hawk	Flag Stop
Fairmount	
Petersons	
Cawiczell	
Schupp	••
Steenholt	
Hatzel	•
Contos	
Calibart	
Despec	••
Daracs	
Bruce	t and frailer
Dide Orass	Locar Station
Schroeder	Plag Stop
Nicholson	
Dawa	**

Albee	Flag Stor
Raker	
Pleasant Prairie	· .
Stecker	·
Paul	· •
Kelly	
Melpine	
Pine Crcek	••
Rainbow	
Van Camp	
Sweetland	
Haifleigh	. •
Sherley	
Richman	
City Limits	. "

# <form> Impound Impound





LAW LIMITING THE HOURE THAT ENDLOYEES IN TRAIN SERVICE ARE PERMITTED TO REALIN ON DUTY. 1. Trainmes are promited in oranin on days a total of sisteen (16) hours in any seekty-four hours privid. 2. After sisteen (16) consective hours on days, they are required to heave in (16) consective hours of days, and after sisteen (16) hours in the aggregate on days any heavy-heavy (20) hour privid, hey are required to any heavy-heavy (20) hours privid, hey are required to any heavy-heavy (20) hour privid.	CLINTON DAVENPORT & MU RAILWAY COM	USCATINE PANY
have at least egget (e) convergine Notes on Nutr. Train Order Signals are located at Clinton Debot: Princens: LeClaire; Pisaast Valley and Davesport Station. Trains making menses since yay time card or by train order at double ended side tracks commonly called tran- out, will are without as were ted of usch turnouts. Were bound trains meeting by train order, at points at which train order signals are located, will not pass the train order signal shift be opposing train has serviced and pulled in the clear.	CLINTON DIVISIO Time Table No	. 12
East Devenours is the first switch on the main line start of Mound St. Weakboard train huving meeting point at East Davenport, either by time card or by train order, and the start of the seake train. The start of the main train of the seake track. Eastboard trains huving exciting point at the Devenour will rem under ababelies control between Mored St and East Devenours. All trains must approch meeting or point and under fail control and mass not attempt to pass shifts and the train have been to be trajed and the trans with the start and the start of the trans how the control between Mored St and East Devenours.	Effective Wednesday, May 10, 19 For the information and guidance of employees, a	933, at 5:00 a. m.
or trains to be mer to parse are test of in mini true. During or after heavy storms or contained even spella trains will be operated with casion and slowed down at all points a where there is any possible chance for trouble to develop, the most bledy of which set. The differ county from Construct (but to Smith): Budd Creek Cut; Crossings at which sets of arise across the tracks in all certs and on bills, and at all water ways. Under those conditions delays are expected and it should be understood by all that asking in the first construction.	K. J. SMIIH, General Man ACCIDENTS AND PERSONAL INJURY MEDICAL ABIISTANCE JZ. Trainace will not ashoring medical ashiring they will injured press at any time of well when specify instruction to be by the September Instruction of the set of the Sector of the Sect	COMPANY SURGEONS
Speed over the viaded over the C. & N. W. tracks at Cannache must not exceed 23 mikes per hour. Through Princeton, prims will be operated not faster than 12 mikes per hour. When the bracket at any substation has been pulled, motorman should also of constolling for enough to allow rebatation attendants unficient time to get their machines and breakers property edivised. It is almost impossible to throw in breakers at substation while a load is on the line.	370. In case of screen, havever appr. to pressul as     371. A full and anaphra move of every actions,     proverty is designed it assess of render 28 about the screen of pressure of the screen	ano Second-Dr. F. A. Hokenscheh, Offer, J12 Wilson Bieg Beil Those, 2003, Revisioner, 1003 Sh. Are. South Revision and Article States and States and States and States and States and States and States First-Dr. Gra. M. Middlence Dr. 212 Relations, 1024 E. Lacut St. Beil Those, Nor. 242 Relations, 1024 E. Lacut St. Beil Those, Dr. 404 Beil Those, Kra. 232, Reisbace, 204 Present IT- Beil Those, Kra. 232, Reisbace,

# COMPANY BETWEEN LOOP AND NINETEENTH STREET, CLINTON

ço mi					
The joint opera	tion over the same track by trains of			EASTBOUN	D
the Clinton, Daveng the Clinton Street F	ort & Muscatine Ry. Co. and cars of y, will be governed by the foregoing	Train I	No. Carbara	6th Ave. 3:9th St.	2nd St. & 6th Ave
instructions and the	tonowing rules.	2	9-11 A. M.	9:15 A. M.	9:21 A. M.
1. When regular	trains of the Clinton, Davenport &		12 07 P. M.	12:11 P. M.	12:16 P. M.
Muscatine Ry. Co.	and cars of the Clinton Street Ry. ap-	6	3 07 P. M.	3.11 P. M.	3:16 P.M.
proach junction point	its at the same time, Interurban trains	8.	6:17 P. M.	6:21 P. M.	6:25 P. M.
will precede.		10	9:07 P. M.	9:1* P. M.	9:16 P. M.
2. When on time	6th Avenue cars of the Clinton Street	*12	12:07 A. M.	12:13 A. M.	12:16 A. M.
Ry, will run on the	following schedule:			WESTBOU	ND
Southbranch V	restbound	Train	No. Station	óth Ave. & 9th St.	Car Barn
5th Ave. and 2nd S	15-45		4.45 4.14	6-50 A M	6-55 A M
6th Ave. and 3rd St	16-48.		0.10 A M	0.15 A M	9.40 A M
6th Ave. and 9th St	, 2252		12 10 P M	12-15 P.M	12-40 P M
8th Ave, and 12th St	25-55	;	1.10 P M	2-15 D M	1.40 P.M
19th Street	3000.		6-10 P M	A:35 P.M.	6 40 P. M
First Car Sth Ave. a	ad 2nd St	•11	9:30 P. M	9:35 P. M	9:40 P. M.
Last car stor Art. a	ng End 51.—11.10 1. m.		Northbranch a	nd Southbran	ch cara dua i
Southbranch &	astbound	Avenu due to	e and 2nd Str leave station	eet when train	a of C. D. & will wait on
19th Street	<b>00—30</b> .	A M	trains to 6th	ve and 9th S	First Cars
8th Ave. and 12th S	05-35.	follow	C. D. & M.	trains from St	h Avenue and
6th Ave and 9th S	t. 07-37.				
6th Ave and 3rd S	12-42.		On 6th Avenu	te between 9	h Street and
Sth Ave, and 2nd S	2. 15-45.	Signal	a located just	west of 3rd S	treet on the s
First Car 19th St	5:30 A. M.	6th A	venue and jus	t east of 9th	Street on the
Last Car 19th St	11:30 P. M.	of 6th	Avenue,		
		T	hese Signala y	ill show no I	ght when the

Northbranch Westbound 5th Ave, and 2nd St. 00-3 6th Ave. and 3rd St. 03-33 6th Ave. and 9th St. 07-37. 4th Avenue North 15-45. First Car 5th Ave and 2nd St -6 00 A. h Last Car 5th Ave. and 2nd St --- 12:00 P. M

Northbranch Eastbound 4th Avenue North 15-45 Ath Ave and 9th St 22-52

The joi the Clinton the Clinton instructions

oth Ave. and Jrd St. 27-57. Sth Ave. and Znd St. 30-00. First Car 4th Ave. N .-- 6:15 A. M. Last Car 4th Ave. N .-- 11:15 P. M.

TIME TABLE NO. 10-EFFECTIVE MAY 10. 1933

"Saturday, Sunday and Holidays Unly

STATIONS

DAVENPORT ......L

28

"• • •

...

2.8 BLACKHAWK

Fairmoun Peterson Cawiezell Schupp Steenbolt

Coates Gabber Bruce

Albee 2.7

Schroeder Nicholson 3.0

on the following schedule

When on time trains of the C. D. & M. Ry. will run

.....

10.4 BLUE GRASS....T.O.-S. 19.5 10.23 1.16 4.18 7.23 10.18

te clear

Between MUSCATINE and DAVENPORT

Going East-Read Up

Patanete 152 154 150 300 and Trans Daily D

29.9 10.50 1.45 4.45 7.50 10.45

....T.O.S 16.6 10.17 1.12 4.12 7.17 10.12

eet and Jrd Street, olled by the Block on the south side of t on the north side All under fu switches or trains hen there is no car \*\* may enter Block ance surnas will show no light when thete is no car between Jrd and bh Si and a train or car mary enter flock from either direction. Essbound train or cat sartking the contactor, in the trailer yait cass of bh Street which operates the signal, will get a green light in the ignal cate of the strength and the strength of the rest of the strength and the strength of the operates Essouther train or car must wait till signal is cleared. Duri trains wi points .wl irom Cou filts, and is the first

U. S. Mail will be handled between Davenport and Blue Graas: Westbound on Trains No. 151 leaving Davenport at 8:10 a. m. and No. 157 leaving Daven-port at 5:10 p. m. Eastbound train No. 152 leaving Blue Grass at 10:23 a. m. and train No. 156 leaving Blue Grass at 4:18 p. m.

# **INSTRUCTIONS**

the second time indicates departure. SYMBOLS

at 12:01 noon.

WHISTLES

Local trains will use station whistle at all points on right of way where stops may be made regularly or by flag, except at public highways, at which places regular crossing signal will be given. STOPS

PS Trains will make regular stops outside of Davenport and Muscatine, at Blue Grass, all other stops only on flag or request.

RULES FOR JOINT OPERATION WITH CARS OF TRICITY RAILWAY COMPANY BETWEEN THE POINTS INDICATED BELOW

The joint operation over tracks of the Tri-City Railway Co., in Davenport, between the Junction at West Third and Rolff Streets to and around the Loop. will be governed by the foregoing instructions and by the following rules.

- balowag resea. When trains of the Clinton. Davenport & Muscatine Ry. Co. and regular cars of the Tri-City Ry. Co. approach junction points at the same time City Cars will precede. Extra cars of the Tri-City Ry, will follow regular Clinton, Davenport & Muscatine trains under similar conditions, and
- vice versa. Inasmuch as the running time between end of double track and Black Hawk "Y" is so short. 2 double track and Black Hawk "Y" is so short, meeting points cannot be made positive without serious unnecessary delays at times. Therefore, trains will be operated between the points above mentioned only when the track is seen to be clear. When trains of the Clinton, Davenport, & Muscatine Ry. Co. are on the tracks of the Tri-City Ry. Co. such trains must be operated accord
- City Ry. Co. such trains must be operated accord-ing to the rules and under orders of the proper representatives of such company, except as may be indicated in special instructions given by the Clin-ton, Davenport & Muscatine Ry. Co. In case where disputs are likely to arise with motormen and conductors of such road, instantly give way, but report occurrence to the Sunt. at once, giving all necessary information.

# When the cars of one road cause cars of the other road to be late at any point on joint tracks, good judgment must be used by both train crews to avoid still further and perhaps more aerious delays. 4.

more serious detays. S. CONTROL When rounding blind curves on joint track at any time, and when approaching or running over same during heavy storms of snow or rain, or during togs, cars of both roads must be under full control smill it is positively known that op-poing cars have been met or passed. No exceuse will be accepted for collision due to failure to observe this rule.

6. WATCHES

1.

3.

5.

WAICHES Watches of all crews must be kept checked by standard clocks of the respective companies by which they are employed. No excuse can be accepted for an accident caused by a man's watch being off time.

## SPECIAL RULES FOR OPERATING OVER C., D. & M. TRACKS

# Subject to Special Rules for Operation of One Man Cars

When any train reaches a meeting point and finds the train or trains to be met have not arrived, trainmen shall immediately call the dispatcher for orders.

suspatcher for ordera. Motormen will file train orders immediately in front of them on book provided for the pur-pose in vestibule until such orders have been ex-cented.

If the wire fails before "Complete" can be obtained, the order is of no effect and must not be acted upon. Orders once in effect continue so until fulfilled, superseded or annulled.

In case conductors or motormen change off before orders received by them are executed, they must hand same over to their relief and know that same are periectly understood.

when a trais tars out to meet another and has stopped clear of main track, or is standing to meet train at end of double track or at junctions, motorman must cut out the headlight. Headlights must be exposed at all times when trains are not clear of the main track. To the stopped of the double track.

Trains must approach the end of double track, junctions, and railroad crossings at grade prepared to stop, unless the switches and signals are right and the track is clear. See Rule 170.

are right and the track is clear. See Kule 170. Except at meeting points provided with spring switches, all regular schedule trains, ir-respective of class or direction, will head in and back out of all siding, unless dispatcher gives orders its contrary, or the limitable requires de-parture from this rule. Extra trains in cliquies de-direction will take, adjing for all achecule trains



NOTICE :- All trains, when on track operated jointly with the Tri-City Railway Co., will be run under absolute control when there is the slightest doubt of the location of the cars of that company.

8.38 5.48 2.38 11.38 8.46 8 13.4 DRUM. 8.44 5.54 2.44 11.44 8.50 20 16.1 PLEASANT PRAIRIE ... T. O. 13.8 10.12 1.07 4.07 7.12 10.07

Car Cag. Disl. Passing from Track Dav's'

- 6

A 34

Between DAVENPORT and MUSCATINE

Going West-Read Down

189 | 187 | 155 | 153 | 151

Datly Daily Daily Daily Daily

510 2.00 11.00 8.10

8.23 5.33 2.23 11.23 8.33 6

8.32 5.42 2.32 11.32 8.40 25

2.16 11.16 8.26

P.M. 

PH

8 00

8,16 5.26

Stocker Paul Kelley Melpine Pine Creek 4.6 9.2 10.02 12.57 3.57 7.02 9.57 8.53 6.02 Van Camp 8.56 6.06 2.56 11.56 9.01 12 22.8 SWEETLAND. ....**T.O** 7.1 9.58 12.53 3.63 6.58 9.53 1.5 6.08 2.58 11.58 9.03 24.2 HAIFLEIGH ... 5.6 9.65 12.80 3.60 6.55 9.60 8.68 Sherfey Richman 3.5 6.15 3.05 12.05 9.10 10 27.8 CITY LIMITS 2.1 9.47 12.42 3.42 8.47 9.42 9.05 . 1 3.15 12.15 9.20 29.9 MUSCATINE 3.30 6.35 9.30 8.15 6.25 9.36 12.30 PH PH PH

#### PH PH AN ARR. LV. AR PH PH PH Buty Bully Bally Bally Dally Dally Dally Delty Daily Daily Delly 152 154 156 158 160

2



- TIME At stations and time points as shown on em-ployees time table the figures indicate time of departure, except where two times are given, in which case the first time indicates arrival,
  - Light-face type indicates: A. M. beginning at 12.01 midnight. Dark-faced type indicates: P. M. beginning



WCJ







BLS

Upon acquisition of light-weight one-man cars, the old heavies were put into freight service.











Home-built from Davenport city ca the 20-class 1200-volt and 30-clas 600-volt cars were able to turn in better schedule speed and on time performance than the handsome heavy cars which they replaced.





## CLINTON, DAVENPORT & MUSCATINE RAILWAY COMPANY

## TABULAR ROSTER OF EQUIPMENT

No.	Division	Car Body	Туре	Lgth.	Builder	Date	Disposition
1	Clinton	Locomotive	Motor		I.& I.Shops	1904	Scrapped 1912
3	Clinton	Express	Motor		From MC&CL		Returned MCACL
4	Clinton	Portable Sub	Trail				MC&CL 1940
11	Clinton	BagPagr.	Motor	56'	Stephenson	1904	Rebuilt as 102
12	Clinton	Bag Pagr.	Motor	56'	Stephenson	1904	Rebuilt as 103
13	Clinton	Baz Pazr.	Notor	56'	Stephenson	1204	Renumbered 18
14	Clinton	Bag Pagr.	Motor	56'	Stephenson	1904	Scrapped
16	Muscatine	Bag Psar.	Motor	50'	Niles	1912	Scrapped
18	Clinton	Bag Pagr.	Motor	56'	Stephenson	1904	Renumbered 41
20	Muscatine	Pagr. +Bag.	Notor	-	T.C.Ry.Shops	1923	Renumbered 23
21	Muscatine	Page Bag.	Motor		T.C.Ry.Shops	1923	Scrapped 1938
22	Muscatine	PaurBaz.	Motor		T.C.Ry.Shops	1923	Scrapped 1938
23	Clinton	PagrBag.	Motor		T.C.Ry.Shops	1924	Renumbered 31
23	Muscatine	Pagr Bag.	Motor		T.C.Ry.Shops	1923	Scrapped 1938
24	Clinton	Pagr Bag.	Motor		T.C.Ry. Shops	1924	Renumbered 32
25	Clinton	PagrBag.	Motor		T.C.Ry.Shops	1924	Renumbered 33
26	Clinton	Paur Paz.	Motor		T.C.Ry. Shops	1924	Renumbered 34
31	Clinton	PagrBag.	Motor		T.C.Ry.Shops	1924	Scrapped 1940
32	Clintan	Pagr Baz.	Motor		T.C.Ry. Shops	1924	Scrapped 1940
33	Clinton	PagrBag.	Motor		T.C.Ry.Shops	1924	Scrapped
34	Clinton	Pagr Bag.	Motor		T.C.Ry.Shops	1924	Scrapped 1940
41	Clinton	BagPegr.	Motor	56'	Stephenson	1904	Scrapped
51	Clinton	Pagr.	Trail	45'	Stephenson	1904	Scrapped
51	Clinton	Pagr.	Trail	45'	Stephenson	1904	Scrapped
52	Clinton	Pagr.	Trail	45'	Stephenson	1904	Renumbered 51
53	Clinton	Pagr.	Trail	45'	Stephenson	1904	Scrapped
55	Clinton	Side Dump	Motor	-	Differential		Scrapped 1940
56	Clinton	Side Dump	Motor		Differential		Scrapped 1940
57	Clinton	Flat Work	Motor				Scrapped 1940
58	Clinton	Crane	Motor				Scrapped 1940
61	Muscatine	Bag Pagr.	Motor	50'	Niles	1912	Scrapped
66	Clinton	Locomotive	Motor		Co. Shops		Scrapped 1940
72	Clinton	Steam Loco.			Davenport	1909	PB545 1915
77	Clinton	Locomotive	Motor	25'	BLW-BW-West.	1906	CTCo. 1940
83	Clinton	Locomotive	Motor		I.& I.Shops	1912	MC&CL
94	Clinton	Caboose	Trail	28'			Scrapped
99	Clinton	Locomotive	Motor		Co. Shops		Scrapped 1940
101	Clinton	Express	Motor	49	Stephenson	1904	Scrapped 1940
102	Clinton	Express	Motor	56	Stephenson	1904	Scrapped 1940
103	Clinton	Express	Motor	56	Stephenson	1904	Scrapped 1940
201	Clinton	Express	Trail	40			Scrapped 1924
401	Muscatine	Bag Pagr.	Motor	50'	Niles	1912	B
402	Muscatine	BagPsgr.	Motor	50	Niles	1912	Renumbered 16
403	Muscatine	BagPsgr.	Notor	50	Niles	1912	D-1-124 CO1
404	Muscatine	BagPagr.	Notor	50'	Niles	1912	Rebuilt as 507
405	Muscatine	BAG Pagr.	Notor	50	NILOS	1012	Benushand ft
406	Muscatine	BAG Pagr.	aotor	50.	NILCO	1912	Renumbered 61
451	Muscatine	ыхртевя	NOTOr	45	NILES	1012	Renumbered 500
500	Muscatine	Express	MOLOP	45	NITER	1012	Remained 1039
501	Muscatine	Express	MOtor	50	NILES	1012	Somepped 1930
502	Muscatine	Express	Motor	50	Niles	1012	Sorapped 1930
503	Muscatine	Express	MOTOR	45	NITES	1914	Samenned 1000
-	Clinton	Sweeper	Notor		WCGOTIG CON		perapper 1340

## FREIGHT TRAIL EQUIPMENT

Numbers	Car Body	Len	<u>zth</u>	Capacity	<u>.</u>	Volu	Total	
301-305 306-309 401-403 404 601-603 701-708 1001	Flat Cars Flat-Made Gondola Cars Gondola Cars Flat Car Stock Cars Steel Hopper Cars Box Car	40' 43' 40' 41' 31'	1/2" 10" 1/2" 2" 6"	60,000 100,000 60,000 60,000 60,000 120,000 60,000	lbs. 1bs. 1bs. 1bs. 1bs. 1bs. 1bs.	1093 1047 2225 1664 1843	cu.ft. cu.ft. cu.ft. cu.ft. cu.ft. cu.ft.	5 4 3 1 3 8 1

Grand Total 25

## SUPPLEMENTARY REFERENCE NOTES ON EQUIPMENT: 1. Original Iowa & Illinois Railway group:

1. Organal lows a fillers failing group: Cars 11-16, 76,000 lb., 4-OX 73 (75 hp) motors, 60 seats, Baldwin #134 trucks, 36" wheels, single end 14 control. Car 101 had same mechanical and electrical emulp't. Cars 51-53, trailers, Baldwin #128 trucks, 33" wheels. Original Davenport & Muscatine Railway group:
 Cars 401-405, 62,000 lb., 4-GE217 (50 hp) motors (2 in series), Standard C50 trucks, 78" wheelbase, single end K42a control, 52 seats. Car 481 same equip't, double end.
 Sngine 72, type 2-8-0, built for Dakota & Western; sold in 1915 to Pine Bluff, Sheridan & Southern Railway -- both steam lines being logging roads.
 Fouriment from \$1 used to build \$453.
 Cars of series 20-23 of Muscatine division built from Tri-Cities street cars, using salwaged motor and mechanical equipment from 401 group, but with new EL control, weight 37,000 lb., 37 sects.
 Cars of series 23-34 of Clinton division built from Tri-Cities street cars; had 4-GE 203 motors, seated 37, had 2 K350 controllers.
 NOTE KITENSITE RENUMERSING. Most of the cars had more than one number at various

times. Thus, 51, listed twice is actually 2 different cars, one the original 51, and next the former 52.

7. Engine #77, formerly Hoboken Mfrs. R.R. #3, purchased 1930, built by Baldwin Locomotive Works-Burnham Williams & Co.-Westinghouse Elec. & Mfr. Co., serial 28002. Wheelbase 84%, 35% wheels, 120,000 lb., 4-Westinghouse 70% motors geared 18:70. HL control. Engine #68, built from car 215 of Tri-Cities Ry., 4 GESOA motors, 2-E356 controllers.

#### IMPORTANT DATES IN THE HISTORY OF THE C. D. & M.

Sep. 17, 1901	I.& I.Ry.Co. chartered in Iowa.
Apr. 1902	Citizens Ry. & Lt. Co. (Muscatine) chartered.
Nov. 20, 1904	I.& I.Rv. commenced through operation.
Dec. 10, 1904	I.& I.Rv. Davenport station opened at 117 Brady St.
May 28, 1905	T.C.Ry.& L.Co. takes over Davenport-Bettendorf local work.
Jun. 22, 1905	Fast schedule established by I.& I. and service doubled.
Jun. 1906	I.4 I. Park opened. Located north of LeClaire.
Jul. 31, 1906	Cut-off in East Davenport completed by I.& I.Ry.
Aug. 30, 1906	Muscatine Lt. & Tr. Co. incorporated.
Jan. 1910	Davenport frt. station opened by I.& I. at Front & Brady.
Feb. 15, 1910	D.& M.Ry.Co. incorporated in Iowa.
Jul. 25, 1910	Local-Limited service started by I.& I.Ry.
Apr. 4, 1912	Through freight service into Davenport via I.& IC.& N.W.
	commenced. Steam locomotive placed in operation between
	Davenport and Pleasant Valley.
Jul. 8, 1912	Muscatine city lines purchased by D.& M.Ry.
Jul. 28, 1912	First through car operated by D.& M. for special party.
Aug. 1, 1912	D.& M.Ry. commenced through operation.
Jan. 1913	Management of I.& I. taken over by.D.& M. Headquarters
	moved from Clinton to Davenport.
Jun. 11, 1913	Mill Creek power station closed. Replaced by Moline power,
Oct. 14, 1913	Steam loco. operation extended to west limits of LeClaire.
Nov. 30, 1913	Clinton station moved from 248 Fifth to 116 Sixth Avenue.
Mar. 15, 1915	I.& IC.& N.W. through freight service discontinued.
	Steam loco, operation ceased on this (last) day.
Jan. 29, 1916	C.D.& M.Ry.Co. formed by merging I.& I. with D.& M.
Sep. 17, 1918	Mill Creek power station switch discontinued.
Sep. 16, 1919	Repair work at Clinton moved to East River St., Davenport.
Dec. 1-15, 1919	Eight trains pulled off Clinton Division a/c fuel shortage.
Apr. 29, 1923	Davenport station moved to 213 Perry Street.
May. 1, 1924	Freight motor 102 placed in operation.
Sep. 2, 1924	First one-man car for Clinton Division completed.
Oct. 27, 1924	Light-weight cars operated on Clinton Div. with two men.
Nov. 10, 1924	One man page, train operation started on Clinton Division.
May. 24, 1920	Auscaline City lines sola to lowa Alectric Co.
Aug. 1, 1920	Parallel Dis operation started on Glinton Division.
Jar. 17, 1929	Ruscaline city lines abandones,
Dec. 22, 1929	Bus operation started on Auscatine Division.
Dec. 5, 1949	Ruscatine pivision service reduced to one car schedule.
Feb. 13, 1930	Clinton com born clicad
Dat 12 1030	Dincon car barn closen.
001 1 1037	Frinceton substation made automatic.
000. 7, 1999	Clinton station moved from the Sixth to (2) fifth Avenue,
Ten Peb 1035	Ver line constructed between Petterderf and Mound Street
9nning 1077	New Alle Constructed Detween Dettendori and AQUNG Street.
Nov 8 1038	Varievon Durceo Rallway abandones. Muacâtina Division negeonren gervice shandones
Nov. 15 1038	Muscatine Division freight service abandoned.
Dec. 20, 1939	Abandonment of Clinton Div. authorized by L.C.C.
Mar. 31, 1940	Clinton Division abandoned.
May, 2, 1940	13.80 miles of Clinton Div. purchased by D.R.I.& N.W.Rv.





th U TRANSFER CHECK. This is not a *lowerer*, but a *Transfer Ticket*, good only for a continuous trip and will not be bosored except when it is presented on the first out has bus on line indicated after the West time presented in maryin. It is one of the conditions midder which this step is an erged, that the presencer examine the Hill date and then do not example the Hill same is put the do referily. 1 1.0 et South 7 0 2 8 4 5 6 8 10 M 11

Property



1



# Остовыя, 1991

# Electric Street Railways at Burlington, Iowa.

A very severe test of the electric system of street cars has been given in Burlington, Ia., by the Burlington Electric Railway Co. In order to appreciate how severe this test is, and how successfully the road equipment has proved itself, it is necessary to get some idea of the peculiar conditions under which the road has run, and of the difficulties it has had to contend against in the way of

to contend against in the way of steep grades. The City of Burlington has often been called the "Rome of America" because it is surrounded by seven hills. The business portion of the city lies in a space be-tween these hills, while the residence portion, pleasure resorts, etc., are scattered over the sides, and up to the summits of the several hills. From the centre of the city, that is, the business portion, five lines radiate and each line necessarily must run up one or more of the hills, consequently there is a great deal of grade to contend against. These grades average from eight to ten per cent, and vary in distance anywhere from one or two thousand feet to more than a mile at a stretch.

C. B. B. Q WEST BUNLINGTON

The electric overhead line of the street railway system is divided into six sections connected together by pole cut-outs or fuses, one section being in the business portion of

city, and the other five sections corresponding to the five branch lines. The cars of each line run to and over the line in the central part of the city. The equipment of the road consists of twelve cars. These cars, illustrated in Fig. 2, incars, illustrated in rig. 2, in-cluding both bodies and trucks, were made by the John Stephenson Co., Ltd., of New York. Each car is equipped with two fifteen H. P. Westinghouse P. Westinghouse double re-duction motors. At the power station, Fig. 1, there are three eighty H. P. Westinghouse generators, and each genera-tor is driven by a Westinghouse compound engine. The switchboard is equipped en-tirely with the Westinghouse tirely with the westing access apparatus, and all the other appliances, lightning arresters. automatic circuit breakers, ammeters, switches, etc., are of the same make. The track is of T rails, not only in the business portion of the city

but on all five of the branch lines.

This road was put into operation about the first of July, and is operating in a very satisfactory manner. Mr. F. N. Waterman, had entire charge of the work of supervising the overhead construction, equipment of power sta-tion, and the whole electrical arrangement of the road: and the smoothness with which the cars have run from the first is due to a large extent to the careful supervision which he has given to the work. The road is excellently managed as the superintendent and general manager, Mr. F. G. Jones, understands his business, and has made himself a thorough manager for such a road. The president of the company is Mr. W. F. Putnam. The success of this road in Burlington demonstrates

that electric power is well adapted to long and heavy grades, even under trying conditions.



FIG. -CAR ON GRADE-BURLINGTON ELECTRIC RAILWAY.

# DUBUQUE:

Street railway service was provided in Dubuque by the Union Electric Company, incorporated in 1900 as a consolidation of the Star Electric Company, the Home Electric Company and the Dubuque Street Railway. In 1911 the company reported 17.28 miles of track (one mile on private right-of-way) with 39 motor cars and 27 trailers.

By 1928 when the company embarked on a bus substitution program, the mileage had increased to 21.0, with 3.3 miles of private right of-way used in summer only to reach a company-owned amusement park. At that time 17 cars maintained the regular schedule on the four routes.

By 1933 bus conversion had been completed. Twelve cars were sold to other properties (see WCF&NRy), and the balance were scrapped or the bodies sold for use as tourist cabins.

Dubuque is one of those Mississippi River bluff towns, with the business section and part of the residential area separated from the remainder of town by a steep hill. While street cars and roads managed this climb by utilizing indirect routes, there was a direct shortcut public transit facility built. This is the Fenelon Place Elevator, an inclined plane counterbalance railway, with two cars interconnected by cable.

This railway of only a few hundred feet length has managed to survive the street railway here.







64543



After the Interstate Power Company, final car operator in Dubuque, discontinued rail service, some of the 200s went to Waterloo.



BN



# INDEPENDENCE:

In the early 1890s, a Mr. Charles W. Williams built a hotel in the town of Independence and a trolley line to connect the hotel with the Illinois Central Railroad depot and a race track which was the main attraction offered by Independence to visitors. The trolley line, which cost \$40,000, began operating in the spring of 1892. It advertised 14 miles for  $10^{\circ}$ , altho it is not clear at this date how many trips this required.

Equipment consisted of 3 closed passenger motor cars and 2 trailers, all single-truck. With so small a population (even in 1950 the town boasts less than 5,000 people) it was small wonder that financial troubles beset the street railway at an early date. The panic of 1893 hit it hard and operations were suspended in 1902-1903 after attempting municipal subsidy.





# MASON CITY BRICK COMPANY:

At Mason City there is now in operation an industrial electric railway having a length of about  $3\frac{1}{2}$  miles. Clay is dumped into dump cars, built by the Differential Dump Car Company, by trucks. The clay is then taken by rail to an unloading building, where it is dumped into grinders.

The entire line of the Mason City Brick & Tile Company is single track, with no passing sidings. The equipment consists of three motored dump cars built new for MCB&T. Altho the line has track connections with the Milwaukee Road and with the Mason City & Clear Lake Railway, no interline switching is performed with the dump cars. Trolley voltage is 600 DC.

---Gordon E. Lloyd.







# IOWA CITY:

The Iowa City Electric Railway was organized in 1908 to build a street railway in that town. Construction began in 1910 and service was started on November 17th of that year. Five cars ran on the 6.1 miles of track.

In 1913 the name was changed to Mississippi Valley Electric Company and the owners expanded into the power business. In 1914 the street railway changed over to 100% one-man cars. It remained profitable well into the 1920s, thanks in no small way to the traffic provided by students at the State University of Iowa. The company was independent of the Cedar Rapids interurban.

Abandonment occurred in the late 1920s.



# Cedar Rapids and Iowa City Railway & Light Company

No. I. TIME TABLE No. I.

..... TAKING EFFECT SUNDAY, OCTOBER 2, 1904, AT 5:30 A. M .....

For the Government and Information of Employes Only. Not intended for the Information of the Public nor as an advertisement of the time of trains. The Company reserves the right to vary therefrom as circumstances may require.

STEPHEN L. DOWS, President. C. A. ROSS, Superintendent G. C. BALES, Ohief Train Dispatcher.

SDM

	NOF	RTH			(	CEL	DAF	≀ R/	٩PI	DS	AN	DI	ow	Ά	CIT	Y R	AIL	.W/	<b>۱۲</b>	ANI	DL	IGH	IT (	COI	MP/	٩N	1			SOU	ITH
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GENERAL INFORMATION.

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STANDARD CLOCKS-Cedar Rapids Passenger Station. WATCH INSPECTORS-The H. D. Cone Jewelry Co., Cedar Rapids. S. T. Morrison, Iowa City.

SURGEQUS-DT. A. B. Poore, Chief Surgeon, Cedar Rapidy, Dr. W. J. Morrison, Cedar Rapids, Dr. David Stewart, North Liberty. REGISTER STATIONS AND BULLYTIN BOOKS-Cedar Rapids Passenger Station, Iowa City Passenger Station.

BULLETIN BOARD-Cedar Rapids Passenger Station,

TRAIN ORDER SIGNALS-Ceder Rapids Ticket Office ; Dispatcher's Office ; Swisher; Coralville ; Iowa City,

VARD LINITS--Cedar Rapids City limits road south of Sub-Station No. 1, to Third Avenue. Iowa Cith from south end Iowa River Bridge to Passenger Station.

WYES-Cedar Rapids, Mid River, Iowa City.

Through trains North bound will stop between 14th Avenue west and

Commencing at 6:00 A. M., daily, city cars will leave City Hall every

thirty minutes, on the hour and half hour, except at 12:00 NOON and 6:00

P. M. when they will leave at 12:05 P. M. and 6:05 P. M. Returning cars

Cedar Rapids passenger station to discharge passengers only.

GRADH CROSSINGS-Cedar Rapids, east end Cedar River bridge, C., M. & St. P. Ry.; 14th Avenue West, C., M. & St. P. Ry.; 2d St. West, C. R. & M. C. Ry. Cut Off, C. & N. W. Ry. Coralville, C., R. I. P. Ry.

## RULES.

RILE 1.—Special rules shall supercede general rules and be fully observed while in force. These rules are all important and a strict observance of each and all of them is absolutely required. In all cases of doubt take the safe course.

RULE 2.-- Each time table at the moment of taking effect supercedes

RULE 6.—Conductors of trains of the same class must register with each other at all meeting points. When meeting points are made by special orders Conductors of trains of all classes must register with each other.

Rule 7 .- In case of accident Conductors may command the services of work trains and track men, and every person in the vicinity in the emtoward the first telephone box from where power was lost. At night or during foggy weather, trains must be brought to a stop as soon as possible and communication had with dispatcher's office. In no case will trains be allowed to run or drift after dark while power is of the line. In such cases trains must be protected as per Rule 99.

allowed to run or arist alter data may command the services ' cases trains must be protected as per







# CEDAR RAPIDS-IOWA CITY-LISBON:

A well-built electric railroad for passenger and freight service was opened between Cedar Rapids and Iowa City on August 13, 1904. Beginning its operating line as the Cedar Rapids & Iowa City Railway & Light Company, the name was later shortened to Cedar Rapids & Iowa City Railway, but thruout it has been better known as "Crandic", from its initials.

Altho the country is rolling, there were no unusually difficult engineering problems, the toughest construction jobs being the bridges over the Cedar and Iowa Rivers.

In 1914 the company opened a 15-mile branch line eastward from Cedar Rapids to Mt. Vernon, the first step of a projected line to Davenport. Two additional miles brought the line to its ultimate eastern terminal of Lisbon. This line was again well built, with 70-lb rail and catenary trolley. Conversion of the two interurban routes to 1200 volts was being seriously considered, and the Mt. Vernon line was insulated for that pressure from the first, altho it actually used the 600-volt system. Two new steel cars were bought at this time and were assigned to the Iowa City line to relieve older wooden cars for use on the Lisbon run.

The Crandic was part of the Iowa Railway & Light system, which ran street railways in Boone, Marshalltown and Toledo (Iowa). Crandic itself operated street railway lines in Cedar Rapids independently of those operated by the Cedar Rapids & Marion City Railway, with which it had no affiliation.

In 1928 the Mt. Vernon-Lisbon branch was abandoned and in the mid-1930s the city service in Cedar Rapids was discontinued. Passenger service was trimmed to just a few trains each way daily on the Iowa City main during the nadir of the depression.

Crandic's versatile master mechanic of more than thirty years was John Munson, who furnished from his memory much of the accompanying rter data. He devised many novel features wh kept Crandic just a step ahead of many lar properties. There was the ingenious trolley w switch which practically eliminated depoleme at turnouts and permitted the unusual Cran practice of backing into sidings without requir anyone to hold the trolley rope. There was a the folding step and front loading arrangeme The step idea was closely copied on many strea lined trains years later. Munson's success Bill Schneider, has kept Crandic's tradition progressiveness thruout a trying period of ra change.

In 1939 Crandic moved to modernize its pase enger service with the acquisition of one exdiana Railroad and 6 former Cincinnati & La Erie Railroad lightweight cars. Originally, or man cars, these were operated on Crandic two-man units. With them Crandic handled r cord wartime loads: 500,000 passengers in peak year.

Moving steadily thru the second-hand tract equipment market, Crandic picked up 50-ton  $\epsilon$ 70-ton interurban locomotives to swell its frei handling fleet as industrial activity gained m mentum in the region.

But the end of the second World War broug more rapid change than ever to Crandic. Pas enger travel on 28-mile rural trips became 4 field of the private auto for sure. Urban traf congestion and suburban population densiti were not factors in Crandic's picture. In 195 passengers handled had declined to 188,00 Trips were cut to two daily, then finally, 10:25 AM, May 30, 1953, train 3 left Iowa C to make the final passenger trip. Later the sar year diesel locomotives took over the freig operation, trolley wires were dismantled a Crandic's history as an electric railway car to a conclusion.



All: Credit BN













in.

GK

sign. Excellent forward observation, safe front loading and attractive interior appointments (note indirect lighting) were offered.

\$3.J

GK

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All: Credit GK



Roller bearings and flopover front steps were being tested on car 106 at the time of this 1926 photo.

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Crandic's heaviest cars were the u popular 107-108, regarded by as slow and sluggish.

Last rebuilt of the heavies was ex-Southern New York Railway 162, which became 109. This car wound up its days with a postwar conversion to a linecar.

162


In May of 1939, Crandic hastily unpacked a freshly delivered C&LE car and allowed a CERA group to have the first "sneak preview" ride. Fitted out with the only appropriate destination sign in the C&LE roll, "College Hill", car 116 proved Crandic's judgment of the car market to be excellent.





Six of these light-weight high-speed cars came from the Cincinnati & Lake Erie Railroad in 1939. Altho operated in Ohio as one-man units, these cars were handled by two-man crews on Crandic. During World War II, conductors were often hard pressed to find standing space in the jammed cars.

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MAZ













ncreased in size over the years from the ight Stephenson-built box motor (#50) up hru the 70-ton MU locomotives (#72-'3) acquired from the Oklahoma Railway. Shown on this page are: 55 56

22	50
50	53
73-72	54-75









# CEDAR RAPIDS-MARION

On March 8, 1879 the Marion & Cedar Rapids Improvement Company was incorporated to build street railways in and between Cedar Rapids and Marion. In October the name was changed to Cedar Rapids & Marion Street Railway Company. The city operation in Cedar Rapids got into financial difficulty and was turned over to a separate Cedar Rapids Street Railway Company in 1899 Lines were built to cover more of Cedar Rapids; some were soon abandoned and the Marion line was again consolidated with the city operation in 1891. At that time equipment consisted of two steam motors, 3 trailers, 1 baggage car, 18 horse cars, 2 snow plows and 19 miscellaneous.

In 1892 a new company, the Cedar Rapids & Marion City Railway, took over and began electric railway operation with a 15-minute headway on city lines and a 20-minute headway on the Marion line, which had already developed so much population as to be really a suburban area.

In 1912 the United Light & Railways syndicate purchased the property and in the following year a new franchise was secured, followed by the purchase of 26 new cars. Car design followed the same style as was developed by the holding company for its Davenport property. The tracks and overhead were also rebuilt to then-modern standards.

The single-truck Birney safety car made its first Cedar Rapids appearance in the early 1920s and by 1923 even the double-truck cars had all been converted to one-man operation with safety features copied from the Birneys.

By the time the franchise was up in 1938, poor prospects gave the owners no incentive to seek a renewal and the street railway operation was discontinued in favor of a bus system installed by National City Lines.

It should be noted that independent street railway service was offered in Cedar Rapids by the Cedar Rapids & Iowa City Railway. Its local service was discontinued prior to that of CR&MC.



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Fast loading and unloading was evidently foremost in the designer's mind when the huge platforms and double doors of these Cedar Rapids Birney cars were selected.

-Standard double-truck safety car was neat and modern for its type, and as dolled up in its aluminum paint job below made a striking appearance on the "MARION FLYER" suburban run.

All: Credit GK.









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WATERLOO CEDAR FALLS & NORTHERN RAILROAD

1056



CEDAR FALI

NORMA

# WATERLOO-CEDAR RAPIDS-WAVERLY Foreword:

WAVERLY

DENVER

NOWLES

VATERLOO

BERTVILLE

COUNT

Iowa's last interurban electric railway-- the last completed and the last to operate passenger service -- and one of the most interesting thruout the land; such is the Waterloo Cedar Falls & Northern Railroad. A top review of the railway was published by the Westinghouse people in December, 1917, as their Special Publication No. 1575, a beautifully printed 84 page book, profusely illustrated and truly a collector's item for the railfan. Because of the size of this volume it is obviously not practical to reproduce it in its entirety; however, we have drawn liberally from its key data and best illustrations, and we have picked up much of its text, with necessary revisions to correct for changes which have occurred since 1917.

Freighthaulage, the great revenue builder and long-range salvation of the electric railway, was well worked out from the beginning on the Waterloo Cedar Falls & Northern Railway. "A steam railroad with a trolley wire over it," completely conveys the idea of the substantial manner in which the WCF &N was constructed and operated.

# History:

In 1895 the Waterloo & Cedar Falls Rapid Transit Company was formed to give local street car service in the City of Waterloo and town of Cedar Falls with a connecting interurban line 8 miles in length. It acquired the Cedar Falls & Northern Ry. (a gasoline line) and the Waterloo Street Ry. Co. (a horse-car line). About 1901 the interurban line from Waterloo to Denver, Iowa, 14 miles, was built. A 22,000 volt transmission line (the first high tension line in Iowa) fed power from the Waterloo power house to a substation, then called Glasgow, halfway between Denver and Waterloo.

DETAIL

1.C.R.R

ACEDAR RAPIDS

In 1903 this line was extended to Denver Junction where connection was made to the Chicago Great Western Railway. Steam service was inaugurated between Waterloo and Sumner, Iowa, over the Great Western (leased) thru Waverly to Sumner, 44 miles.

On December 29, 1910 electric operation was extended over a newly built track to Waverly and the operation over Great Western tracks was discontinued.

Construction to the southeast from Waterloo began in 1912, with service being extended in steps as construction progressed:

-	0
LaPorte City	December 12, 1912
Brandon	September 28, 1913
Urbana	December 7,1913
Center Point	June 21, 1914
Cedar Rapids	September 14, 1914







The first freight work was done in 1899, when brick from a plant near Cedar Falls was transported to Waterloo and delivered on the city streets on flat cars. This was done during midnight hours, using one flat car handled by an interurban motor car.

The first electric freight engine was built in 1900 and the second in 1901, the latter weighing 26 tons and having 4-Westinghouse 12A motors. This engine hauled one car of coal at a time to the normal school in Cedar Falls, climbing a 2% grade en route.

Waterloo Cedar Falls & Northern, often called "The Cedar Valley Road", operated a system of electric railway lines from Waverly on the north to Cedar Rapids on the south, thru rich agricultural country, ranking with the best in Iowa.

Waterloo, the hub of the system, is a progressive city of 65,000 (1950). Here WCF&N operates a belt line which connects most of the city's important industries with the steam roads. Switching tracks honeycomb the city's factory areas. Cedar Rapids, a bustling metropolis of 72,000 (1950) is firmly contacted, but is not penetrated in depth by direct WCF&N tracks.

When WCF&N was built, tho paralleling steam railway lines most of the way, it branched into exclusive territory striking several communities which were not served by steam roads. Some of the towns along this route doubled in population after the "Cedar Valley Road" went thru, for instance, Urbana and Brandon. These were on the old prairie schooner route, and altho the country around them was of the best, for over 50 years they failed to secure any steam road service.

When the road was first projected, considerable foresight was shown in that land adjacent to the route was purchased in towns, in plots large enough so that industries could be placed adjacent to the railway.

# TERMINALS AND STATIONS:

Purchases of land for station sites were based on requirements for future developments, and in few cases did the management allow price to alter its decision. This policy paid off particularly well in Waterloo.

The mileage between important way stations made it possible to build a combination passenger, freight and substation at nearly every point. The standard design included a building of brick, concrete and steel, 101 ft. long and 22 ft. wide. The substation occupied  $30^{\circ}-6^{\circ}$  at one end. A ticket office extended 12 ft. across the width of the building and a waiting room 16 ft. wide and a freight room  $36^{\circ}-6^{\circ}$  long occupied the other end of the building.

Station facilities include a team track, wellbuilt stock pens, grain elevators and loading chutes. The station proper, wherever possible, includes a tract of land approximately 2000 ft. in length, permitting the railway to offer attractive long term leases for elevators, mills, etc. Each station had a twin train-order semaphore signal board, with blades displayed to the upper righthand quadrant controlling train movements in both directions.

TRAFFIC

One of the secrets of the perseverance of the WCF&N where other interurban roads failed has been the aggressive traffic solicitation and wellorganized methods of securing business it has always followed.

Business to or from any point in the United States is fostered by off-line travelling agents who call on railway and industrial traffic departments thruout the country. Foreign freight solicitation is also part of WCF&N's traffic plan.

Statistical records are used to keep track of the business and its origin. Reciprocal switching arrangements with trunk lines serving cities on the electric line enable almost every industry in these places to be served by the "Cedar Valley Road". Special arrangements, such as "milling in transit" for the processing of grain en route to market on the original billing, have been worked out to meet competitive requirements.

In earlier years, passenger traffic solicitation offered similar attractions, with thru tickets and special rates being available to encourage use of the electric railway. For example, for many years the Chicago & North Western Railway and WCF &N offered a thru Chicago-Waterloo rate meeting the competition of the direct Illinois Central Railroad route.

WCF&N was the pioneer electric line to compel steam railroads to interchange freight with electric railways. As a result, as long ago as 1917, over 70% of the switching from steam roads entering Waterloo was performed by WCF&N. Furthermore, thru similar agreements at Cedar Rapids, steam roads there obtained access to the Waterloo area via the "Cedar Valley Road". Interchanges are shown on the accompanying maps.

In view of the extensive freight operation of this company, it was necessary to build a large freight house, with yards at Waterloo. This is at Utica and Lafayette Streets, adjacent to the wholesale district and only about six blocks from the central business district. It occupies about 32 acres near the Cedar River. The land was quite low, so it was necessary to use over 100,000 yards of fill, consisting of rock brought from the high areas along the belt line and at the roundhouse shops.

The freight house is a one-story brick structure with two-story office end with basement. The door arrangement was carefully worked out to avoid the necessity of exact spotting of cars at doors.





The Cedar Valley Road's combination baggage-passenger-observation one car trains had a logical corollary in the open rear platform box motors. The 30-class were used in the 650-volt services between Waterloo-Cedar Falls and Waterloo-Waverly.









Cedar Falls-Normal gas motor pulled single-truck passenger trailers in preelectrification days.

IMPORTERS 8 WHOLES

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The steam locomotives are from the early days of the Waverly-Sumner line, as is the bus-like motor car #1.





The freight motive power equipment of the Cedar Valley Road had its beginnings with "trap cars" (cab-on-flat type) and with the light, home-made steeple cab engines #2 and #3. Rebuilding and renumbering brought some of those numbers thru the years, while other acquisitions, both new and second-hand, brought much variety to a relatively small total of engines.





B e l o w : Cedar Rapids district interurban 140 peeks out of the tight wye as Cedar Falls car clatters thru the special work on Mulberry Street, Waterloo.





City operation within Waterloo was handled by single-truckers--- Birneys, of course, in the later years. Similarly, the local operation within Cedar Falls utilized the little one-man cars. The suburban operation between Waterloo and Cedar Falls, over a route somewhat like a figure 8 in shape, was conducted with double-truck equipment. The ex-Dubuque 200s, shown here, did the job during the 1930 period, but were replaced by the ex-Knoxville (Tennessee) 380 type shown on the opposite page.







As rebuilt AS BUILT (car 100 any)



# WATERLOO BELT:

The freight belt line extends  $7\frac{1}{2}$  miles around the factory district of Waterloo and ties in to all the steam roads. Starting at the east edge of town, where the Cedar Rapids district enters the Waterloo limits, the line extends around the northern perimeter of Waterloo to the shop yards. Just beyond these yards it connects with the Waverly district and then turns in to town to reach the Cedar Falls district and the East Waterloo freight house at Park Junction. The Aladdin industrial area in west Waterloo is reached next.

One of the early developments brought on by the intensive operations of this freight belt was the "trap" car. Long disappeared into history, this type (there were two cars on WCF&N) was not much more than a powered flat car of 30-ton capacity. These cars called at definite periods at the various plants along the belt to handle the smaller freight shipments to and from the East Waterloo freight house. In other words, these were an early version of the pick-up-and-delivery trucks which work today's LCL shipments. The WCF&N trap cars also once called at the Great Western Railroad and the Wells Fargo Express Company for the collection of LCL and railway express matter.

## FREIGHT OPERATION:

Freight operation today is the sole railway revenue source, but it was given top importance more than forty years ago on WCF&N. It followed standard steam road practices in handling freight service, with road freight and switching as well as package car (box motor) service. When unit costs spiralled and motor truck competition became so powerful, the express and package services were ended, fading from the scene in the early 1940s. Thru freight has retained its strength, but the real value of WCF&N today seems to lie in the Waterloo switching district. Lightest operation of the system today is the Waverly branch. For years the two daily passenger car trips were used as mixed trains to bolster the frequency of accommodation of the towns of Denver and Waverly and the sight of a box car bobbing along behind the passenger motor, itself loaded mainly with express matter, was common.

The Cedar Falls branch freight operation was originally handled by box motors, with LCL in the car and carloads (one or two) trailing behind. For years, two daily round trips were made. As carload business grew, the box motors proved inadequate for the hauling job, and when LCL traffic dropped they were relegated to switching duties, as at the East Waterloo freight house. POWER FACILITIES:

The power for operation of WCF&N came originally from a generating station owned by the company. It was located on a 13-acre site in west Waterloonear the junction of the Rock Island and Great Western Railroads. This site was selected because it was near the two railroads, which tapped the Iowa coal fields, and at the same time it was within 600 ft. of Blackhawk Creek, from which an excellent supply of water could be obtained.

In 1917 the plant had a capacity of 6000 kva and fed a transmission line at 44,000 volts, 25 cycles. The original substation layout fed the entire system with 650 volts at the trolley wire, but immediately upon completion in 1914, the Cedar Rapids district was changed to 1300 volts DC from a point in the northeast segment of the belt line to the edge of Cedar Rapids. The city lines in Waterloo, the Waverly and Cedar Falls districts and the line within Cedar Rapids below Shaver were operated at 650 volts DC, and this arrangement has persisted with minor changes in limits. When the street operation in Cedar Rapids was chopped off about 1941, the 1300 volt trolley wire was carried right to the terminal depot.

In addition to the power house, which contained rotary converters, 650 volt power was delivered from substations at Waverly, Denver, Farmer and Cedar Falls, as well as one in the carbarn at Waterloo. The initial layout on the Cedar Rapids district included 650 volt subs at Gilbertville, LaPorte City, Brandon, Urbana, Center Point and Shaver and it had been proposed to install equipment at Lafayette and Louisa. In the 1300 volt conversion, the proposed subs were eliminated, and those at LaPorte and Urbana were dropped as well.

About 1940 the distribution system was entirely reconditioned in connection with the sale of the power house facilities and the conversion to purchased 60-cycle power. The project was accomplished quite economically by raising the trolley voltages to 700/1400 DC and respacing some of the subs. Some equipment from the then-recently abandoned Cincinnati & Lake Erie Railroad, together with other newly-built apparatus was used. At present, 700 volt subs are located at Waverly, Denver, Aladdin, East Belt; while 1400 volt subs are located at East Belt, LaPorte City, Urbana and Robins.

All overhead trolley lines with the exception of the Cedar Rapids interurban are standard direct suspension construction; in general, a 0000 trolley wire and a 0000 feeder are used. The line between Waterloo and Cedar Rapids is of the 5point catenary construction with 150-ft. pole spacing on tangent track, the poles being 40-ft. in length. The catenary fittings are for chord-type construction, where the 0000 trolley and the 7/16" galvanized messenger remain in vertical alinement around curves.



### RIGHT-OF-WAY:

The entire line in interurban areas is constructed on private right-of-way varying in width from 100 ft. between stations to 200 ft. or more, as required, at stations. Between LaPorte City and Brandon the line runs thru a rich limestone deposit which supplied a good crushed stone business for many years.

On main and passing tracks, running rail has a weight of 85 lb. per yard. Continuous rail joints are used, with tie plates on curves. The maximum curve is  $5^{\circ}$ , except in yards, and the ruling grade as 1%.

Steel bridges are designed for Cooper's E-50 loading. Most notable are the several concrete arch bridges, designed for Cooper's E-60 loading, viz, two 213-ton locomotives, followed by a train weighing 6000 lb. per lineal foot. The Elk Run bridge, just south of Waterloo, crosses the Cedar River on six 70-ft. concrete arch spans, It cost \$36,000 in 1912. Near LaPorte City there is a second crossing of the Cedar River, this time with nine spans costing \$75,000. A few years ago one of these spans was damaged by quicksand action and has been rebuilt with a timber trestle within the concrete arch. Steel trolley line poles are used on these bridges.

With the exception of a very few main roads, the highways in this area are dirt or gravel roads. There is no route which parallels closely the railway. The problems of grade crossing protection have not been serious, altho modern flashers and automatic crossing gates are employed at the relatively few main roads.

Of the several railroad grade crossings along the route, only those with the Illinois Central Railroad at Rath (East Belt) and West Tower, both at Waterloo, were provided with interlocking. The Rock Island Railroad crossing at Center Point, all railroad intersections (past and present) in Cedar Rapids and most others in the Waterloo and Cedar Falls district were at grade, with operation protected by flagging rules.

Automatic block signals are used only on the Cedar Falls line, from the Waterloo station at 4th & Mulberry to Cedar Falls, and on the leg of the belt line from West Tower to Park Jct., altho practically the entire road has always been single track. These are Nachod trolley contractor signals.

Direct track connection was made at the downtown Cedar Rapids station with the 600-volt line of the Cedar Rapids & Iowa City Railway and it is known that special passenger trains have operated thru to Iowa City.

#### **REPAIR SHOPS:**

Twenty-three acres of farming land at the north corporate limits of Waterloo were acquired to make up the shop and yards. The main building was a 12-stall roundhouse with a 55-ft. motordriven turntable. The shop building was 72 ft. deep, built on a 130-ft. outside radius. Adjoining the roundhouse were storeroom and armature repair shops. Other buildings on this general site include a dispatcher-yard office and a line department building, which was hurriedly converted to a temporary shop after the fire.

Acity carbarn, located close to the East Waterloo freight house, is now the bus garage of the successor city transit company.

PASSENGER SERVICE:

The most colorful main line passenger service in Iowa, if not as fine as any in the midwest, was operated in the heyday of the WCF&N interurban line connecting Cedar Rapids and Waterloo.

For the high-speed limited service on this route, the company purchased in 1914 four combination passenger and baggage cars (140-143) and three parlor cars (100-102). These cars weighed 94,000 lb. and compared in size and accommodations with the best steam road equipment of their day.

The limited service added considerably to the whole operation in the way of publicity and putting snap into the whole operation. In 1917 the parlor cars contributed about \$8000 a year thru seat charges and buffet service, so it was no great surprise when the parlor cars were brought in for rebuilding into deluxe coaches in the late 1920s. In this form, as combination baggage-passenger-parlor-observation coaches, are WC F&N's 100s bestknown. Car 100 received an enclosed solarium end, but 101 and 102 retained their dust-prone open, brass-railed obs to the end.

Local passenger service in early days was handled by 35-ton wooden cars, some of which were only suitable for use on the 650-volt lines, while others could be used full speed on either 650 or 1300 volts. Obviously all cars would not successfully operate as multiple units, as their balancing speeds were different. However, the coach trailers could be worked in the middle or end of a train of any class equipment, heating and lighting them from the equipment with which they were working. Motor cars could be hauled as "dead" trailers on any train, using individual auxiliary circuits from the leading, or master, car of the train.

On special days, it was often necessary to make up trains of almost any conceivable combination. The flexibility was worked out so that 1300-volt and 650-volt cars could be operated in train on the 650-volt district without any care other than making the couplings.

#### CITY OPERATION:

The usual array of small city cars peppered WCF&N's fleet of equipment for Waterloo city service. In December 1915 one man car operation was instituted under the catch name "Quick Service Car" During the year 1915, the city system had been gradually falling off in receipts, so that the management felt that some step should be made to curtail the cost of operation without impairing the service.









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L. S. CASS, Pres. and Gen'l Mgr.

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#### ROSTER OF THE WATERLOO, CEDAR FALLS & NORTHERN RAILROAD COMPANY

	NUMBERS	BUILDER	DATE	LENGTH	width	HEIGHT	SEATS	WEIGHT	MOTORS	HP	TRUCKS	WHEELS	CONTROLS	NOTES
	1	WCFAN	1909	51-0	9-1	12_0		45 000	4-GE80	40	McGuire 20A	33	K28B	Work car, rebuilt 1913, acramped 1936
	2	WCFAN	1909	42_0	9_8	12-5		43 500	4-WH327C	55	McGuire 20 A	33	K288	Work car, retired 1941, motors to 208 & 222, acrapped 1947
	3	WCFAN	1910	28-10	9_0	10-0		60,000	4. AC75	60	Tavlor	33	K14	Locomotive, burned at Cedar Falls car barn fire 9/15/16
1	4	WCFAN	1910	31-0	9-0	13-0		110,700	4-GE73	90	McGuire	33	мк	Locomotive, rebuilt 1930, had AC75 motors and K14 controls
	5	WCFAN	1912	33-4	9-8	13-6		114.000	4-GE73	90	McGuire	33	HIL.	Locomotive, had C74f controls when built
	6	Baldwin	1927	35-6	9-0	12-0		100.000	4-WH562D5	100	Baldwin	36	HL	Locomotive
	7	NST	1925	32-3	9-6	13-1		114,000	4-GE239	250	American	36	м	Ex. Toronto Suburban 300 purchased 1936 from NST
	9								Trailer				None	Passenger trailer burned at Cedar Falls 9/15/16
	11	WCF&N	1909	28-0	8-0			30,000	2-GE301	40	McGuire	33	K10	ST Line Car scrapped 1928
	14								Trailer				None	Passenger trailer burned at Sans Souci 10/1/16
	15 .	Wagner		59-1	10-0	13-5	52	53,600	Trailer		Wagner	33	None	Rebuilt 1913, scrapped 1936
	16	Wagner		61-0	9_8	13-7	58	57,800	Trailer	•	Wagner	33	None	Scrapped 1928
	17	Wagner		61-0	9-8	13-7	52	53,300	Trailer		Wagner	33	None	Rebuilt 1925, scrapped 1936
	18	Wagner		63-1	9_8	13-10	62	54,000	Trailer		Wagner	33	None	Rebuilt to express trailer 1922, scrapped 1936
	20	Pullman	1897	45-4	8-7	12-0	48	46,500	4-GE80	40	McGuire 20 A	33	K28B	Rebuilt 1920 to express trailer, new weight 32,500, scrapped 1936
	21	Pullman	1897	44-11	8-7	12-2		65,400	4-WH327C	55	Peckham	33	HL	Rebuilt into line car 1913, scrapped 1925, equipment to 80
	22			43-0	8-10		40	41,600	2-AC301	40		33	K12	Open excursion car, scrapped 1924
	25	McGuire-C	1909	53-2	9-2	13-6		75,760	4-WH317A3	90	McGuire 20A	33	HL.	Express car, scrapped 1947
	26	McGuire_C	1911	53-2	9-2	13-6		78,500	4-WH317A3	90	McGuire 20A	33	м	Express car, sold 1946, originally had GE73 motors and C74f controls
	27	McGuire-C	1912	52-2	9-0	12-4		54,600	4-GE80	40	McGuire 20A	33	K28B	Express car, burned at Cedar Falls 9/15/16
	27	McGuire-C	1908	51-7	9-2	12-11		69,000	4-WH317A3	90	McGuire 20 A	33	HL	Express car, rebuilt 1931 from 81, scrapped 1952
	28	McGuire_C	1912	52-2	9-0	12-4		54,600	4-GE80	40	McGuire 20 A	33	K28B	Express car, scrapped 1925
-		M.Calas C	1010	09-4 57 c	9-0	- 10 2	50	60,000	4-WH317A3	90	N.C		HL	Interurban passenger car, scrapped 1924
	31	McGuire_C	1910	57.6	9-2	13-6	52	74,000	4-WH01/A0	90	McGuire 70A	26	- ML - MI	Last wooden intervalues can examped 1942 last need 1936
	32	McGuire_C	1910	57 6	9-2	13 6	52	75,200	4-WH017A0	90	McGuire 70A	30	- CL - LT	Last wooden interurban car, scrapped 1942, Jast died 1950
	33-34	McGuire-C	1912	58_9	9_2	13-10	52	77 800	4. WH31743	90	McGuire 70A	36	MI NI	Scrapped 1936
-	40-49	McGuire-C	1909	28-11	7-10	11-2	24	22 000	2-40301	40	Columbian	33	K10	ST closed city cars rebuilt 1915 to one-man acramed 1924
	50-54	McGuire-C	1910	28-11	7-10	11-2	24	22,000	2-AC301	40	Columbian	33	K10	ST closed city cars, one-man 1915, scrapped 1924
	60-74	McGuire-C	1909	28-4	10-0	11-0	50	22,000	2-AC301	40	Columbian	33	K10	ST open city cars, scrapped 1924
	79	McGuire-C	1912	31-0	8_4	12-0		30,400	2-GE80	40	Taylor	33	K36J	ST line car, rebuilt 1928 from 303, scrapped 1949
	80	McGuire-C	1908	51-7	8-10	13-7		79,100	4-WH317A3	90	McGuire 20A	33	HL	Rebuilt 1925 to line car replacing 21
	81	McGuire-C	1908	51-7	9-2	12-11	44	69,000	4-WH317A3	90	McGuire 20 A	33	HL	Rebuilt 1931 to express motor 27
	90-99	McGuire-C		24_7	7_7	10-6	35		Trailer			33	None	ST open city cars, scrapped 1917, 91 in 1916, 95, 99 in 1919
	100	McGuire_C	1915	60-3	10-4	13-9	41	102,700	4-WH333E7	125	McGuire 70A	36	HL	Originally parlor car, to coach 1920, completely rebuilt in 1928
	101	McGuire-C	1915	60-0	10-4	13-9	40	94,830	4-WH333E7	125	McGuire 70A	36	HL	Originally parlor car, rebuilt to coach in 1918 •
	102	McGuire-C	1915	60-0	10-4	13-9	40	100,120	4-WH333E7	125	McGuire 70A	36	HL	Originally parlor car, rebuilt to coach in 1921 •
	140	McGuire-C	1915	58-3	10-7	13-9	52	95,320	4-WH333E7	125	McGuire 70A	36	HL	Out of service since 1950
	141	McGuire-C	1915	00-0 50 0	10-7	13-9	20	96,560	4-WH317A3	90	McGuire 70A	36	HL.	Rebuilt in 1936, had WH333 motors, out of service since 1950
	142	McGuire C	1915	58 3	10-7	13-9	50	94,000	4-WE31(A3	90 195	McGuire 70A	30		Cut of service since 1980
-	150	Pullman	1915	59.0	10 0	19.0		34,200	Tesiler	120	Bull-an		Need	Beinete and net word in intermeter contine and 1929 to Sugarland
	100	1 uninali	1910	00-0	10-0	10-2			Trailer		ruman		None	Ry Sugarland Taxas
	180	McGuire-C	1915	35-0	9-1	13-1		120.000	4-WH308E3	240	McGuire	- 36	HL	Sold 1922 to Iowa Transfer Railway No. 1. Fort Dodge Line 208 in 1950
	181-184	McGuire-C	1915	35_0	9-1	13-1		120,300	4-WH308E3	240	McGuire	36	HL.	1300 volt locomotives 182,183.
·	185	Baldwin	1912	32-2	10-1	12-0		124,500	4-WH308D3	240	Baldwin	36	HL	Ex-Southern Pacific 100, P&SR 100, purchased 1942
	186-187	Baldwin	1912	32-2	10-1	12-0		125,500	4-WH308D3	240	Baldwin	36	HL.	Ex-SP 101-102, Interstate Mining Co. 210, 209 purchased 1944
	190	GE	1914	36-0	9-7	13-2		131,000	4_GE251B	240	American	36	HL	Ex-Bush Terminal 23 purchased 1939, rebuilt 1939 by WCF&N .
	207-208	GE	1931	37-6	8-10	14-10		170,000	4-GE818A2	250	GE .	46	м	Ex-Interstate Mining Co. 207, 208 purchased 1947
	200-202	American	1914	40-0	8-10	12-0	40	37,660	2-GE203	50	Baldwin M	34	K36J	Purchased 1932 from Interstate Power Co., Dubuque, same nos.,
														200-222
	204,206	American	1914	40-0	8-10	12-0	40	37,660	2-GE203	50	Brill 39E	34	K36J	204 scrapped 1938, 206 in 1941
	208	American	1914	40-0	8-10	12-0	40	37,660	2WH327C	55	Brill 39E	34	K36J	Motors in 1942 from 2, scrapped 1947
	210	American	1914	40-0	8-10	12-0	40	37,660	2-GE203	50	Baldwin M	34	K36J	Scrapped 1948
	212-220	American	1914	40-0	8-10	12-0	40	37,660	2-GE203	50	Brill 39E	34	K36J	Even numbers only, scrapped 1938-1941
-	300 305	MaCuiro	1010		0-10	11-6	40	31,000	2-WH327C		Brill 392	34	Kabj	Scrapped 1949, motors from 2 in 1943
	306-311	McGuire	1912	32-2	8-5	11-0	32	28,000	2-AC301 9 W/L1999	40	Taylor	33	53	303 rebuilt into line car 79 in 1928
	350-369	American	1921	28-0	8_0	9_9	32	14,550	2-WH508A	25	1 aylor B-111 70F	33 98	KESPP	Bimerry assessed 1926, 359 servered 1927 ( ool a
	380-382	Thomas	1930	39-6	8-5	10-9	48	32,500	4-GF265	35	Brill 76ELX	26	K75	Ex_Knowville 380 379 & 375 muchased 1948 380 humed 10/22/49
-	X1	McGuire	1906	28-3	9-0	11-0		26,150	2-GE80	40	McGuire	33	K361	Sweeper, had K10 controls
	<b>X</b> 2	McGuire-C	1910	28-3	9-0	11-0		26,150	2-GE80	40	McGuire	33	K361	Sweeper had K10 controls, K36 from 200's
	<b>X</b> 3	McGuire-C	1912	28-3	9_0	11-0		26,150	2-GE80	40	McGuire	33	<b>К</b> Збј	Sweeper had K10 controls, K36 from 200's
	X4			35-6	9-3			40,000	Trailer		MCB	33	None	Plow rebuilt from flat car 2186
	X5	McGuire_C	1913	32-2	8-11	12-0		40,000	2_WH323	38	McGuire	33	K10	Sweeper purchased for parts 1936, ex-Dubuque Electric Co.,
	X6	McGuire C		98 9		11 0		04 000	0.0765	40	N.C.			scrapped/1941
	X3008	McGane-C		40+0	5-0	11-0		20,000	2-6807 Tenile-	40	McGuire		No	Consultante & Clauser
	X3009								Trailer				None	Show blow of Hanger
													TAOHE	onon brou

The above roster was compiled by James J. Buckley from company files. It goes back to about 1910. Steam engines 6-9 were sold to the Kansas City Northwestern Ry. in 1917. This 173 mile line was abandoned in 1919 and torn up in 1925. There was other equipment, especially city cars, which were destroyed in a couple of early fires. There were at least two other interruban cars similar to 20 and 21, probably 10 and 15. Pullman also built two trailers to go with these cars. No. 9 listed in this roster could have been one of them. \*Destroyed in the roundhouse fire of October, 1954.



Car 141 was rebuilt into a small capacity coach for use in Waverly-Waterloo service, with a huge express compartment.

SIDE ELEVATION OF FORWARD END of CAR 141 AS REBUILT

REAR END & CAR (Art glass upper ponels removed.)

#### ROSTER OF THE WATERLOO, CEDAR FALLS & NORTHERN RAILROAD COMPANY

NUMBERS	BUILDER	DATE	LENGTH	WIDTH	HEIGHT	SEATS	WEIGHT	MOTORS	HP	TRUCKS	WHEELS	CONTROLS	NOTES
,	WCERN	1000	51 0	0 1	19.0		45 000	4 CE80	40 ·	McCuire 20A	33	¥288	Work car, rebuilt 1913, arranged 1936
1	WCFOIN	1909	42 0	9-1	12-0		43,000	4-GEOU A WEI297C	55	McGuire 20A	33	¥788	Work car, retired 1941, motors to 208 & 222, accanned 1947
2	WCFGEN	1909	44-0	9-0	12-0		43,300	4- 463210	60	Tenlas	33	N14	Locomptive humed at Codes Falls car ham fire 9/15/18
	WCran	1910	20-10	9-0	10.0		110 500	4-AC10	00	1 aylor	33	114	Locomotive, submit 1920, had AC75 meter and VIA controls
4 E	WCFGN	1910	31-0	9-0	13-0		114,000	4-GE13	90	McGuire	33	MIN UT	Locomotive, reduit 1950, nan AC10 motors and K14 controls
5	WCFAN	1912	33-4	9-8	13-6		114,000	4-GE73	90	McGuire	33	HL.	Locomotive, nad C/41 controls when built
6	Baldwin	1927	35-6	9-0	12-0		100,000	4-WH562D5	100	Baldwin	30	HL	Locomouve
	NST	1925	32_3	9-6	13-1		114,000	4-GE239	250	American	36	M	Ex- Toronto Suburban 300 purchased 1930 from NST
9								Trailer				None	Passenger trailer burned at Cedar Falls 9/15/16
11	WCF&N	1909	28_0	8-0			30,000	2-GE301	40	McGuire	33	<b>K</b> 10	ST Line Car scrapped 1928
14								Trailer				None	Passenger trailer burned at Sams Souci 10/1/16
15 .	Wagner		59-1	10-0	13_5	52	53,600	Trailer		Wagner	33	None	Rebuilt 1913, scrapped 1936
16	Wagner		61_0	9-8	13_7	58	57,800	Trailer	•	Wagner	33	None	Scrapped 1928
17	Wagner		61_0	9-8	13-7	52	53,300	Trailer		Wagner	33	None	Rebuilt 1925, scrapped 1936
18	Wagner		63-1	9_8	13-10	62	54,000	Trailer		Wagner	33	None	Rebuilt to express trailer 1922, scrapped 1936
20	Pullman	1897	45_4	8-7	12-0	48	46,500	4-GE80	40	McGuire 20 A	33	K28B	Rebuilt 1920 to express trailer, new weight 32,500, scrapped 1936
21	Pullman	1897	44-11	8-7	12-2		65.400	4-WH327C	55	Peckham	33	HL	Rebuilt into line car 1913, scrapped 1925, equipment to 80
00			42.0	9 10		40	41 600	9 40201	40		22	¥19	Onen examples are examped 1924
25	Machina C	1000	52.0	0-10	19 6	40	41,000	4 WEJ21742	-40	MaCulas 90.4	22	L16	Emper escurior car, scrapped 1004
20	McGuire-C	1909	53 0	3-4	10-0		70,100	4- 10101740	30	McGuire 20A	33		Express car, scrapped 1847
20	McGuire-C	1911	50-2	9-2	13-0		18,000	4-WH317A3	30	MCGuire 20A	33	M	Express car, sold 1940, originally had Ge13 mours and C141 controls
21	McGuire-C	1912	52-2	9-0	12-4		34,600	4-6280	40	McGuire 20A	33	K28B	Express car, burned at Cedar Palls 9/10/10
21	McGuire-C	1908	51-7	9-2	12-11		69,000	4-WH317A3	90	McGuire 20A	33	HL	Express car, rebuilt 1931 from 81, scrapped 1932
28	McGuire_C	1912	52_2	9-0	12-4		54,600	4-GE80	40	McGuire 20A	33	K28B	Express car, scrapped 1925
			59-4	9-0		50	60,000	4-WH317A3	90		36	HL.	Interurban passenger car, scrapped 1924
30	McGuire-C	1910	57_6	9-2	13-6	52	74,600	4-WH317A3	90	McGuire 70A	36	HL.	Scrapped 1936
31	McGuire_C	1910	57_6	9-2	13-6	52	77,200	4-WH317A3	90	McGuire 70A	36	HL	Last wooden interurban car, scrapped 1942, last used 1936
32	McGuire_C	1910	57_6	9-2	13-6	52	75,800	4. WH317 A3	90	McGuire 70A	36	нL	Scrapped 1936
33-34	McGuire_C	1912	58-9	9-2	13-10	52	77,800	4_WH317A3	90	McGuire 70A	36	HL	Scrapped 1936
40-49	McGuire_C	1909	28-11	7-10	11-2	24	22,000	2-AC301	40	Columbian	33	<b>K</b> 10	ST closed city cars, rebuilt 1915 to one-man, scrapped 1924
50-54	McGuire_C	1910	28-11	7-10	11-2	24	22,000	2-AC301	40	Columbian	33	K10	ST closed city cars, one-man 1915, scrapped 1924
60-74	McGuire-C	1909	28-4	10-0	11-0	50	22,000	2-AC301	40	Columbian	33	K10	ST open city cars, scrapped 1924
79	McGuire_C	1912	31_0	8-4	12_0		30,400	2-GE80	40	Taylor	33	K36J	ST line car, rebuilt 1928 from 303, scrapped 1949
80	McGuire_C	1908	51_7	8-10	13-7		79,100	4-WH317A3	90	McGuire 20A	33	HL	Rebuilt 1925 to line car replacing 21
81	McGuire_C	1908	51-7	9-2	12-11	44	69,000	4-WH317A3	90	McGuire 20 A	33	HL	Rebuilt 1931 to express motor 27
90-99	McGuire-C		24-7	7_7	10-6	35		Trailer			33	None	ST open city cars, scrapped 1917, 91 in 1916, 95, 99 in 1919
100	McGuire_C	1915	60_3	10-4	13-9	41	102.700	4-WH333F7	125	McCuire 70A	36	HI.	Originally parlor car, to coach 1920, completely rebuilt in 1928
101	McGuire-C	1915	60-0	10-4	13-9	40	94 830	4.WH333F7	125	McGuire 70 A	36	HI	Originally parlor car, rebuilt to coach in 1918 a
102	McGuire-C	1915	60_0	10-4	13-9	40	100 120	4 WH333F7	195	McCuire 70A	36	HI	Originally parlor car, rebuilt to coach in 1921 a
140	McGuire_C	1915	58-3	10-7	13.9	50	95 320	4 WH333F7	105	McGuine 70 A	36	ыл. 111	Out of service since 1950
141	McCuite_C	1915	58 3	10 7	13 0	20	96,560	4 WH31743	00	McGuire 70A	36		Rebuilt in 1036 had WH333 motors out of service since 1950
142	McGuire-C	1915	58-3	10-7	13.9	50	94,000	4 WH317 A3	90	McGuire 70A	36	LT	Out of service since 1950
143	McGuire - C	1915	58.3	10-7	13 0	50	04 260	4 WL2333F7	105	McCuire 70A	36	11L 111	Burned 1025
		1010	60.00	10-1	10-0		34,200	4-11100021	120	MCOULE TOA			Bulled 1920
150	Puijman	1912	59-0	10-0	13-2			Trailer		Pullman		None	Private car, not used in interurban service, sold 1922 to Sugarland
100													Ry., Sugarland, Texas
101 104	McGuire-C	1912	35-0	9-1	13-1		120,000	4-WH308E3	240	McGuire	- 36	HL	Sold 1922 to Iowa Transfer Railway No. 1, Fort Dodge Line 208 in 1950
181-184	McGuire-C	1915	35-0	9-1	13-1		120,300	4-WH308E3	240	McGuire	36	HL	1300 volt locomotives 182,183 •
185	Baldwin	1912	32-2	10-1	12-0		124,500	4-WH308D3	240	Baldwin	36	HL	Ex-Southern Pacific 100, P&SR 100, purchased 1942
186-187	Baldwin	1912	32-2	10-1	12_0		125,500	4-WH308D3	240	Baldwin	36	HL.	Ex-SP 101-102, Interstate Mining Co. 210, 209 purchased 1944
190	GE	1914	36_0	9-7	13-2		131,000	4-GE251B	240	American	36	HL	Ex-Bush Terminal 23 purchased 1939, rebuilt 1939 by WCF&N •
207-208	GE	1931	37-6	8-10	14-10		170,000	4-GE818A2	250	GE	46	м	Ex-Interstate Mining Co. 207, 208 purchased 1947
200-202	American	1914	40-0	8-10	12-0	40	37,660	2-GE203	50	Baldwin M	34	K361	Purchased 1932 from Interstate Power Co., Dubuque, same nos.
	-												200-222
204, 206	American	1914	40_0	8-10	12-0	40	37.660	2-GE203	50	Brill 39E	34	K361	204 scrapped 1938, 206 in 1941
208	American	1914	40-0	8-10	12-0	40	37,660	2WH327C	55	Brill 39E	34	K361	Motors in 1942 from 2. screnned 1947
210	American	1914	40_0	8-10	12-0	40	37 660	2 CE203	50	Baldwin M	34	K361	Second 1049
212-220	American	1914	40 0	8-10	12.0	40	37 660	2 CE202	50	Baldwill M	34	100	Furn number only commend 1099 1041
222-220	American	1014	40 0	9 10	12 0	40	37,660	0 1012070	22	Beill 39E	94	1/261	Even numbers only, scrapped 1938-1941
200 205	MaCuine	1010		0-10	12-0		00,000	2-100210		Brill SAF		<u>K30j</u>	Scrapped 1949, motors from 2 in 1945
	McGuige	1912	34-2	8-8	11-6	32	28,000	2-AC301	40	Taylor	33	\$3	303 rebuilt into line car 79 in 1928
300-311	McGuire	1913	32-2	8-0	11-0	32	24,800	2-WH323	38	Taylor	33	K36J	306 rebuilt into plow X5
390-369	American	1921	28-0	8-0	9-9	32	14,550	2-WH508A	25	Brill 79E	26	K63RB	Birneys, scrapped 1936, 359 scrapped 1937 / 381 •
380-382	1 homas	1930	39-6	8-5	10-9	48	32,500	4-GE265	35	Brill 76E1X	26	K75	Ex-Knoxville 380, 379 & 375, purchased 1948, 380 burned 10/22/49
X1	McGuire	1906	28-3	9-0	11_0		26,150	2-GE80	40	McGuire	33	K36J	Sweeper, had K10 controls
<b>X</b> 2	McGuire-C	1910	28-3	9-0	11-0	<b></b>	26,150	2-GE80	40	McGuire	33	K36J	Sweeper had K10 controls, K36 from 200's
X3	McGuire-C	1912	28-3	9-0	11_0		26,150	2-GE80	40	McGuire	33	K36J	Sweeper had K10 controls, K36 from 200's
X4			35-6	9_3			40,000	Trailer		MCB	33	None	Plow rebuilt from flat car 2186
<b>X</b> 5	McGuire-C	1913	32-2	8-11	12-0		40,000	2.WH323	38	McGuire	33	K10	Sweeper purchased for parts 1936, ex-Dubuque Electric Co
													scrapped/1941
<b>X</b> 6	McGuire-C		28-3	9-0	11-0		26,000	2-GE67	40	McGuire			•• ·····
X3008						<b>.</b>		Trailer				None	Snow plow & flanger
X3009								Trailer	•			None	Snow plow

The above roster was compiled by James J. Buckley from company files. It goes back to about 1910. Steam engines 6-9 were sold to the Kansas City Northwestern Ry. in 1917. This 173 mile line was abandoned in 1919 and torn up in 1925. There was other equipment, especially city cars, which were destroyed in a couple of early fires. There were at least two other interruban cars similar to 20 and 21, probably 10 and 15. Pullman also built two trailers to go with these cars. No. 9 listed in this roster could have been one of them. \*Destroyed in the roundhouse fire of October, 1954.

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The car previously used was a single-truck, double-end car, with short platforms, the forward left-hand side and the rear right-hand side having two-leaf doors, the opposite side being permanently closed. In remodelling, the closed sides were equipped with folding doors and the necessary door operating mechanisms, while the unused doors were locked by a latch on the outside. At the right of the motorman was located a farebox. REORGANIZATION:

One of the few interurbans placed under Federal control during World War I, WCF&N suffered in maintenance as did the steam railroads. This condition, combined with the recession of the early '20s, left the road in a very precarious financial shape and from 1923 it was in the hands of a protective committee of first mortgage bondholders for whose account it was operated. Finally, to effect reorganization, the property was placed in receivership in 1940: From this it emerged in 1944 as the Waterloo, Cedar Falls & Northern RAILROAD.

# FADING DAYS:

The increasing use of automobiles over the years gradually caused a drop in riding which was reflected by cuts in passenger service. The 1917 schedule of eight daily trains in each direction over the Cedar Rapids-Waterloo line was cut to six in 1928; three each way were dropped in 1936. In 1948 this was cut to two each way and in 1952 one of these was annulled daily except Friday, Saturday and Sunday.

The early cuts in passenger train service were cushioned by a bus service operated over the nearest paralleling highway route by the railway. This interurban bus route was sold off in 1952.

The city lines in Waterloo were converted to motor bus operation in the late '30s, and this bus system, too, was sold in 1953.

The wooden equipment disappeared from passenger service in the late 1930s; the 140-class suffered the loss of 143 at an early date, but the 140-142 ran until after World War II.

The end of WCF&N's days as an electric interurban was brilliantly signalled by a fire which broke out in a pit of the Waterloo roundhouse on Sunday morning, October 31, 1954. Before the flames were extinguished, interurbans 101-102, one suburban car, and four freight locomotive were damaged beyond salvage. Interurban #1( out on the road at the time, was spared. END OF PASSENGER SERVICE:

Passenger service on the Cedar Rapids inter urban limped along with car 100 doing all th honors, but this placed too much dependence on faithful, but weary warhorse. It became so diff cult to keep her going (spare parts just couldn be had these days for interurbans) so the compar was forced to reduce to just the Friday, Saturda and Sunday afternoon trips. By early 1956 mote conditions on #100 were so poor that controlle connections were fixed to prevent operation fast er than full series and she missed her schedule time by 15 to 20 minutes. Finally came the lat regular run: February 19th.

Waverly passenger service had never bee heavy, with only one or two daily round trips fo years. These had been mainly accommodatio trains for express and light freight service.

The Cedar Falls line has been a valuable sourc of freight revenue but runs thru an attractiv suburban area that produces small demand fo passenger service. The local operation into th town of Cedar Falls, entirely on city streets, wa converted to motor bus in 1940, and motor buse were run from that time on paralleling highway into Waterloo. However, in the interests of main taining the freight link, the company retained a accommodation suburban service between th interurban station near the center of Waterloo an the edge of Cedar Falls. For years this was per formed by ex-Dubuque city cars. When these de teriorated hopelessly in the early '40s, they wer replaced by three very attractive Perley Thoma cars bought from Knoxville, Tennessee. At th time of the interurban demise, the one remainin was still making morning and afternoon trips Monday thru Friday.

In May 1956, after little more than token oppo sition from other railroads, the Interstate Com merce Commission gave final approval to a plan of the Illinois Central and Rock Island Railroads jointly to acquire control of the system. The Waterloo Railroad, as it will be known, will be dieselized as soon as possible, its new owners say.


WATERLOO, CEDAR FALLS & NORTHERN RY CO. TRAIN ORDER NO." Operator 1 A 207225572 WATERLOO AND WAVERLY MIE 182225 0 5.8 7.88 9.23 13.32 Waterlo Waterio County Farmer Knowies Denver Rust Waverly Arm Daily. 1040 

 AM
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 Daty,
 Codar Fails at \$6:15 A.M. and thereafter at 15 minutes after the hour until 7:15 S.M. \$5:00 P.M. and thereafter at 15 minutes after the hour until 7:15 BETWEEN WATERLOO AND CHICAGO

Cedar Cedar T WRITTEN READ DOWN AM 131 AM 200 AM 200 AM 200 AM 200 N 10 PM PPM PPM PM 5 PM until 7:15 P.M. RAMANA 55 45 20 Date 55 DOWN 11 25 2 33 5 10 READ UP PM PM PM S AM NOT Faint Mar C. & N. The second vice from W.-Unio Waterloo to Los Angelez-Lv. Waterloo 4:10 PM, Ar. Los Angelez 8:45 AM third day via to pacific to parts fintering Content Dating and Content Dating - 1-27 timing \*1)any WUST . Waterloo Gilbertville Burk La Porte City Glory /Hawkey MARGIN La Porte City...... City (Hawkeye Quarries) McChane Branche Merrye Quarries) Change Urbasey La Point Centry Charter La Point Centry Charter La Point Shaves Shaves Cdar Rapids La Point Shaves Charter Cha THIS Cedar Rapids Reversion Constraints La Fayate Context Point Con Repeated at. Cedar Rapids TRAIN SIGNED BY 2 6-19-52 \*\*\*\*\*\* NATERLOO - CEDAR RAPIDS READ UP зwn Fri. Sat. Sun. Only Daily MERE DISPATCHER'S INITIALS ARE NOT USED Daily No. 19 PM No. 15 AM STATIONS No. 4 AM 8:30 11:30 6:50 Waterloo .. 10:51 7:51 7:42 Gilbertville ... 7:28 RER N .LaPorte City.. 10:42 7:38 7:26 .. Brandon ... 10:26 7:54 7:17 7:12 10:17 Cheney .... 8:03 . . . 10:12 Urbana ... 8:08 10:02 7:02 ...Center Point... our train 8:18 6:53 9:53 ... Lafayette ... 8:28 FORM 6:43 9.43 Robins ... 8:37 6:30 9:30 ..Cedar Rapids.. ORM 10 8:50 WATERLOO - WAVERLY READ UP OWN No. 36 STATIONS 35 2:30 PM Waterloo ..... PM 1:52 PM ..... Denver ..... PM 1:30 PM ..... Waverly ..... 68 , PM

#### CHARLES CITY-MARBLEROCK-COLWELL:

The Charles City Western Railway, located in northern Iowa about 30 miles east of Mason City and 45 miles northwest of Waterloo, could be considered the true "grass roots" interurban. The company was chartered in 1910 and began operating the next year between Charles City and Marble Rock, using a 200 hp. McKeen gasoline motor car, four single-truck 40 hp. gasoline motor cars and two 75-ton steam locomotives.

In 1915 the original 13 mile line was extended 8 miles northeast from Charles City to Colwell. Electrification at 1200 volts DC was completed and placed in service on July 30, 1915. An interesting feature of the reconstruction program, according to ELECTRIC TRACTION magazine of the time, was the voting of taxpayers within 5 miles either side of the line of a 5% tax, amounting to a \$120,000 subsidy to the railway.

The line was built on a 100 ft. right-of-way, with 70 lb. rail and 1% max grades. Largest bridge is a reinforced concrete arch 250 ft. in length over the Cedar River at Charles City.

Trolley construction is direct suspension, with 4/0 trolley. There are no substations other than the m-g sets at Charles City. Cedar line poles are placed on 100 ft. centers.

As originally built, the interurban line was routed thru city streets, including Court and Illinois streets, in Charles City, even tho there was, from the beginning, a freight belt line entirely on private right-of-way around town. Two double-end single-truck one-man city cars were operated for local service, routing via the city line to Sherman Junction, thence around the belt line. One car running in each direction was able to keep up a 15-minute service. Altho Charles City boasted only 7500 inhabitants, as many as 1940 people paid the nickel fare on a good day. These cars were 28 ft. in length, of the arch-roof semi-steel type, built by McGuire-Cummings. They had 2-GE217B 1200-volt motors and R-200B controllers.

For interurban service, the company bought a 48 ft. double-end, arch-roof, baggage-smokerpassenger, semi-steel car from McGuire-Cummings. This car has 33'' wheels, with 4-GE217B motors, 4.3 gear ratio and K-47 controllers.

Equipment needs were figured pretty close. In case either city car or the interurban had to be held in at the shops, its chores were taken over by relief car 52, a Minneapolis-built monitor-roof, gate-enclosed platform car. This car was rebuilt in the company shops into a combination city and interurban car, with baggage compartment and toilet facilities. It was equipped with 2-GE217B motors and R-200B controllers.

Freight operation was carried out originally by locomotive 300, a 35-ton steeple-cab job built by McGuire-Cummings. It was fitted with 4GE 205E motors, 3.62 gear reduction and type control. Relief for this engine had to be perfoed by passenger car 50 until 1920 when box tors 301, 302 and passenger car 53 came f the old Shore Line Electric Railway in Connicut. In the late '40s, engine 303 was acqu from Texas Electric and two internal combus engines, 200 and 201, were added, chiefly serving non-electrified industrial tracks in Oliver Tractor factory.

The city cars were operated by women du World War I The service was taken offal 1921. The late '20s also brought to an end the of the city street trackage and saw the begin of one-man interurban operation. This cha: was brought about without elaborate deadman terlocks on control devices or fancy air dothe conductor was merely eliminated. This seem a little difficult in the case of car 50, . its single vestibule at the extreme end, and too much easier on car 53 with its center de Actually, at the start of one-man service, 50 was wyed at Marble Rock and looped at ( well, but doing this turning with one man (par ularly at Marble Rock) proved far more diffic than warranted by the slight inconvenience to few passengers who would have to walk up to motorman to pay fares. Those of us who may familiar with one man operation in areas of n mally heavy loading might express dismay at thought of the hazards and time loss, but in ac service there was no problem. Seldom were m than a dozen or two passengers on the cars." speeds of 25-35 mph seldom caused rough rid and schedules never pressed for impatience way stops.

Rural population in the area is small; two terurban round trips daily sufficed over mos the history of the passenger service. These tr were timed to connect with Rock Island Railr Minneapolis-Burlington trains at Marble Ro affording passenger and mail service. Freig from the first, was the mainstay of the compan revenues, but the passenger accommodation v maintained at a loss for decades, possibly consideration of the 1915 subsidy. Finally, r ular passenger service (Monday thru Saturd ended in 1952, but to this day frequent char trips bring old car 50 over the line with passengers.

As a terminal railroad serving practically freight customers in Charles City, C-C-W see reasonably certain of its future. Internal co bustion may take over, but C-C-W will res the change as long as parts can be obtained the maintenance of electrified service. Moto men will, we hope, still be able to coast up the Little Cedar River Bridge at Niles when power fails, and get in a little fishing while wa ing for power to build up again.



Postcard artists vied with one another to make the Charles City McKeen Motor Car appear even more sharply pointed than its designer intended.



The Charles City local service was one of the first one-man operations in the country.













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## MASON CITY-CLEAR LAKE:

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The Mason City & Clear Lake Railroad is one of the shortest interurban lines on the books. It vies with the Waterloo Cedar Falls & Northern Railway for the title of oldest interurban in Iowa. It was incorporated in 1896 as the Mason City & Clear Lake Traction Company and completed construction in time to celebrate opening day on July 4, 1897.

The line was soon busy handling summer excursionists to Clear Lake, using a large four motored combination baggage-passenger car pulling double-truck open trailers, each seating 56 passengers. It was not uncommon to find thru coaches from connecting steam roads and even executive private cars rolling behind MC& CL motors to the beautiful shores of Clear Lake. The company was one of the first interurbans to interchange freight with the steam road This may have had something to do with the nar change from "Traction Company" to "Railroa which occurred about 1900.

One of the interesting sources of freight years gone by was the ice traffic. Each winte the surface of Clear Lake provided an inexhaus able supply of the necessary raw product, a hundreds of carloads of ice were shipped out all parts of Iowa and adjacent states every yea

The local street railway line in Mason Git abandoned in 1936, was operated by the compar Interurban passenger service with one man lig weight cars (rebuilt at Davenport from city car were placed in service in 1923-24. Rail passe ger service was discontinued in the late '30 Electric freight operation continues actively.





IJ IJ IJ .... 11 H Н H Mason City & Clear Lake Railway (OVAL) 0 0 511  $\odot$ -][] 17 л 

> 9.2 1260 1 2 3 4 5 6 7 8 9 10 FEET NOTING SCALE

MASON CITY & CLEAR LAKE RY. Cars 21 and 22 Builder: American Car Company, St. Louis, Mo. Equipment: 4-General Electric 73 motors Type M Control, C-6 master control.





Mason City's older freight motive power was heavy box motor #34 shown above and #3 shown below. Later locomotives, like #50 and also of the standard Baldwin-Westinghouse type, were acquired second-hand. Service cars were in the 100 series. Three-way stub switch at Emery shops was an oddity.

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Roster appears at bottom of page 145.

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#### MARSHALLTOWN:

The Marshalltown Light, Power & Railway Company was chartered on July 7, 1892 as a consolidation of the Marshalltown Gas Company, the Marshalltown Electric Company, the Marshalltown Street Railway and the Marshalltown Passenger Railway. It operated about 4 miles of line with (in 1914) 6 motor and 5 trail cars.

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The property came under the control of the Iowa Railway & Light Company, which also operated the Cedar Rapids & Iowa City Railway. It abandoned street railway operations in the early 1930s.



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MARSHALLTOWN Roster of Equipment as of 1928 Single-truck closed passenger cars #30, 32 ft., built 1907 #31-33, 32'-7", built 1913 #34-35, 32'-7", built 1917 **#36-38, 24** ft., built 1898 #39, 30 ft., built 1898 Sweeper #1002 (see Crandic), 28'-4" All above cars had two motors.





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#### OTTUMWA:

The Ottumwa Railway & Light Company was incorporated in December 1905 as a successor to the Ottumwa Traction & Light Company. It operated street railway, light, power and steam heating plants. In 1914 there were 12 miles of track with 24 motor and 10 trail cars. Street railway operation ended in the early 1930s.





# FENELON PLACE ELEVATOR COMPANY



# Dubuque, Iowa

Iowa's sole remaining electric railway regularly engaged in passenger traffic.





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TOP: Oskaloosa's two-window front end Birney car was a real rarity as it shyly poked its way into the town square.

BELOW: Altho not positively identified, this long interurban #6 is thought to be Oscaloosa's first suburban job.



#### OSKALOOSA-BEACON:

OPL

The Oskaloosa-Buxton Electric Railway was the first in Iowa to have catenary overhead trolley construction. It was built southwest from Oskaloosa on a right-of-way 70 ft. wide, with guards at all crossings and neat waiting shanties at every stop. There was one short grade of  $2\frac{1}{2}\%$ .

OPL: WER

HIGH AVENU

OSKALOOSA IOWA

10WA POWER & LIGHT CO.

AVE

Construction of the first 3 miles to the town of Beacon was completed and placed in service in 1907. The remaining 15 miles to Buxton, which would have formed a connection with the Southern Iowa Traction line had it, too, built its projected extension, was never laid down.

In the meantime, one interurban car of conventional design was able to maintain a 40 minute headway. A single truck city type car, apparently fitted with a baggage compartment, relieved the bigger interurban on occasion.

The interurban railway, with the Oscaloosa city system operated by the same management, was abandoned in the 1920s.

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#### CENTERVILLE-ALBIA-MYSTIC

The Southern Iowa Railway has the longest and probably the most colorful history of all of the Iowa electric railways. The original predecessor company was chartered May 6, 1879 as the Centerville Moravia & Albia Railroad and was actually built as a branch of the Missouri Iowa & Nebraska Railroad, part of the Wabash System.

For a time the Wabash operated its St. Louis-Des Moines trains over this line, but when the Wabash System disintegrated in 1885, the line was turned back to its bondholders, who let it remain idle for a while. In 1890, after being reorganized as the Albia & Centerville Railway, it was leased to the Iowa Central (later part of the Minneapolis & St. Louis Railway), which operated it until 1910. The owners then became dissatisfied with M&SL management and forcibly repossessed their property by running a borrowed Burlington engine and coach over the line without benefit of a train order or any rights whatsoever on November 26, 1910. The new operation, altho steam-powered, became known as the Southern Iowa Traction Company.

Train service at this period consisted of mixed freight and passenger trains, most of the time only one per day each way.

In 1914 the Centerville Light & Traction Company, operating a street railway and power business in Centerville, acquired the property and changed its name to the Centerville Albia & Southern Railway. Soon thereafter, it was modernized and electrified.

One of the first changes was to bring the line directly into the business district via trackage of the company's Mystic interurban branch. New freight terminal facilities were constructed within a block of the heart of town. The new line became a belt line and terminal railway which permitted steam railway carloads to be brought to more convenient delivery. Track connections were installed with the Milwaukee Railroad at Trask. Together with a Wabash connection at Moravia and a M&SL connection at Albia, this gave access to Centerville to three additional railroads.

Freight equipment included two box motor cars, also built by American, with a 40 ft. body and

powered by 4-Westinghouse 305 motors rated 80 hp each at 600 volts. Type HL control was installed on these cars, which are in service today.

There were also a number of small city and suburban cars for the Mystic line and local service, of which only little work car #9 survives. This car finds its most interesting use as an inspection car for the railfan inspection trips which the company happily encourages. A local railfan group recently sponsored the repainting of this car a brilliant orange color.

During the 1917-18 war period, the line bought a standard Baldwin-Westinghouse electric locomotive with 4-562 (100 hp) motors. This, today, is its principal workhorse.

Between Centerville and Trask, the country is rolling and the line traverses the Chariton River bottoms. From Trask to Albia the ground is largely flat farmland. All the equipment was geared for low speed. This proved no handicap in the early days, as there was no competition for the north-south business.

Passenger service was discontinued in March of 1933 after piling up a continuous loss record for years. In 1944,  $2\frac{1}{2}$  miles of track between Mystic and Appanoose was abandoned. In March of 1948,  $10\frac{1}{2}$  miles between Moravia and Albia were scrapped.

The road, known as the Southern Iowa Railway since 1941, continues to haul freight electrically over the remaining 16 miles of line.

Centerville is surrounded by an extensive coal field, which provides fuel for the company power plantas well as freight traffic. In 1916 the name of the property was changed to Iowa Southern Utilities Company, which more accurately reflected its activities.

Interurban passenger equipment consisted of two center-entrance cars built by the American Car Company. They were about 45 ft. long and had baggage, smoking and "ladies" compartments, the latter a desirable feature on a road thathauled miners who sometimes became quite boisterous on pay-days. Electrical equipment on the passenger interurbans consisted of 4-Westinghouse 313A motors, rated 40 hp each at 600 volts DC. Control was type K35.









Centerville's street railway system is long gone, and its interurbans have dwindled to a freight-only operation reaching out only a few miles to Appanoose and Moravia, but recently nation-wide interest has been focussed on the property thru its cooperation with railfan groups. This has developed to the point where the Iowa Chapter of the National Railway Historical Society has repainted some of its interesting old (#1 and #9 shown here before this work) and plans to bring Waterloo interurban #1 here for permanent preservation.





#### -TOLEDO:

3.95 miles of electric railway from Tama edo, Iowa, was opened on July 4, 1894 by ma & Toledo Electric Railway & Light Co. icity for operation of the line as well as le to the public was generated at a power nidway on the line. Coal was hauled by the y from a connection with the Chicago & Western Railway at Toledo, or from the

TOL€DO

Chicago Milwaukee & St. Paul Railroad at Tama. Original equipment consisted of two passenger cars, a baggage motor, 4 coal cars and a flat. In 1912, the roster showed 3 motor and 1 trail passenger; 1 freight motor and 9 freight trail cars. This was the year the entire line was re-located from side-of-the-road to private rightof-way.



The road came under the control of the Iowa Electric Light & Power Company, which also controlled the Crandic line, and, in 1919, its name was shortened to Tama & Toledo Railway









# IOWA TRANSFER RAILWAY:

A terminal yard in the east side of Des Moines connecting with the Fort Dodge Des Moines & Southernas well as with the various steam roads was electrified about 1920 at 1200 volts DC. This was the Iowa Transfer Railway. Motive power consisted of one locomotive, acquired from the Waterloo Cedar Falls & Northern Railway. The operation was dieselized in 1950 and the engine went to the Fort Dodge line.



# MUSCATINE:

The Citizens Railway & Light Company organized in April 1902 to operate a street way and power business in Muscatine. Oper of the railway commenced in 1906 and by there were 12 miles of route with 21 pass and 10 freight or service cars. Typical pa ger equipment was a Brill 26-seat singleturtle back roof car.

Interurbans of the Davenport & Muscatine way (later CD&MRy) changed from 1200 vo 600 volts at the city limits in order to use zens' trackage in Muscatine. The two comp were under common control of the United & Railways Company of Grand Rapids.

In May of 1928 the city system was sold t Iowa Electric Company and on March 17, the new owners abandoned the street rai. The Davenport interurbans continued to use tain track for a few additional years.







## COLFAX SPRINGS:

To serve the health resort center of Colfax Springs, located one mile from the town of Colfax in Jasper County, James Donahue of Davenport, owner of the hotel, requested a franchise in February 1908 to build a street car line from the Rock Island Railroad depot. The company was incorporated on July 17, 1908 and appears to have be completed and placed in operation later in the same year.

The single track line had no passing tracks. It did, however, report 2 motor and 3 other cars in 1910.

The hotel was leased as an army hospital during World War I, but was then closed and the line was evidently abandoned at that time.

Altho the Inter-Urban Railway connected Colfax to Des Moines, the two electric railways had no track connection in Colfax, but terminated on opposite sides of the Rock Island Line.



# ALBIA INTERURBAN

The Albia Interurban Railway Company, an enterprise separate and distinct from the Iowa Southern Utilities system serving Albia, was incorporated in 1907 and by 1908 had a line working from Albia west to Hiteman and southwest to Hocking. In 1911 the company boasted 10.5 miles of line with 6 motor, 2 trail and one motored coal cars. Local service was given in Albia.

The operation closed in 1925.





#### DES MOINES

Twenty year old Des Moines was just emerging from the pioneer era when, on January 11, 1869, four promoters who had wangled a franchise to build narrow gage track on ANY street in the city began running horse car service. Their franchise permitted them to operate with any form of motive power then known. By 1876 the company had 10 animals, with "helpers" stationed at the foot of the two steepest hills to assist cars loaded full with 30 passengers.

The city fathers are said to have "blown their top" in 1886 when the company laid scrap iron rails on the new wood-block paving of Fourth Street without specific permission. A franchise was granted to a rival, the Broad Gauge Street Railway, who built a line on Locust, E. 7th St., and Grand Av. On the basis of the 1868 franchise the old company sought an injunction against its rival. But the new company, noting that the original franchise mentioned "any then-known" motive power, turned to electricity. Thompson-Houston did the job, and on December 19, 1888 the first electric street cars began the 62 yearthree-month period of such service.

The road expanded as the city grew, but operation was harrassed and profits were lean because of the large size of the city for its population. By 1907 lines had reached the neighboring towns of Urbandale, Valley Junction and Fort Des Moines. The system reached its maximum extent in 1920 with the opening of the single-track Crocker line into a very fine residential area. Thrumost of its history, the property was closely affiliated with the Des Moines & Central Iowa interurban road and there was considerable joint use of trackage between the companies.

During the 1920s the company had considerable difficulty with the union over the issue of oneman cars, but the problem was finally resolved, with the last two-man car running on April 30, 1930.

The company was in financial straits even during the prosperous 1920s and began to think about bus conversions in the 30s. The first line to get gas motor buses in Des Moines was Scott Street, serving a blighted area and having many railroad grade crossings. The change was made in 1936. Trolley buses came to Des Moines in 1938, replacing street cars on the two heavilytravelled Sixth Avenue lines.

The war halted the bus conversion program, but it was resumed in 1946 and completed with the motorization of the Fort Des Moines line in 1950 and the Urbandale line in 1951.



We may guess from this spread of early DesMoines cars how the first singletruck box cars were enclosed and lengthened.

BN









The saloon gates and center door developed with the fourwheelers set a distinctive pattern carried over to the early double-truckers.



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TEST











Later varieties of double-truckers show rapid progress to the fully-enclosed platform and pay-as-you-enter plan for operation of two-man cars. Above are cars 148, 231, 248 and 277. Des Moines, like Milwaukee, developed a liking for trucks with inside-hung motors, which permitted long wheelbase and graceful chassis. Below are cars 317, 408-401 (one-manned), 356 and 509. Note the Pittsburgh influence in these latter cars. Bridge in 400-class snapshot at Des Moines car house was intended to bring trolleys into upper level but was never used.





Arch-roof car designs, the final additions to Des Moines' fleet, were neat and attractive single-enders. The 1931 group of 30-700s, built by Cummings Car & Coach at Paris, Illinois, were quite similar to interurbans built by the same firm for Gary and South Bend, as befitted their application to Des Moines' long suburban lines.

> Work equipment evidenced the close tie between the city and DM&CI interurban properties.... check the line cars 72 and 73 against car 10 shown on page 105. Locomotive 1800 looks suspiciously identical to engine 800 first in line in string at left in yards scene on page 111. Incidentally, note the ballast load







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# For map of **Des Moines &** Central Iowa system, unfold here.


Southbound train eases up to conductor-operated interlocker at Milwaukee Road crossing, Grav

## Roster appears at bottom of page 144.

#### DES MOINES--COLFAX--PERRY:

Incorporated 1899 as the Inter-Urban Railway, the first portion of this road was opened from Des Moines, thru Altoona and Mitchellville to Colfax in 1902. Passengers bound for the health resort town of Colfax left downtown Des Moines via local street railway tracks, passing the State Fairgrounds before going onto Inter-Urban tracks at the edge of town. Freight, principally coal from mines along the line, came into Des Moines on the Inter-Urban's own tracks around the north side of the city.

Lines were built to Valley Junction north and south to Army Post, later Fort Des Moines, later to become part of the city system.

In 1906 the Beaver Valley division was built 34 miles northwest to Perry, with a 3-mile branch to Woodward.

Freight locomotives, besides hauling coal, handled interchange shipments of ice, milk, cattle and general freight.

The creation of Camp Dodge on the Beaver Valley Division in World War I provided a brisk business in troop movements, some in Pullman cars handled by I-U locomotives. Difficult times were nothing new to the interurban whose territory included only one city and no towns of any size. Rural population was no longer enticed by infrequent passenger service. Steam road competition could handle everything the terminal towns offered. Revenues sledded after World War I and brought the 1922 reorganization which changed the name to Des Moines & Central Iowa Railroad. The second war brought further decline and in 1946 the Colfax line was abandoned. In 1949 the property was acquired by Salzberg interests and was dieselized.

Today the terminal operation at Des Moines is active, together with the main line to Granger and Highland Transfer; the remainder is history.

In 1939 the old American and McGuire passenger equipment had deteriorated to a sad degree, and was replaced by three modern (but hardly new) steel cars acquired from the recently demised Lake Shore Electric Railway of Cleveland

In World War II the military traffic again be came very important and DM&CI leased cars 102 and 109 from Crandic to help handle the lead. The end of this war brought real troubles for the company.

# Des Moines & Cen<sup>4</sup>



Name changed from INTER-URB



D. W. Yungmeyer recalls from boyhood days that there were
3 or 4 of the 100s on the old Altoona Mitchellville & Colfax line, one of which had a baggage compartment.

The 700s were Des Moines' first multiple-unit electric cars and their operation in trains was a subject of much awe and amazement.





l: Credit BN )4



TOP TO BOTTOM:

Passenger extra with locomotive #301 at Hyperion on June 4, 1911.

Light American-type locomotive #350 at work near Moran during construction days.

- Line car #10 strings trolley wire at more advanced stage of construction.
- Engine #1, "The Jim Brenton" and derrick car N01 at work on trestle repairs.

New Year's present for the year 1919 was locomotive #807 (later renumbered 1807).



Top: Inching along the Des Moines River, swollen by spring thaws, is a local train consisting of 700 and 707. Above, right: Barely distinguishable in this damaged old print is party car "IOWA", an unforgettable beauty with its royal blue paint job and its brass observation rail. Below and left: An ownership link with the Gary lines probably helped steer two Air Line interurbans to I-U rails.

BC

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RVN







Before the days of heavy downtown congestion, when it was possible to park a horse-drawn buggy on the left, Inter-Urban trains circled thru the heart of Des Moines.



DES MOINES & CENTRAL IOWA RAILADAM, DES MOINES & CENTRAL IOWA RAILADAM, GOOD FOR ONE CONTINUOUS PASSAGE, From DES MOINES, IOWA

NO STOP

TO.

OVER ALLOWED.

REGISTER VALUE

Form B 14

CENTS



With the acquisition of the Lake Shore steel cars in 1939, DM&CI quickly sent its worn-out wooden equipment to the scrap pile, knowing that its three new units could easily meet its sparse schedules.

In the meantime, the Cedar Rapids & Iowa City Railway had also modernized its passenger fleet by the purchase of seven high-speed light-weight cars. Its heavy equipment, unlike DM&CI's, was in good shape, altho no longer needed for regular service.

So it was no surprise that DM&CI worked out a lease deal with Crandic for cars 102 and 109 when wartime training camps were developed on the former's lines. Scene above was taken on arrival date: January 10, 1943. The cars were returned to Crandic after the war.

At left: Box motor 1600, formerly Gary & Interurban car, and below that, box motor 500.



The DM&CI locomotive roster, altho not large numerically (except for the engine numbers themselves) was a substantial one for such a relatively small property. Answer lies in the large and productive switching district which it developed in the Des Moines area, and this is the reason for the existence of today's remaining segment, now operated by diesel. Left to right and top to bottom: 1801 (rebuilt from 1, see page 105), 1805, 1804, 1806 (a standard GE "rubber-stamp" design), Sunday morning in Des Moines yards in March 1920, work car 51 (ex-AM&C combine), line car 71 before and after candy-stripe paint job.





FORT DODGE-DESMOINES:

The State of Iowa, altho primarily an agricultural one, has important coal producing areas. Its flat prairies find contrast in rugged river ravines. The FortDodge Des Moines & Southern Railway serves a region rich in both mineral and agricultural values. Beginning as a steam railroad, the property spent nearly 50 years as an electric railway. Indeed, if we can bring ourselves to regard the modern diesel locomotive as a compromise between the steam engine and the trolley-powered traction car, then, in a way the FortDodge-Des Moines line remains an electric railway today.

The Fort Dodge Des Moines & Southern Railroad was incorporated February 16, 1906. Starting by acquiring the Newton & North Western Railroad (a steam line from Newton to Rockwell City via Boone, almost straight northwest, with a branch from Goddard to Colfax) and the Ames & College Railway (a street railway) FDDM&S proceeded to build a north-south interurban railroad. First step was electrification of the central 37-mile section of the N&NW and the construction of new electric extensions from Ft. Dodge Junction (Hope) north to Ft. Dodge and from Des Moines Junction (Midvale) south to a connection with the Inter-Urban Railway north of Des Moines.

Interurban passenger service over this line began on November 4, 1907 with ten cars built by Niles Car Company, powered to run about 60 mph from the 600-volt trolley. A branch was also promptly opened from Kelley to the Ames & College Railway tracks at Ames, thus giving a valuable connection into the home of the State University.

The non-electrified extremities of the N&NW came under consideration next. The leg east of Midvale was abandoned in 1911 and the leg west of Hope was electrified when it became evident that the new 1200-volt trolley system would cut the cost of this work to a level that could be supported by the lighter traffic here. Accordingly, the trolley voltage of the Fort Dodge-Des Moines main line was changed from 650 to 1200 volts and the car equipments were replaced by apparatus that would operate on either voltage.

During this period the freight traffic of the company had grown steadily to the point where it represented 60% of the gross revenues. A new entrance into Des Moines, involving an entirely new route south of a point below Oralabor, was obtained, in part thru a lease arrangement with the St. Paul & Des Moines Railway (Rock Island System), permitting the use of this company's tracks directly into the Rock Island station in Des Moines. Later the company built a connection into the Des Moines Street Railway system near the state Capitol Building and abandoned its operation to the Rock Island station in favor of an interurban terminal jointly used with the Des Moines & Central Iowa Railroad. Still later, even this was abandoned and Fort Dodge trains terminated without street operation at the foot of the Capitol hill.

In 1916 the Crooked Creek Railroad, between Webster City and Lehigh, was acquired. It was electrified and extended to connect with the main line by a former Chicago Great Western Railway branch from East Fort Dodge to Evanston Junction. This opened one of the country's prime gypsum producing areas to the railway. In addition to its railway business, the company was now also deriving substantial returns from the sale of electric power to elevators and gypsum plants along its route. This power business led the company to schedule its freight trains mainly for night operation, when commercial power demands were the lightest, so that its relatively small Fraser power plant could enjoy a good load factor.

Passenger service on the several branch lines was discontinued in the early 1930s, but was continued, even the unprofitable, on the main line until August of 1956. Dieselization of freight operation was accomplished simultaneously, except for some switching at East Fort Dodge yard.

### AMES

Local street railway transportation in Ames was started with the organization on September 9, 1890 of the Ames & College Railway as a steam dummy line. Two locomotives were acquired to draw passenger trailers in an operation between the center of the business district and the Iowa State College Campus.

In 1907 the Fort Dodge Des Moines & Southern Railway acquired the property and connected it to the main line by a 7-mile branch from Kelley. Electrification brought street car as well as interurban service. The former was discontinued in 1929 when a bus was placed in 'temporary' service. Trolley cars were never restored, altho portions of the railway remain in service as part of present day FDDM&S diesel operations.







Yard scene of 1907 shows the old Newton & Nor Western roundhouse as well as the "new" fram car shop. Careful study of this none-too-clear halftone shows that cars 66, 74 and 82 as origin ally built for 600 volt operation had Van Dorn couplers below the MCB couplers. Inter-Urban Railway cars were similarly equipped.

The famous Des Moines valley ravine bridge a few miles north of Boone was a favorite spot for photos thru the years. Above is the original timber N&NW trestle, at right, it is being replaced with a parallel steel viaduct 156 ft. high and 800 ft. long, while below a 1940 railfan special is poised midspan.









was the only one of its type on the odge Line and only vaguely resembles inment of any other road. The Niles. Dodge Line and caninment of 、 ナ ナ





Jewett Car Co., 1910.

A.E. Barker 10-4-56

0 12 Scale ~ Feet & Inches





A E BARKER 10-9-56.

FORT DODGE, DES MOINES AND SOUTHERN RHILWAY OBSERVATION-PARLOR CAR BUILT BY THE JEWETT CAR COMPANY 1912.



FORT DODGE, DES MOINES AND SOUTHERN RAILWAY Combination Passenger-Brggage Motor Car Nº62 Built By The American Car Company 1916.

A.E.BARKER 10-30-56















FORT DODGE, DES MOINES AND SOUTHERN RAILWAY. COMBINATION PASSENGER-BAGGAGE MOTOR CAR Nº 52. BUILT BY THE AMERICAN CAR COMPANY 1916.

A.E. BARKER 10-22-56.









Roster of equipment appears at top of page 145.



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Box motor 84 of the original order became a line car and all freight was then handled by electric locomotives.

Most imposing of the engines was the 360-class, purchased from Oregon Electric Railway, where they were 60-class. These fourtruckers were built at OE shops from old passenger car trucks and motors.



126





S. S. Start



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At right: Ames & College Railway scene with local car.

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### BOONE:

In 1883 the Boone & Boonesboro Street Railway Company built a narrow gage horse car line to replace the stage line between the Court House Square in Boonesboro and the Chicago & North Western Railway depot in Boone. Two one-horse cars were built in St. Louis for \$800. They were ornately painted but seated only ten passengers each. In 1895 the line was changed to standard gage and two-horse cars were acquired. Electric operation began November 14, 1897.

An area of coal mining about 3 miles west of Boonesboro, along the Des Moines River, developed into communities known as Shepardstown, Logansport and Incline. Transportation was by wagon or hitching a ride on a freight train until 1885 when a steam dummy line was built out of Boonesboro. Due to lack of patronage, partly due to not being permitted to come into Boone, the line lasted only about a year In 1899, L. W. Reynolds, one of the owners of the Boone electric line, organized the Boone Suburban Railway as a private venture. It was built thru the brick plant and coal mining areas to an amusement park known as Pilchers Park. In 1900 it was extended to Whitcombs Park on the Des Moines River and in 1901 a second extension was built to the C&NWRy viaduct then under construction over the river. This latter extension was taken up after a few years when the novelty of "rubber-necking" at the C&NW structure (a handsome sight to this day) wore off.

The Iowa Electric Light & Power Company acquired the property after Reynolds' death and at about this time an extension was built east on 5th Street to serve the new C&NW shops.

Shortly after World War I the Shepardstown suburban line was abandoned and in a surprise move in 1934, the power company petitioned the city council to abandon the remainder. Service ended on the evening of May 19, 1934.





#### SIOUX CITY

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(Condensed from a history by Peter E. Kocan) The transit history of Sioux City is unique in the number of forms of rail transit that have been operated: service has been given by horse car, cable car, steam dummy, and electric trolley car and the city for a time even boasted an elevated railway with first steam and later, electric power. All these have now bowed to the motor bus and private automobile.

The physical layout of the city has greatly influenced its transit history. The small area in which the business center is located is the only level area; north and west the city is entirely on hills. To the east is the valley of the Floyd River, containing marshes, stock yards and railroad yards. A large part of the city is rural in character and two areas, Leeds and Riverside, are virtually independent communities. The lines serving them were examples of "interurbans within city limits".

The Sioux City Street Railway Company opened a 4 ft.-gage mule car line on July 4, 1884 with five cars. Rails were spiked on ties lying on the surface of the street and planks were laid between the ties for the mules to walk upon. As the system was expanded it was found necessary to station spare mules (or horses) at the bottom of many of the steeper grades to help pull the cars.

It was probably because of the hills that the company decided to electrify the system and in October 1889 a contract was signed with the Sprague Electric Company to perform this work on its  $14\frac{1}{2}$  miles of line. Electric operation began on Easter Sunday, April 6, 1890. Fifty new 16 ft. Pullman cars were bought for \$1500 each About half of these cars had only one motor; the remainder had two. The original return circuit was a wire buried in the paving; conventional rail bonding following later.

Along with one man cars, the company used fare boxes, rear-view mirrors and tear-off transfers, all features that did not appear generally elsewhere for many years.

New lines were added as needed. One of these was a line on South 3rd Street to the Missouri River Bridge, where it connected with the South Sioux City Traction Company, which had been running one mule car since 1895. The operation into Nebraska was eventually electrified and integrated into the Sioux City system. Meantime, the system passed thru a receivership and emerged as the Sioux City Traction Company.

During this same period a group of promoters conceived the idea of an elevated railroad to provide transportation to a new real estate development called Morningside, south east of the city. A street car line would have been handicapped in crossing the valley with its many stock yards and railroad crossings, so, in 1888, the Sioux City Rapid Transit Company was organized to build an elevated railroad.

The line had two divisions: an elevated from downtown to the east bank of the Floyd River and a surface line from there to a terminus in East Morningside. The surface portion was built first, opening on September 13, 1888 as a single-tra line. One steam locomotive pulling two coach operated five round trips per day. Opening of new street car line between downtown and t east bank of the river brought traffic increas that resulted in hourly service.

Building of the elevated division began in Ap 1890. Iron truss bridges were built to cross t river and the Milwaukee Road tracks. The "1 tracks were 22 ft. above the surface, support on a structure 18 ft. in width with supporti bents on 40 ft. centers. Two new 2-4-0 type loc motives with four new coaches painted brig red were acquired. Anthracite coal was burn to meet the city smoke control ordinance.

The first train left Leech St. station at 3:00 F April 16, 1891 for Morningside and a few da later regular half-hourly service was establishe

In the spring of 1892 the "L" proved its won in an unexpected way. The Floyd overflowed banks and inundated the lowlands on both side rising so rapidly that the people in the area h no time to escape to high ground. Their only se vation was to climb the "L" and ride resc trains to Jones Street.

It had originally been intended to replace t locomotives with battery cars. However, the po showing of storage battery installations on stre railways elsewhere and the success of the ove head trolley system led the company to choo the latter method, purchasing power from t local power company. Five double-truck, doubl end two-motored cars with railroad roof we bought from the Northern Car Company of Min eapolis and electric operation began in 1893, t first electrified elevated railway in the world.

The boom that had nurtured the elevated ratival values way collapsed with the panic of 1893 and the "I was soon in financial trouble. Operation of ca on a half-hour headway with 5¢ fare could longer meet expenses, especially since ea purchaser of a lot in Morningside got a free pa on the "L" good for himself and his family f one year. Things got so bad that in Februa 1895 the line was sold to the highest bidder f only \$50,000, one-tenth of its cost.

The new company, known as the Sioux City E evated Railway Company, was able to build second surface route from the east end of t structure via Leech Street to Peters Park a began operating a 15-minute headway on the "L In 1896 a single-track ramp was added to t westend of the structure and cars began opera ing into the downtown business district over t city streets.

All Sioux City transit operations were conso idated in 1899. Altho the "L" continued operati for a few more years, service ended sometin between July 1901 and the end of 1903. The stru ture was dismantled bit by bit over the years, t bridge over the Milwaukee tracks remaining u til shortly before World War II. The five electr cars were used in city service for a few year but were regarded as too heavy and too powe hungry.





Between 1889 and 1895 the only cable railway ever to exist in Iowa operated from downtown on Jackson Street over a single route. A powerhouse at 29th & Jackson handled the cable for this line and for a later extension on to 39th Street. The downtown terminus at 3rd & Water was the scene of some fancy cable railroading as the trailer was shifted around the grip car. As the train approached, the gripman had to drop the cable to pass over the double crossover at the full 9 MPH cable speed, all the while clanging furiously on the gong. The conductor meanwhile was hanging precariously on the front of the trailer. The switch was set for the grip car to take the crossover. At the propitious moment, the conductor pulled the pin to uncouple the trailer, alighted and dashed ahead to throw the switch to shunt the trailer into the straight track, and then reboarded the trailer and wound up the hand brake to spot it alongside the grip car.

The remainder of the layover was spent in reorganizing the train. To start the trailer, a rope was hitched across from the grip car so that it could pull the sinker thru the other crossover into position for coupling at the rear of the grip. This type of operation, not always successful on the first try, commanded the princely wage of  $17^{c}_{c}$  per hour.

The novelty of cable operation soon wore off, leaving behind the fantastic costs and woes of paralleling electric lines finally forced electrification and toward the end of 1895 overhead was installed. Four 16 ft. Laclede cars took over.

A line built to Highland Park originally operated by steam dummy (a small, light engine that was supposed to look like a car so it wouldn't frighten horses or annoy the neighbors). This, too, was electrified at an early date. A second "interurban within city limits" was the line to the Leeds district northeast of the city.

On June 1, 1899 all five properties were consolidated into the Sioux City Traction Company. Immediately work began on widening the 4 ft. gage of the former Sioux City Street Railway lines to  $4'-8\frac{1}{2}''$ , the conversion taking about a year to complete. A number of narrow gage cars were retained. The bodies of two of the open trailers were spliced together and given motorized trucks, becoming known as the "long greens". They survived until the 1920s.

In 1902 the company passed under control of Swift and Armour packing interests. In 1908 it was renamed the Sioux City Service Company.

Both single-truck and double-truck new cars were acquired in this period. All were singleended, and loops or wyes were provided at the ends of all lines.

In 1920 a fleet of 25 single-end birney type cars were purchased and by 1923 the entire operation returned to the original one-man technique of the original days. In 1923 four double-end birneys were bought second-hand from the Citizens Traction Company of Oil City, Pennsylvania. These were used on the Pearl line, where heavy auto traffic on 24th Street had made wying inadvisable.

In 1937 buses were substituted on the South Sioux City line because of bridge rebuilding. In 1940 the East 7th line was pulled for the same reason. The remaining lines survived World War II, buses taking over in 1948.









The Sioux City old-timers gallery includes many varieties. This group contains representatives of some of the more interesting: (Top to bottom:)

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2	8		1	4	etc.
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Cars 39....45 51....58 60....60 155...203

## Sioux City's fleet of one-man cars

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Cars 64....65 236 etc.63

> 235...220 301....11

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90-05		17	Taylor SES	41244	GE COD	38000	88	37 8				-	TAG & MOTOT BAY, LFACTION BEFORE 1969
63-67	American	<u>'22</u>	Brill 39-1	81607	GL-K51	33000	-38	371 8				₽	Bodies rebuilt to replace cars burned
200-204	Company	17	Taylor LEB	2130745	GE_E51	28000	33	301 4 <sup>#</sup>				4	Double-end
205-206		18	Taylor LEB	2130748	02-X51	28000	32	301 4			<b>11</b>	2	
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street paving scheme. The company was indisposed to meet their share and operations were discontinued that year.



## COUNCIL BLUFFS:

The city of Council Bluffs was established when Abraham Lincoln designated it as the eastern terminus of the Union Pacific Railroad. For many years the railroad provided the only connection with Omaha on the Nebraska side of the Missouri River opposite Council Bluffs, except in the dead of winter, when adventurous souls could drive sleighs across the frozen "Mo".

In 1889 the Omaha & Council Bluffs Railway & Bridge Company opened a highway bridge and began running trolley cars between the two cities. Originally, the interstate cars entered Omaha on Douglas Street, running into Nebraska for several blocks without any physical track connection with the Omaha street railway system. In Iowa, cars ran on Avenue A and Broadway, replacing horse cars which had previously given local service.

Shortly after the turn of the century, the interstate property was combined with the Omaha system and a connection was made in downtown Omaha. For a time, bridge cars were thru routed with Dundee cars.

Meanwhile the local system in Council Bluffs was expanded. One of the most interesting lines was that to Fairmount Park. It ran south on First Street, entering the park thru a cut 60 ft. deep. Heavily loaded open cars brought swarms of people to the park on fine summer days.

Another interesting line ran south on Main and Sixth Streets to "Lake" Manawa, a basin that was once part of the main course of the Missouri River. Time was when every few minutes a summer car ground to a halt at the Lake, disgorging a crowd of pleasure seekers. By the 1930s, traffic had dropped so much that a Birney car on an hourly interval was well able to handle it.

A spur ran east from the Manawa line to the Iowa School for the Deaf and hourly passenger service was originally operated here, as well as occasional coal car delivery. By 1932, the Birney service was down to three trips a day. A single-track line ran north on 28th Street from the carbarn at Avenue A to the Illinois Central Railroad tracks. Service on this line, right up until the time of abandonment in 1928, was limited to three daily trips.

A heavy line was the route to the Union Transfer Station of the Union Pacific and most other steam railroads into the city. Other routes were on North Eight Street, East Broadway, East Pearce, Benton and Harrison and a shuttle to the Milwaukee-Rock Island Depot at 11th Street and 26th Avenue.

After World War I the effect of the automobile began to be felt. Second-hand Birney cars were acquired. The last open car ran in 1928. The picturesque cut at Fairmount Park caved in and the line was shortened to the Park entrance. After 1932 all local service was provided by the Birney cars, with double-truck 800-series cars working the thru service from Omaha.

Riding held up during World War II, with its tire and gasoline rationing, but the inevitable drop occurred as soon as hostilities ended. The franchise in Council Bluffs expired in December 1947, but cars continued to run after that while negotiations were in progress. In August 1948, after the O&CB had rejected a new franchise as unacceptable, the city awarded one to a new company which brought about the replacement of the local Birney car operation on September 14, 1948. The interstate operation of cars continued, with the new company operating competing bus service, under protection of an injunction of the District Court. Just to be sure, O&CB ran its own buses besides, which gave a plethora of service while the battle lasted.

However, when the injunction expired at noon on September 25th, the police gradually forced car after car into the barn. The last car, #875 pulled into the barn at 3:40 PM and its passengers were refunded their fares. So ended the story of Council Bluffs street cars.





Additional data on these companies appears elsewhere in the bulletin.	<b>Rosters of Equipme</b>
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<ul> <li>FORT DODGE DES MOINES &amp; SOUTHERN RAILWAY</li> <li>Miscellaneous Roster Notes:</li> <li>NEWTON &amp; NORTH WESTERN R.R. EQUIPMENT ACQUIRED IN 1906 and SCRAPPED BETWEEN 1910 and 1926: 6 steam locomotives 1 combination baggage-passenger coach, 660 1 coach, 662 (1st)</li> <li>INTERURBAN PASSENGER EQUIPMENT:</li> <li>\$7 (1st) Business car, ex-Wichta Falls &amp; Southern R.R., scrapped about 1954.</li> <li>\$7 (2nd) Business car, ex-Wichta Falls &amp; Southern R.R., scrapped about 1954.</li> <li>\$7 (2nd) Business car, ex-Vincha Falls &amp; Southern R.R., scrapped about 1954.</li> <li>\$7 (2nd) Business car, ex-Fullman, air-conditioned open end observ., 816 observation-parlor car, arcroof, built by McGuire-Cummings.</li> <li>\$8 observation-parlor car, arcroof, built by McGuire-Cummings.</li> <li>\$8 observation-parlor car, center entrance, built in company shop, 26 (1, 220, 90, 55-99, 288-292.</li> <li>ELECTRIC LOCOMOTIVES OF THE FORT DODGE: \$10, 11, 113, 115, 117, 113, 115, 115, 115, 115, 115, 115, 115</li></ul>		(	) C					<sup>O</sup>							
<ul> <li>FORT DODGE DES MOINES &amp; SOUTHERN RAILWAY</li> <li>Miscellaneous Roster Notes:</li> <li>MEWTON &amp; NORTH WESTERN R.R. EQUIPMENT ACQUIRED IN 1906 and SCRAPPED BETWEEN 1910 and 1926: <ul> <li>for distantic baggage-passenger coach, 660</li> <li>l combination baggage-passenger coach, 660</li> <li>l combination baggage-passenger coach, 660</li> <li>l combination baggage-passenger coach, 662</li> </ul> </li> <li>MITERURBAN PASSENGER EQUIPMENT: <ul> <li>f1 (st) Business car, ex-Wichth Falls &amp; Southern R.R., scrapped about 1954.</li> <li>f1 (st) Business car, ex-Puilman, air-conditioned open end observ., 80 oft. "M. Foraker"</li> <li>f36 observation-parior car, r.rroof, built by McGuire-Cummings.</li> <li>f36 observation-parior car, r.rroof, built by McGuire-Cummings.</li> <li>f40 (2nd) double-end branch line motor car, center-entrance, similar to 405 passenger-baggage motor cars, schilt are for for built by McGuire-Cummings. sold to St. Francois County Ry. for use as engine.</li> <li>f42 (2nd) passenger-baggage motor cars, built 1916 there:cummings. sold to St. Francois County Ry. for use as engine.</li> <li>f42 (2nd) passenger-baggage motor cars, built 1916 there:cummings. sold to St. Francois County Ry. for use as engine.</li> <li>f42 (2nd) passenger-baggage motor cars, built 1916 there:cummings. sold to St. Francois County Ry. for use as engine.</li> <li>f42 (2nd) passenger-baggage motor cars, built 1916 there:cummings. sold to St. Francois County Ry. for use as engine.</li> <li>f42 (2nd) passenger-baggage motor cars, built 1916 ty Stow that arch roof, built by McGuire-Cummings. sold to St. Francois County Ry. for use as engine.</li> <li>f42 (2nd) passenger-baggage motor cars, built 1916 the south of the fort bodge line was discom an archive, for 7, 7, 7, 8, 80, 82 rebuilt and re-equipped for 1200 volts in 1911, 75,000 lb., 4-GE205 motors.</li> </ul> </li> <li>f43 (add) for the passenger baggage motor cars, built 1916 the there were about 500 south cars, morthe first, were passender dord merodor dord tor</li></ul>											1				
<ul> <li>FORT DODGE DES MOINES &amp; SOUTHERN RAILWAY</li> <li>Miscellaneous Roster Notes:</li> <li>Miscellaneous Roster Notes:</li> <li>MEWTON &amp; NORTH WESTERN R.R. EQUIPMENT ACQUIRED IN 1906 and SCRAPPED BETWEEN 1910 and 1926:         <ul> <li>6 ateam locomotives             <ul> <li>1 combination baggage-passenger coach, #60</li> <li>1 coach, #62 (1st)</li> </ul> </li> <li>INTERURBAN PASSENCER EQUIPMENT:         <ul> <li>#7 (1st) Business car, ex-Wichths Falls &amp; Southern R.R. scraped about 1954.</li> <li>#7 (2nd) Business car, ex-Pullman, air-conditioned open end observ., 80 ft. "Wit, Foraker"</li> <li>#34 observation-parlor car, arch-rood, built by McGuire-Cummings.</li> <li>#64 (2nd) double-end branch line motor car, center entrance, 8110 role-end branch line motor car, center-intrance, 8110 role-end branch line motor car, center-intrance, 8110 role-end branch line motor car, center-intrance, 8111 role-ford branch line motor car, center-intrance, 8111 role-ford branch line motor car, center-intrance, 8111 role ford ford line role role role role role role role rol</li></ul></li></ul></li></ul>															
<ul> <li>Miscellaneous Roster Notes:</li> <li>Miscellaneous Roster Notes:</li> <li>MEWTON &amp; NORTH WESTERN R.R. EQUIPMENT ACQUIRED IN 1906 and SCRAPPED BETWEEN 1910 and 1926: 6 steam locomotives 1 combination baggage-passenger coach, #60 1 coach, #62 (1st)</li> <li>INTERURBAN PASENCER EQUIPMENT: #7 (1st) Business car, ex-Wichina Falls &amp; Southern R.R., scrapped about 1954.</li> <li>(7 (2nd) Business car, ex-Wichina, air-conditioned open end observ., 80 ft. "Mt. Foraker"</li> <li>#34 ex-steam road double-end open observ. car, finished its days as a wrk car.</li> <li>#36 observation-parlor car, arch-roof, built by McGuire-Cummings. 180 observation-parlor car, arch-roof, built by Jewett Car Company.</li> <li>#40 (2nd) double-end branch line motor car, center entrance, built in company shop, 42 ft. 2-GE206 motors, 56,000 lb.</li> <li>#50 built with arch roof, built by McGuire-Cummings, sold to St. Francois County Railway as engine.</li> <li>#50 but with arch roof, built 1916 American Car Co. #516 Jouble-end branch line motor car, center entrance, built in company shop, 42 ft., 2-GE206 motors, 56,000 lb.</li> <li>#510 built of St. Francois County Railway as engine.</li> <li>#52 but with arch roof, built 1916 American Car Co. #516 Jouble-end branch line motor car, scher-entrance, similar to #52 with arch roof, built 1916 American Car Co. #54 (2nd) passenger-baggage motor car, arth roof, built 1916 by American Car Company.</li> <li>#64 (2nd) passenger-baggage motor car, arch roof, built 1916 by American Car Company.</li> <li>#64 (2nd) passenger-baggage motor car, arch roof, built 1917 5,000 lb 4-GE205 motors.</li> <li>FREICHT TRAILER EQUIPMENT owned by the Fort Dodge extensive. In 1912 there were about 500 such cars, on and while this fleet dwindled considerably during the di- recently been redeveloped.</li> <li>FREICHT TRAILER EQUIPMENT owned by the Fort Dodge. In August the cars were operated and removal of trolley wires was begun as whiching operation was converted first, ex- car were operated and removal of trolle</li></ul>	FORT	DOD	DGE I	DES	MOINES	& SOI	JTHER	N RAII	. W A	Y		0			
<ul> <li>NEWTON &amp; NORTH WESTERN R.R. ELUIPMENT ACLOIRED IN 1996 and SCRAPPED BETWEEN 1910 and 1926: 6 steam locomotives 1 combination baggage-passenger coach, #60 1 coach, #62 (1st)</li> <li>INTERURBAN PASSENGER EQUIPMENT: #7 (1st) Business car, ex-Wichita Falls &amp; Southern R.R., scraped about 1954.</li> <li>#7 (2nd) Business car, ex-Pullman, air-conditioned open end observ. 80 (t. "Mt. Foraker"</li> <li>#34 ex-steam road double-end open observ. car, finished its days as a work car.</li> <li>#36 observation-parlor car, arch-roof, built by McGuire-Cummings. #40 (2nd) double-end branch line motor car, center-entrance, built in company shop, 42 (t., 2-G2206 motors, 58,000 lb. #40 (2nd) double-end branch line motor car, center-entrance, similar to f40 is old to St. Francois County Railways as engine. #52 Double-end branch line motor car, center-entrance, similar to f450 built with arch roof, built 1916 American Car Co. f52 Double-end branch line motor car, center-entrance, similar to f452 (2nd) passenger-baggage motor car, arch roof, built 1916 American Car Co. f52 (2nd) passenger-baggage motor car, arch roof, built 1916 American Car Co. f54 (22nd) passenger-baggage motor car, arch roof, built 1916 American Car Co. f54 (22nd) passenger-baggage motor car, arch roof, built 1916 American Car Co. f54 (2nd) passenger-baggage motor car, arch roof, built 1916 American Car Co. f54 (2nd) passenger-baggage motor car, arch roof, built 1916 American Car Company. f64, 66, 68, 70, 72 Passenger-baggage motor cars, built 1907 by Niles, f74, 76, 78, 80, 82 rebuilt and re-equipped for 1200 volts in 1911, 75,000 lb. 4-GE205 motors.</li> </ul>	Misce	ilan	eous	Ros	ter Notes										
	and INTERL #7 #34 #36 #38 #40, 42, #40 #50 #52 #54 #64, 66, 74, 76,	<pre>I SCR (1st) (2nd) (2nd) (2nd) (2nd) (2nd) Doub Doub Doub Doub (2nd) (2nd) (2nd) (2nd) (3nd) (3nd)</pre>	APPED 6 1 1 N PASSE Busines 50 Busines 80 team ro. as rvation- 6, 48 pa 6, 48 pa 6, 48 pa 9 bule-end t #4 le-end t #5 sco passen Ar 0, 72 P 0, 82 re 4-	BEE stear combi coac concernation so can coac coac so can coac coac coac coac coac coac coac c	TWEEN 19: n locomotive sination bagg h, #62 (1st) R EQUIPME r, ex-Wichit: ed about 195 r, ex-Pullma 'Mt. Foraker uble-end ope ork car. or car, arch- or car, arch- or car, arch- or car, arch- or car, arch- or car, arch- to company sh h line motor b line motor t with arch r h line motor t arch roof, St. Francoir baggage moto can Car Com nger-baggaga and re-equi 05 motors.	10 and 19. ss age-pass NT: a Falls & 4. , air-co  roof, built ex-railr motor car,  oof, built car, cen boilt by b silouby b siloub	Southern nditioned . car, fin lt by McCt t by Jewe ond coacl r, center , 2-GE20 ter-entra unty Rail- ter-entra 1916 Am ter-entra McGuire- Ry. for u ch roof, 1 ars, buil- 1200 volt	ach, #60 a R.R., i open end ished its Guire-Cur tt Car Co- hes. entrance, 6 motors ince, simi- cournming se as eng built 1916 t 1907 by s in 1911,	dobse days nmin mpar , 58,0 gine, , 58,0 gine, , 58,0 gine, , 58,0 llar tr gs, ine, , by <b>Niles</b> , 75,0	gs. ay. 000 lb. r to o o	EXPRI #8 #1  CITY ( #1 ELECT #1 #111, 1 #2 #2 #2 #3 FREIG ext and ret	<ul> <li>Lass MOTT</li> <li>built by</li> <li>00 becam</li> <li>old rec</li> <li>CARS for</li> <li>0, 20, 90,</li> <li>RRIC LOC</li> <li>07, 109</li> <li>13, 115,</li> <li>13, 115,</li> <li>13, 115,</li> <li>14, 203</li> <li>207</li> <li>208</li> <li>2</li></ul>	JR CARS: Niles, re and in e signal d ords also rebuil AMES and 95-99, 21 OMOTIV. 85,000 lb. re-equ control 117, 119 geared General E General E Control Control	buill stall lepa: indi t frc 88-2 ES C buil uipp al E Sea Stor i 3.8 Clect i 3.8 Clect E Ele Sea E Ele i Sea E C i i i i i i i i i i i i i i i i i i i	to line car by removal o lation of tower and tool eq criment work car. cate that first branch line im a baggage motor car. ORT DODGE: 92. F THE FORT DODGE LIN to riginally for 600-volt si ed in 1911 for 1200-volt si me as 111. 100 lb. built in 1911 for 12 lectric Company; 4-GE20 2, 31'-1'' long, type M cc ric 70-ton locomotives built lectric locomotives built 1 in 1915, acquired by FDI lectric locomotive built 19 tric Ry. #60, 61 built 194 ttle R.R. shops, acquired ttle Ry. #60, 61 built 1944 SJ ENT owned by the Fort Do were about 500 such cars, led considerably during th d.
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CAR NUMBER	BUILDER	DATE BUILT	TRUCKS	MOTORS	CONTROL	WEIGHT	CAPACITY	LENGTH OVERALL	WIDTH OVERALL	HEIGHT OVER ROOF	ACQUIRED 2ND RAND DATE		REMARKS All Cars interurban unless otherwise noted
1-2				Trailer			_		1				Flat Cars
3	IAI Ry.	12	Baldwin	4-0173	14	103600		421 7	91 6	13' 1"	CD44 119	DE	Locomotive Rebuilt 447 into 51
4			Brill	4-6180	<b>X3</b> 5	49200	. 44	451 41	81 6"	111 4	TCRy 123	. az	Passanger cars, one-man, combination baggage,
5	L			<b>.</b>			44						rebuilt 1923 from Tri City Ry. street cars
6						·•	44	•	•			_ 81	
9-10	Pullman	197	Packham	Trailer_			56	43' 1"	81 74	11 10"	ļ.,		Passenger cars, open
11-13							-		<b> </b>				<b>4 4 </b>
16	Pullman	197	Taylor	4-0157	K14	ļ	36	421 8	81 74	12' 3"		52	Combination passenger & baggage
.19	Pullman		McGuire	4_0173	X	66600		461 04	91 6	13: 0"	MT #L#09		Frt. Motor rebuilt from New York "L" car
21-22	American	<b>'</b> 09	Brill	4_GE73	<u>¥</u>		65	571 04	91 24	13' 2"		SE	Combination passenger & baggage
23-32	NYNE&H	10	NYNHAH	Trailer		<b> </b>	<b>4</b> 8	451 9	81.84	12' 2"	NYNH&H		Excursion trailers
34	McOC.	12	McGC.	4-CE73	<u>N</u>	92000		501 0#	91.4	12' 10"		DE	Freight Motor
35	Cincy	18	Brill	2-G <b>1</b> 80	<b>x1</b> 0	<u> </u>	.32	32' 10"	81 3"	10' 8"		DE	Single truck wood city car
36				2-01110		<b> _</b>	<b>! .</b>						<u> </u>
37-41	American	17	Brill	2-11506		16500	32	30 9	71.9*	2" 2		DE	Single truck Birney " "
50	Okla Ry	129	Standard	4.156205	HLY	140000		431 3	91.9	12' 6"	Okla Ry	DE	Locomotive, Okla Ry. #600
51	I&I Ry	12	Baldwin	4-G173	14	103600		421 74	91 6	13' 1"	CD44 19	DE	Rebuilt from #3 Locomotives, orig. Tonngetn & Ohio Riv 3 & 5
52-53	Baldwin	17	Baldwin	4_ <b>W</b> 308D3	HIJ	120000		321 34	10' 1"	12' 0"	UERy 148	DE	later Union Electric Ry 80 & 82
102	McGC.	_ בני	McGC.	2GE80	<b>X</b> 36	26000		281 3	7' 3"	11' 0"	ļ	DE	Single truck city sweeper
103	IC&CL	עי	Taylor	2- <b>GI</b> 54		+		18' 8"	8' 6"	11: 04		DI	Single truck line car
106						<u>}</u>			01 <b>PH</b>		<u> </u>		Flat car enouplow
107	CULIMAN	197	Feckham	<b>GI</b> 5₹	<u>K16</u>		.—	40 1	8' 7"	11, 10,		DE	Double truck work car repuilt ir exp trir 13
			Brill	4-G180	<u></u>			451 4"	8' 6"	11' 4"		SI	Work car rebuilt from \$5
		-											Dota: MCCL





