

This was a Zephyrette:



And so was this:



Come along as we
explore the history of
the Budd RDC and
take a ride on the
Western Pacific's
Zephyrette...



- **R** Rail
- **D** Diesel
- **C** Car
- A self-propelled rail car with control stand, passenger space, and/or baggage and RPO



Origins - Pre-War

- DGRW contracted with Budd for a streamlined diesel train set
- This became the DRGW's 'Prospector'
- Ran between Denver and Salt Lake City
- First revenue run November 17, 1941
- Notoriously unreliable and under-powered for the difficult terrain
- Pulled from service July 5, 1942 and returned to Budd
- Scrapped





Origins – Post-War

- Post WWII, railroads were awash with profits from wartime government contracts
- All railroads had old, worn out rolling stock and motive power
- Switch to diesel motive power
- Rural to urban population shift
- Post-war, the ICC was very reluctant to excuse RR's from their 'responsibilities' to rural America



Col. Earl James Wilson Ragsdale

- Was Budd's chief engineer, developer of 'shotwelding'
- Never gave up on the idea of a self-propelled rail car
- Naval and Army diesel designs
- After the Prospector fiasco, improved plans were worked on
- War time efforts meant shelving all other plans

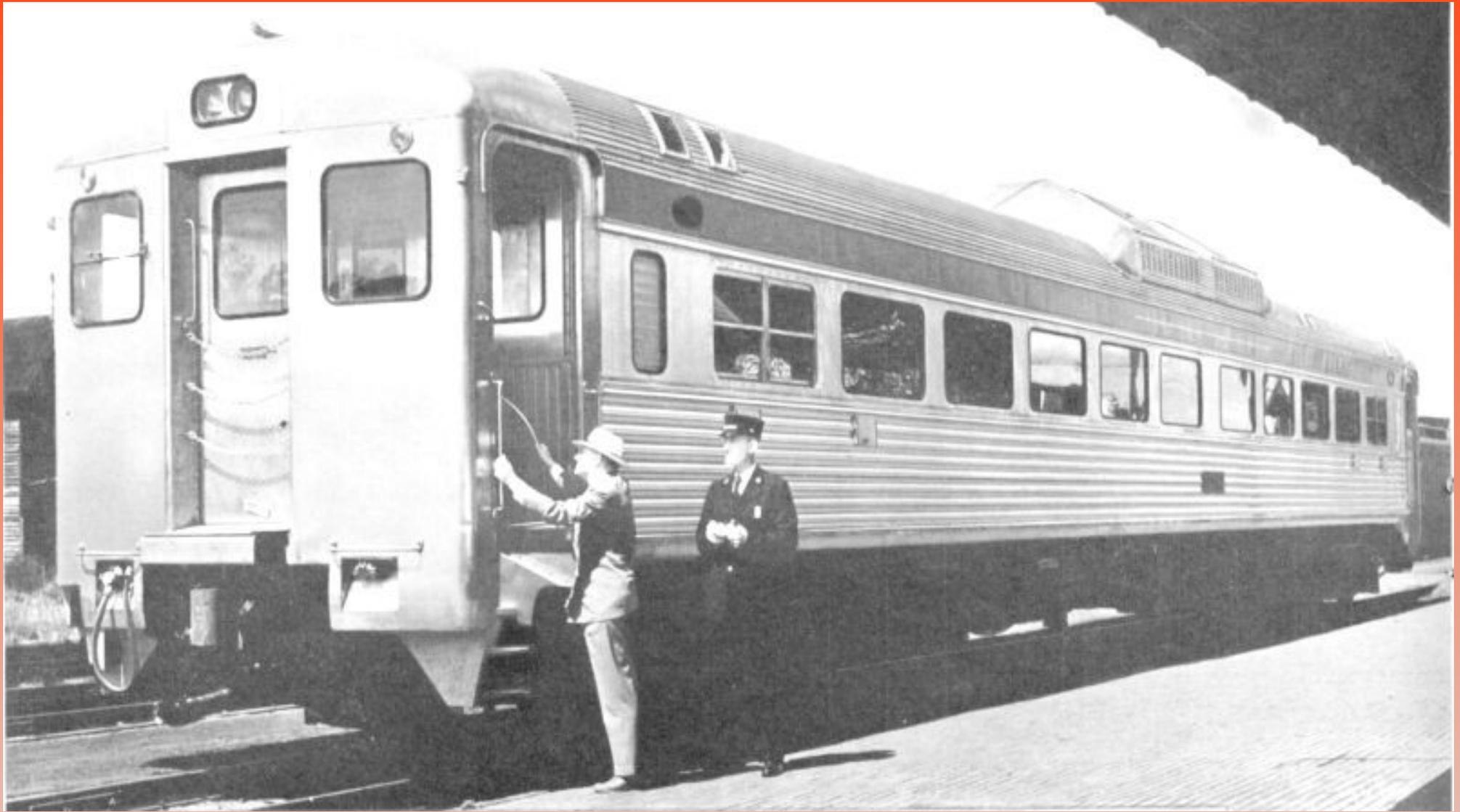


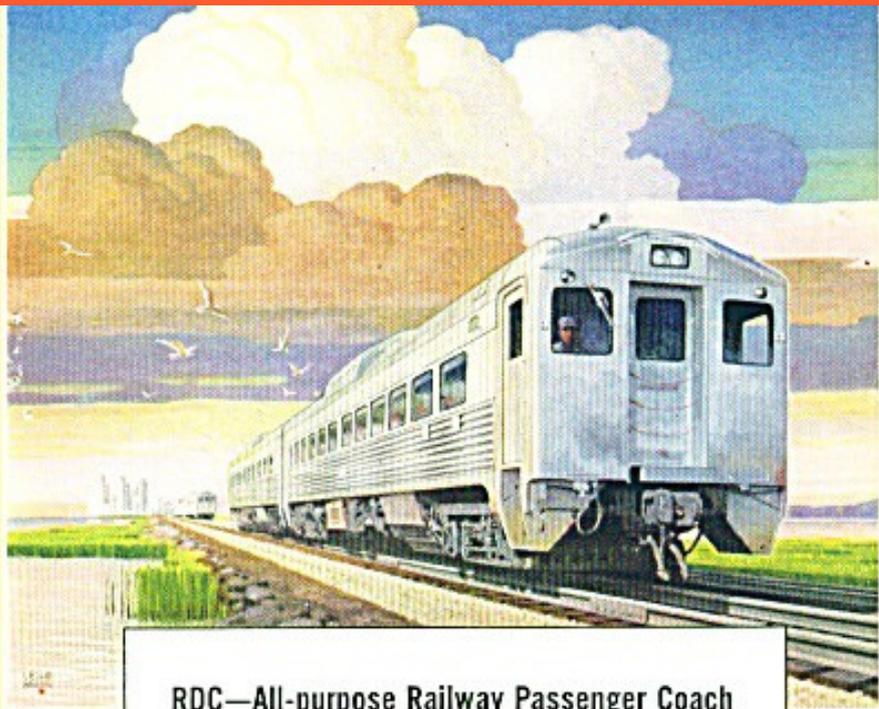
Budd Takes A Chance

- War production causes delays, but...
- War production led to great advances
- Maj. General G.M. Barnes pushes development of Ragsdale's baby after Ragsdale died in 1946
- Without any orders, Budd produces tooling and a demonstrator RDC in 1949









RDC—All-purpose Railway Passenger Coach

RDC, introduced a year ago, is the new all-stainless steel, self-propelled Budd rail diesel car. It is good looking, quiet, smooth riding. It is comfortable, clean and air-conditioned.

The New York Central now has two Budd RDC's operating in express service between Springfield and Boston, and a third providing local service between western Massachusetts and Albany.

Western Pacific has two RDC's covering the 924 miles which separate Oakland and Salt Lake City.

Pennsylvania-Reading Seashore Lines have just placed six RDC's in operation between Camden, Ocean City, Wildwood and Cape May. They leave Camden as a six-car train and end up as two-car trains at each of the three Jersey seashore cities.

Chicago & North Western has three RDC's in commuter service; the Baltimore & Ohio will soon have two and New York, Susquehanna & Western, four.

These varied uses to which RDC is being put cover almost every kind of service a railway passenger coach can render.

The general acceptance of the Budd all-stainless steel RDC suggests that the development of railway passenger coach equipment may be headed in a new direction.

The Budd Company
Philadelphia, Detroit, Gary.



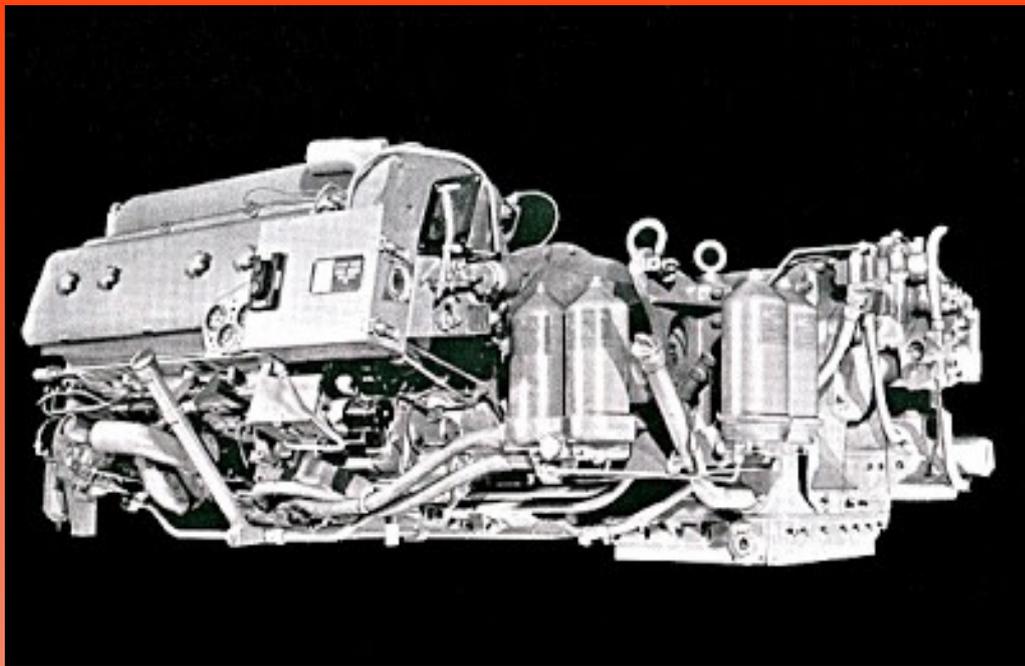
Single Car "Limited"



Easy To Service

- Detroit Diesel/GM 110 engines mounted under floor could be changed out completely in 1.5 hours
- 275 hp, 6 cyl. 2-stroke
- From 1956 on power increased to 300 hp
- Twin engines... if one malfunctioned, the RDC could continue with one engine
- Direct drive and Allison torque converters.. strong acceleration and good performance on steeper grades





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Flexible

- Since each car had its own power and operating controls (except the special RDC-9), the RDCs could be combined or split as necessary to service a variety of routes
- A single train could start at a mainline station and by splitting en-route, could service multiple final destinations without the need for additional motive power



Comfortable

- RDCs 1, 2, 3, & 9 all had foam padded walk-over seats, with backs that flipped depending on direction of travel
- Overhead florescent lighting, with incandescent lens reading lights over seats
- 7 ton A/C unit for each car (later upped to 8 ton)
- Hot water heating through registers at floor level
- Some RRs added curtains, shades, plusher upholstery



Success!



- Budd built 398 RDCs between 1948 and 1962.
- They were sold to operators across North America, Brazil, Saudi Arabia, Cuba, and Australia
- 5 more were built under license in Australia
- 45 heavily modified units were built under license in Taiwan

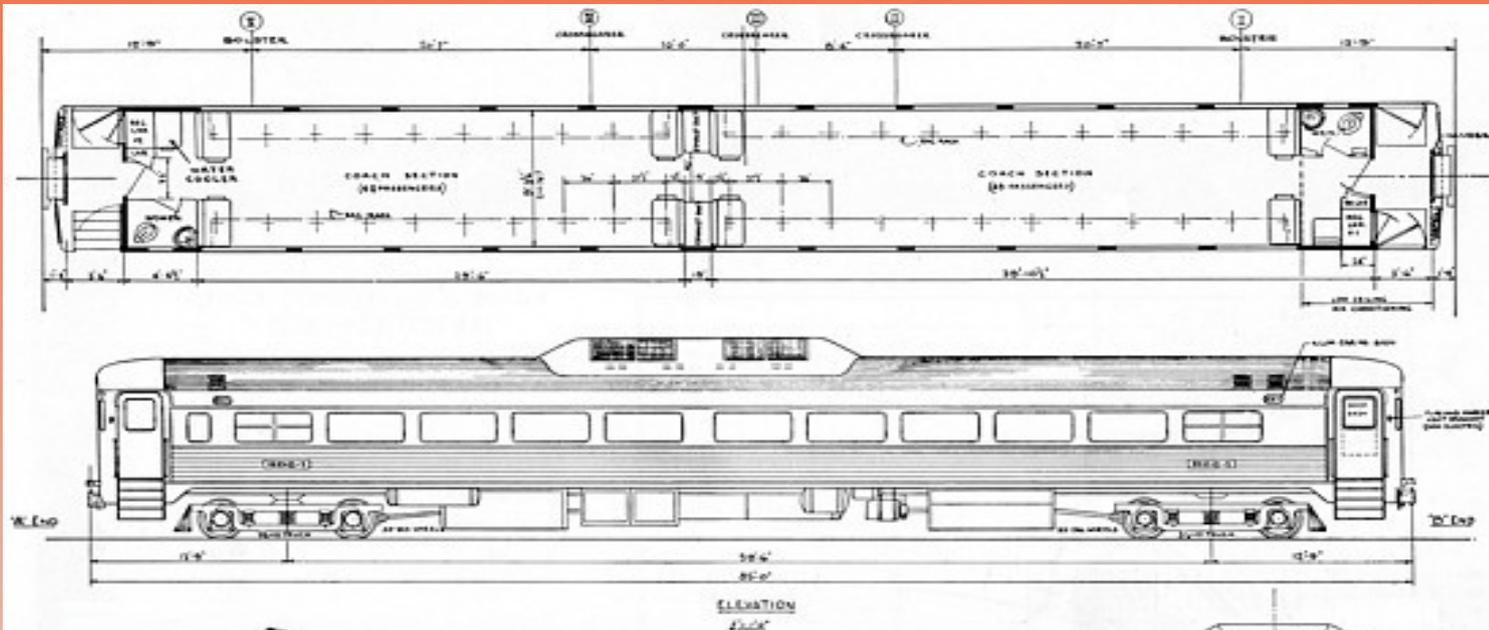


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Types

- RDC-1 90 passengers
- Wheel Arrangement: 1A-A1, 239 built



RDC 1

RDC-1 is strictly for carrying passengers. It seats 89, on walkover seats.

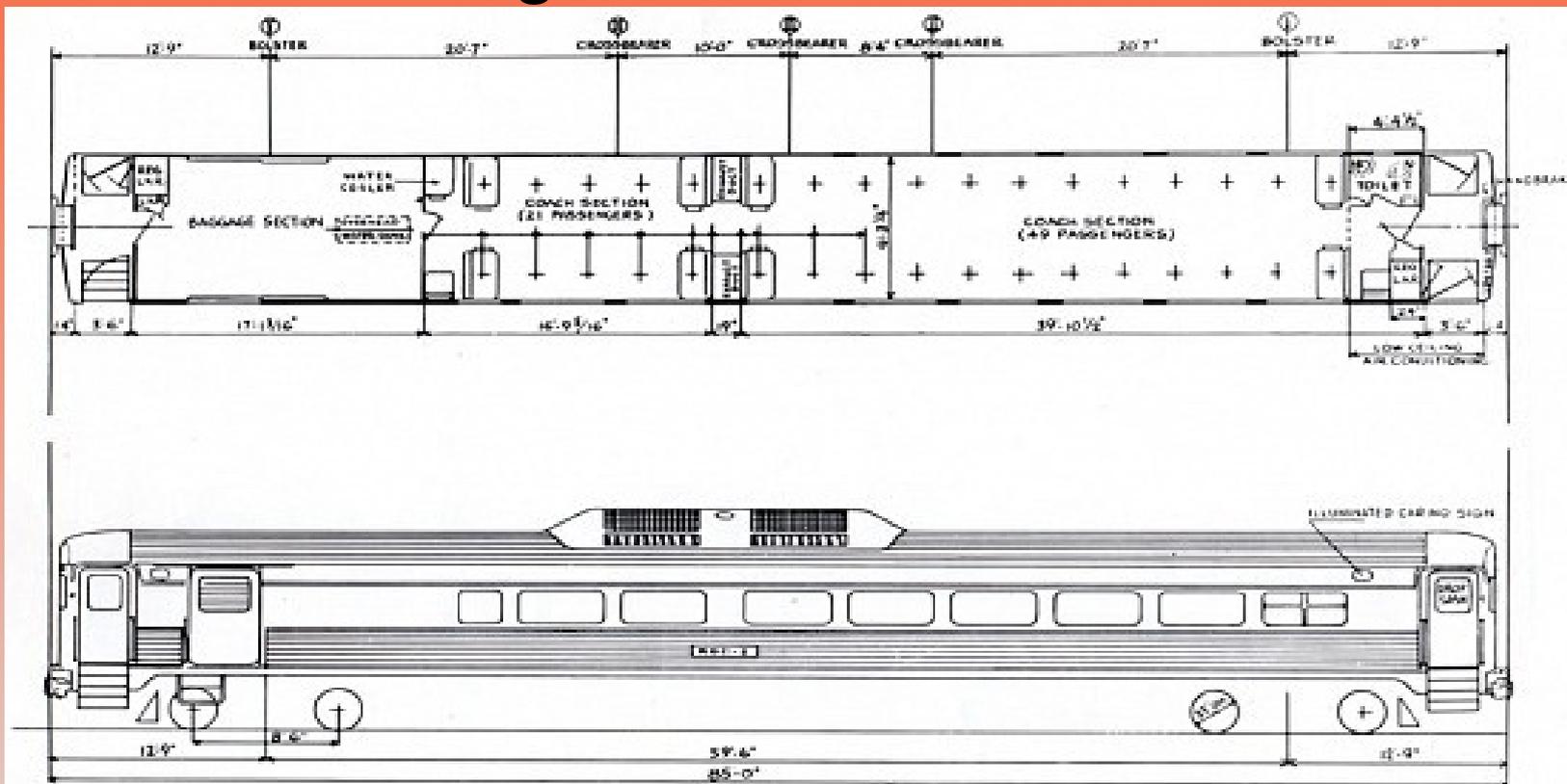
<i>Weight, light</i>	<i>108,000 pounds</i>
<i>Weight, ready to run</i>	<i>112,800 pounds</i>
<i>Normal maximum weight (including 89 passengers)</i>	<i>126,600 pounds</i>





Types

- RDC-2 70 passengers, baggage section
- Wheel Arrangement: 1A-A1 67 built



RDC 2

RDC-2 combines passengers and baggage-express. Seats 70 passengers. Has a 17 foot baggage-express compartment.

<i>Weight, light</i>	<i>109,000 pounds</i>
<i>Weight, ready to run</i>	<i>113,800 pounds</i>
<i>Normal maximum weight (including 70 passengers and 10,000 lb. baggage)</i>	<i>134,800 pounds</i>

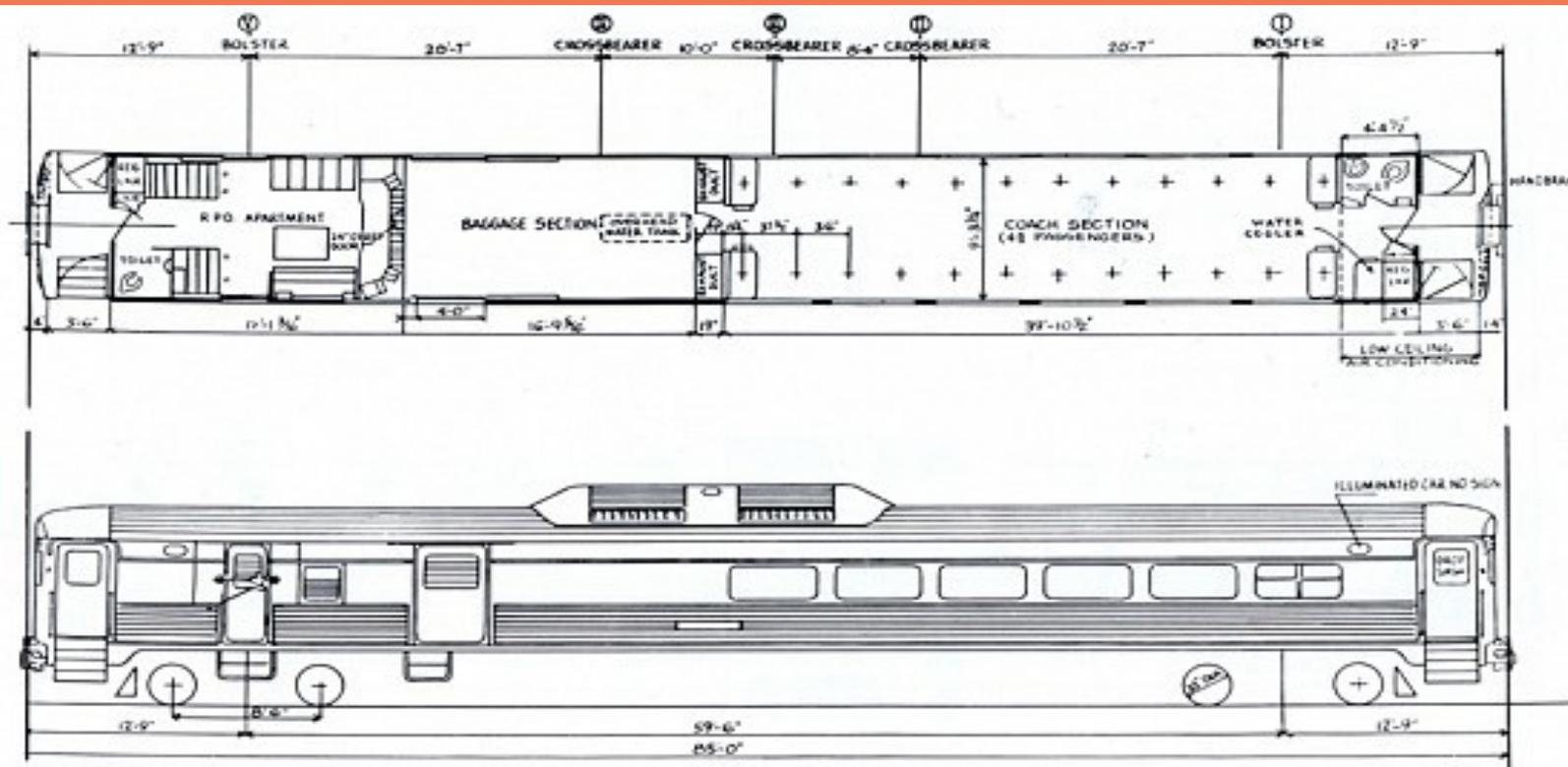


The RDC-2 was the type purchased by the WP for Zephyrette service.



Types

- RDC-3 48 passengers, baggage, RPO
- Wheel Arrangement: 1A-A1, 48 built



RDC 3

RDC-3 combines passengers, baggage-express, and mail, seating 48 passengers, with a 17 foot baggage-express compartment, separated by a bulkhead with a creep door from a 15 foot railway mail apartment.

Weight, light	113,100 pounds
Weight, ready to run	118,100 pounds
Normal maximum weight (including 48 passengers 5,000 lb. R.P.O. load 8,250 lb. baggage)	139,500 pounds



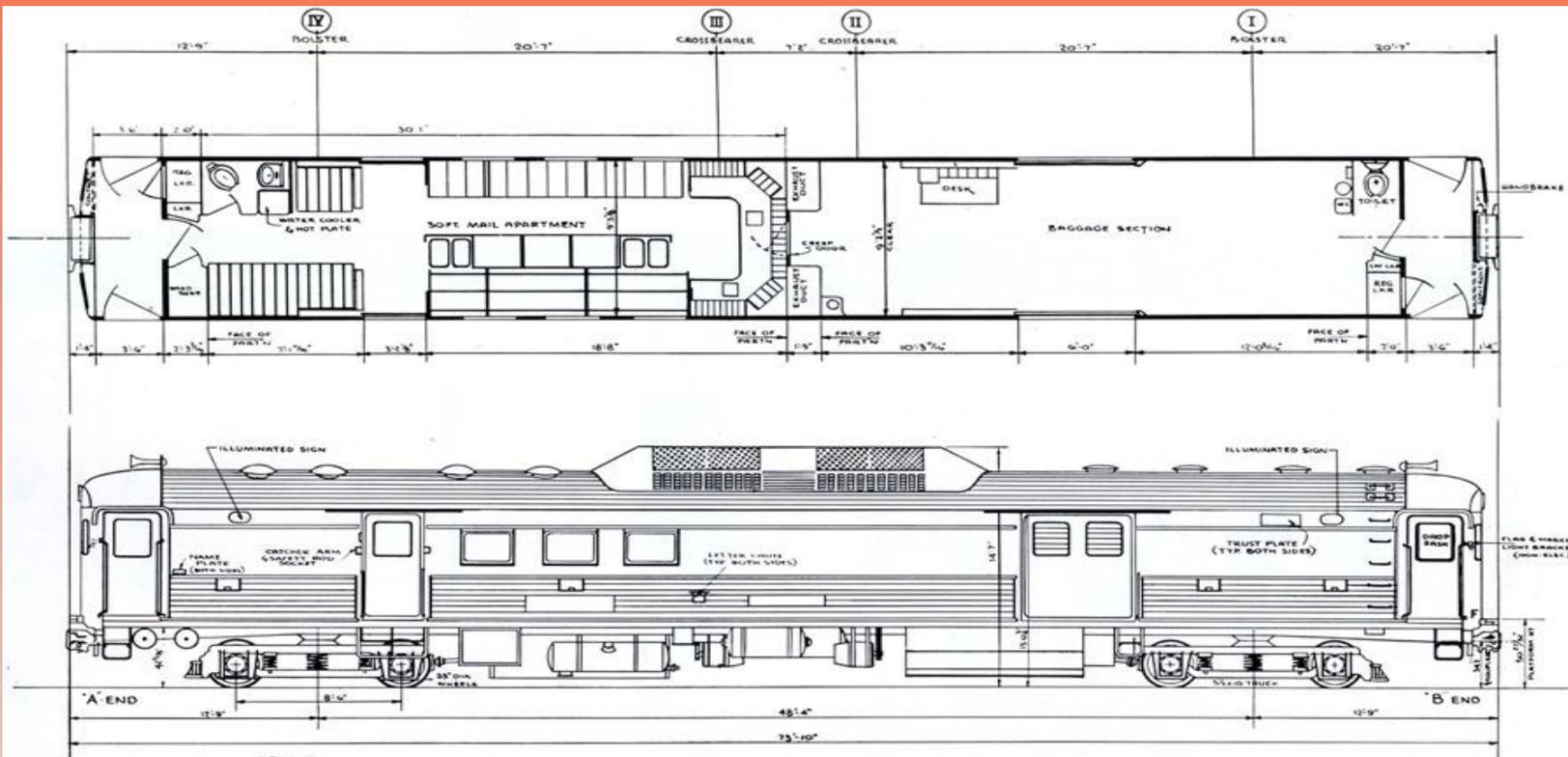


www.SisterBetty.org



Types

- RDC-4 Baggage, RPO
- Wheel Arrangement: 1A-A1, 14 built



RDC 4

RDC-4 is for mail and baggage-express exclusively. It is 73 feet, 10 inches long and contains a baggage-express compartment of 31 feet, separated by a bulkhead and creep door from a mail apartment of 30 feet.

Weight, light	105,200 pounds
Weight, ready to run	109,800 pounds
Normal maximum weight (including 10,000 lb. R.P.O. load 22,300 lb. baggage)	142,100 pounds





Joseph Testagrose Collection

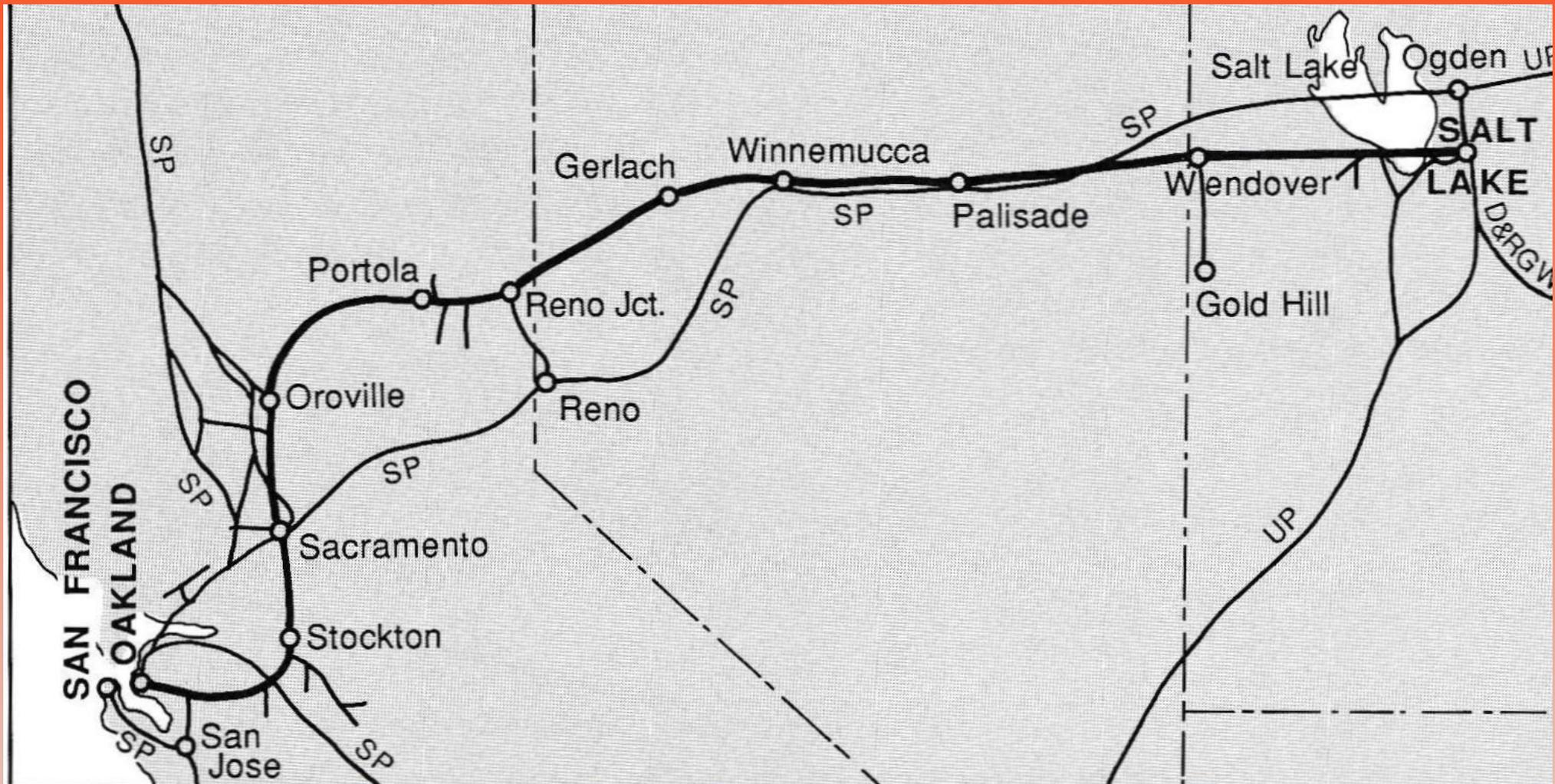


Types

- RDC-9 94 passengers
- Wheel Arrangement: 1A-2, 30 built
- No independent operation, no controls or end windows



Zephyrette Route



924 miles, longest run for any RDC, 19 scheduled, and nearly 100 conditional, stops



WP's Modifications - External

- Filters installed in the opening at each end of the engine compartments and side louvers sealed to create a dust-tight engine compartment
- Back-up horns at each end used in the event the leading horn became plugged with snow or sand
- Oscillating "Gyralights" mounted on the end doors, one equipped with a clear lens, the other with a red lens
- Illuminated identification number boards mounted on the roof.



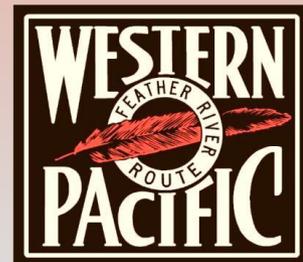
WP's Modifications – External

- Steel reinforced pilots
- Rear-view mirrors
- Electrical trainline for operating the car's electrical services while being hauled as a coach in a train
- Conductor's air-signal communicating equipment
- WP's herald and orange "wings" and the name "Zephyrette" added



WP's Modifications - Cab

- Engineer's seat identical with those standard on WP road diesel power.
- The standard Westinghouse M-23 automatic brake supplemented by the application of straight-air brakes
- The car's communicating system was expanded with buzzers in each of the passenger sections and in the baggage compartment
- Sun visors, stainless steel drinking water cooler, and a receptacle for the engineer's watch



WP's Modifications – Baggage Compartment

- Independent regulation of baggage-car radiators
- A rack for iced fish, milk, and other commodities requiring drainage
- Letter rack for handling company mail, together with a desk and individual light for reports and forms





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WP's Modifications – Long Haul Passenger Compartment

- Construction of a separate ladies' lavatory in the forward corner of the middle compartment
- In the opposite corner an electric drinking water-cooler was installed
- Hot water for each lavatory was provided by individual electric rapid-recovery, immersion-type heaters with four- gallon tanks mounted under the washbowls.



WP's Modifications – Long Haul Passenger Compartment

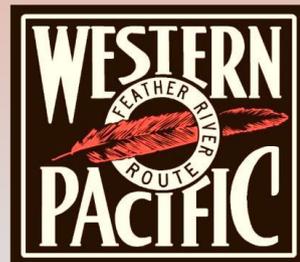


- For long-distance passengers in the middle compartment, the standard RDC seats were replaced by nine pairs of individual reclining seats mounted on 36-in. centers.



WP's Modifications – Short Haul Passenger Compartment

- The addition of the lavatory and water cooler reduced the seating capacity of the long haul section from 22 to 18
- The original seats were left in the larger coach compartment
- Hat-check clips mounted on the edge of the baggage racks above the center line of the seats.



WP's Modifications – Short Haul Passenger Compartment

- Conductor's headquarters located at the jump seat in the short haul passenger compartment with a wall mounted folding desk
- Night lights adjacent to the toilet in each passenger section
- Additional grab irons in vestibules
- Custom photo murals of Zephyrette route locations in both passenger sections.



WP's Modifications



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Let's Take A Ride On The Zephyrette



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7:30 AM in Salt Lake City





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RAILINER OPERATION

- 1- Place throttle lever in #1 position with the brakes "on."
- 2- Release brakes and allow train to move before advancing throttle to #2 position.
- 3- To accelerate, move throttle lever to #2, #3 and finally #4 positions one step at a time and allow train to reach new speed before advancing throttle.
- 4- To decelerate train speed, move throttle to position #1, which will activate the retarder in the transmission. Then use brakes if required.
- 5- If by accident the throttle lever is placed in the "off" position while in motion, the railiner speed must be reduced below 35 m.p.h. before reopening the throttle to position #1.





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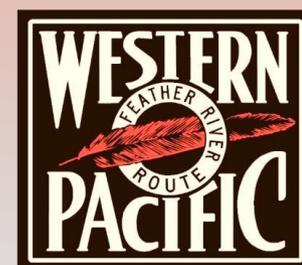


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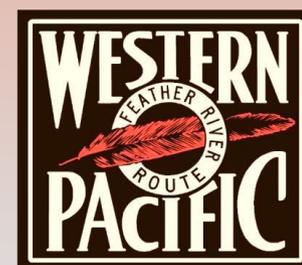


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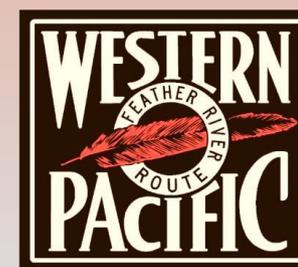


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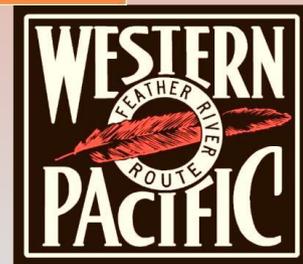


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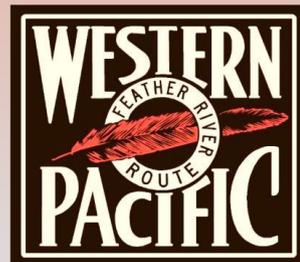
WVRails.net / Doug Bess

End of the line - 3rd Street Station,
Oakland
23 hours 30 minutes run time



The End For The Zephyrette

- The Zephyrette's last revenue run was October 2, 1960
- #375 and #376 were sold to Northern Pacific in 1962
- NP sold both to Amtrak in 1973
- #375 was wrecked at Galena, IL in 1974 and scrapped
- #376 was partially destroyed in a fire in 1979 and was sold for parts



But Not For RDCs

- All 45 units in 15 permanently coupled consists are still in use in Taiwan
- 2017, All Earth Rail (Vermont) bought 12 RDCs from Dallas Area Rapid Transit for projected commuter service
- VIA Rail (Canada) continues to use RDCs today in local service in Ontario
- Several remain in service in Brazil between Curitiba and Morretes
- At least two remain in service in Cuba



What has this:



Got to do with this?





Zoom! 183.68 mph Record still stands



Special thanks to:

Eugene Vicknair, without whom this presentation would not have been possible

The Feather River Rail Society Archives –
Western Pacific Railroad Corporate Archives /
Kenneth J. Meeker Collection

The Western Pacific Railroad Museum at Portola



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RDC's Successor



- Budd SPV-2000
- 31 built, 30 sold, 14 unfinished bodies were scrapped
- RDC idea, married to Amfleet coach body



History of the Budd RDCs and Western Pacific's Zephyrette service

Created by Mark Williams for NMRA
regional convention 2019

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Please include authorship citation – thank
you!

