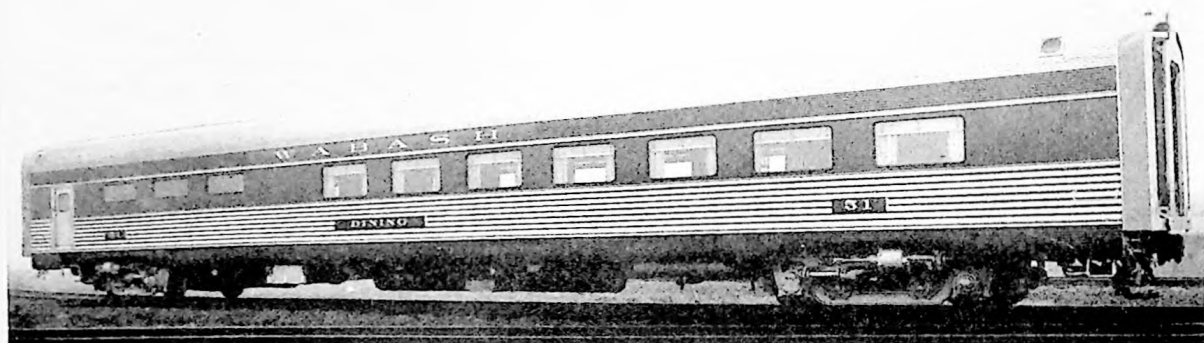


Above—The chair cars each seat 54 passengers on the main floor and 24 in the dome. Below—The dining car



Budd Builds Six-Car "Blue Bird" for Wabash

Three dome chair cars, a dome parlor-observation car, diner-lounge, and baggage-buffet-lounge offer variety of accommodations for daylight service between Chicago and St. Louis, Mo.

On February 26 the Wabash placed in service a new Budd-built six-car all stainless-steel passenger train, four of the cars in which have dome observation compartments. The train operates between Chicago and St. Louis, Mo., making a round trip every day. It consists of a combination baggage-buffet-lounge car, three dome chair cars, a diner-lounge car, and a dome parlor-observation car.

Each chair car seats 54 passengers on the main floor and has seats for 24 in the dome. The parlor-observation car seats nine in the forward parlor section, 14 in the rear parlor section, five in the under-dome drawing room, and six in the observation section at the rear end of the car. The dome seats 24. The dining car has five tables on each side of the dining room and seats 40. The cocktail lounge adjoining the dining room has seats for 12. The lunch counter accommodates nine

and the adjoining lounge, 23. The chair cars, parlor sections, and drawing room can accommodate 190 passengers, exclusive of the 96 dome seats and the six seats in the observation section.

The exterior of the train is dark blue and stainless steel. The blue is applied on the skirt below the side sill, on the window panel, and on the letterboard. The latter two surfaces are separated by the unpainted stainless steel of the upper belt rail. The roof and sides of the car below the windows are unpainted stainless steel. Lettering is in gold on the dark blue ground.

Seats in the main-floor compartments of the dome chair cars are the Sleepy Hollow type and are individually reclining and rotating reversible. The rubber-covered foot rests are adjustable. Seats in the domes are reversible but do not recline. Ash trays are mounted in the arms of these seats and there are

Murals are done
in oil on canvas



Looking down
the dome stair-
way into the
rear chair-car
compartment



The buffet,
looking toward
the lounge at
the rear end of
the baggage-
buffet-lounge





folding foot rests. The cushions and arm rests of all seats are foam rubber.

The decorations of the interiors of the chair cars and diner are all based on dark blue and gray walls, with drapes, upholstery and carpets varying to produce a distinctive color combination in each car. In one of the chair cars a rose carpet and blue needle-point upholstery are set off by drapes with a blue background and contrasting horizontal stripes. The carpets in the other two cars are blue; the upholstery in one, gray, and in the other, ashes of roses. Drapes are patterned in blue, and gray and blue, respectively. Carpets in the domes are the same as in the main passenger compartments. Upholstery in the domes is of the same three colors used in the main passenger compartments of the three cars, but is selected so that the colors in the dome and main compartments of each car are different.

Decorations

In the dining car the walls of the cocktail lounge are blue and the ceiling light ivory. The carpet is a feather pattern in several tones of blue. The drapes are blue and the leather upholstery on the chairs and settees, Chinese red. In the dining room the wainscot and painted parts of the partitions are blue, and the sides above the windows and the ceiling, two tones of ivory. The patterned drapes and carpets are blue and the upholstery, tan leather. Table tops are black.

A distinctive feature of the dining car is the decorative screens which separate the dining room from the cocktail lounge. These are vertical rods of clear Lucite across which are laced strips of red leather matching the color of the lounge upholstery. The rods are edge-lit and the decorative bands etched around them glow red when the edge lights are on.

The pier panels in the dining room are faced with mirrors. These and the large mirror on the pantry foyer wall are gold tinted. Repoussé decorations are placed on the headers at the ends of the dining room.

The predominant hue in the parlor-observation car

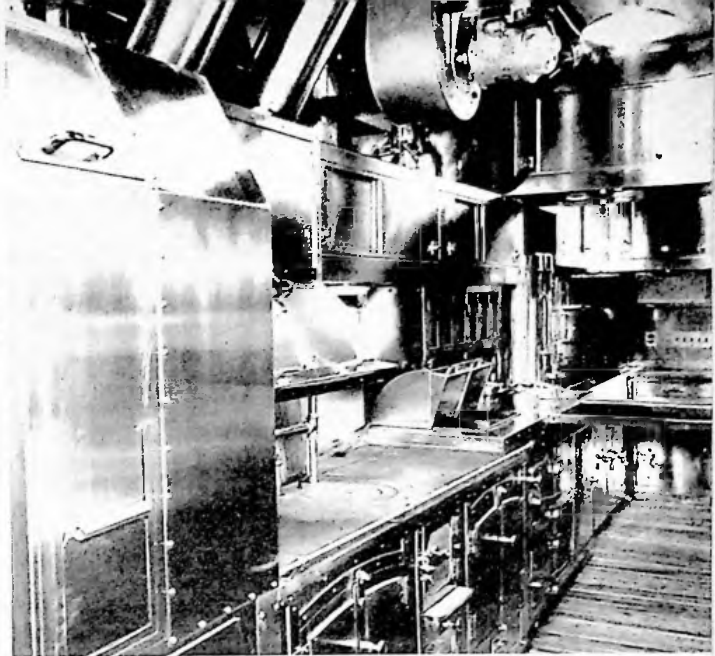
is plum which is used on the walls of the two main compartments. The carpet is rose and upholstery alternately ashes of roses and blue. The ceiling is a light beige, as are also the walls of the observation section. Wall colors in the domes are plum tones, with a rose carpet and seat upholstery alternately blue and gray.

Chairs in the rear parlor section are Sleepy Hollow type, rotating and fully adjustable. In the forward parlor section are nine movable barrel-back lounge chairs. The observation section is furnished with six large overstuffed lounge chairs. These chairs are all upholstered in ashes of roses.

The lounge in the combination car is furnished with 12 arm chairs, two sections with fixed settees and a curved corner seat. This room is decorated in tones of tan and blue-green. The sides are tan; the ceiling, light beige, and the painted portion of the end walls, blue-green. The carpet is rose and the leather in the sections and corner seat, green. The chair upholstery is equally divided among gray, blue and turquoise. Window drapes are turquoise. The pier panels in the lounge and counter sections are covered with gold-tinted mirrors.

The walls and ceilings in the lunch-counter section are finished in the same colors as those in the lounge. The door to the baggage space is blue-green, as is also the painted portion of the partition between the two rooms. The decorative feature of this partition is etched glass panels. The stools at the counter are upholstered in green leather, matching in color that in the lounge sections. The bar front is finished in green and tan leather and stainless steel.

Murals painted in oils on canvas, by Auriel Bessemer, decorate a partition in each of the cars, with the exception of the dining car. In the three dome chair-cars and the parlor-observation car the mural covers the partition above the wainscot at the end of the forward main passenger compartment. In the combination car there are two framed murals, one on each side of the passage at the end of the lounge opposite the lunch counter. These depict aspects of the



Facing page—Looking toward the cocktail lounge at the end of the dining room. Above left—Screens between the dining room and the cocktail lounge are clear Lucite rods laced with red leather. Above right—In the kitchen looking toward the pantry

life of the territory through which the train operates, some historical and some contemporary.

The car-body structures are of Budd Shotweld construction in which stainless steel is used throughout, except for the welded alloy-steel combination ends, draft sills and bolsters which are joined to the stainless steel center sills by rivets. Sides are of truss form and the corrugated roofs of the builder's standard type with outside purlines. The under floor consists of stainless steel pans, at one end of each of which is formed a transverse floor support. The plywood floor is laid directly on these floor supports and secured to them with Cherry monel rivets.

Sound deadening is applied in the form of Insulmat, which is sprayed on the inside of the roof, sides, ends and floor pans. The body insulation is 3 in. thick throughout. In the four dome cars the material is Ultralite. In the combination car and dining car the material is Stonefelt. The kitchen and pantry partitions in the dining car, and the partition between the baggage section and the lunch counter in the combination car are insulated with 1½ in. of Stonefelt. These and partitions in the other cars are of carbon steel, aluminum or metal-faced plywood.

Electric Power—Air Conditioning

Windows are Adams & Westlake double-glazed breather type. Those in the body of the car are glazed with ¼-in. panes of Solex outside and safety glass inside. The dome windows are curved and both inside and outside panes are ¾ in. thick. The outside pane and the outside lamination of the inside safety glass are Solex. The windows at the observation end of the parlor-observation car are also curved to conform to the lines of the car body.

Power for lighting and air conditioning is supplied on each car by a Safety 25-kw. 32-volt d.c. generator with Spicer drive. Alternating current for fluorescent

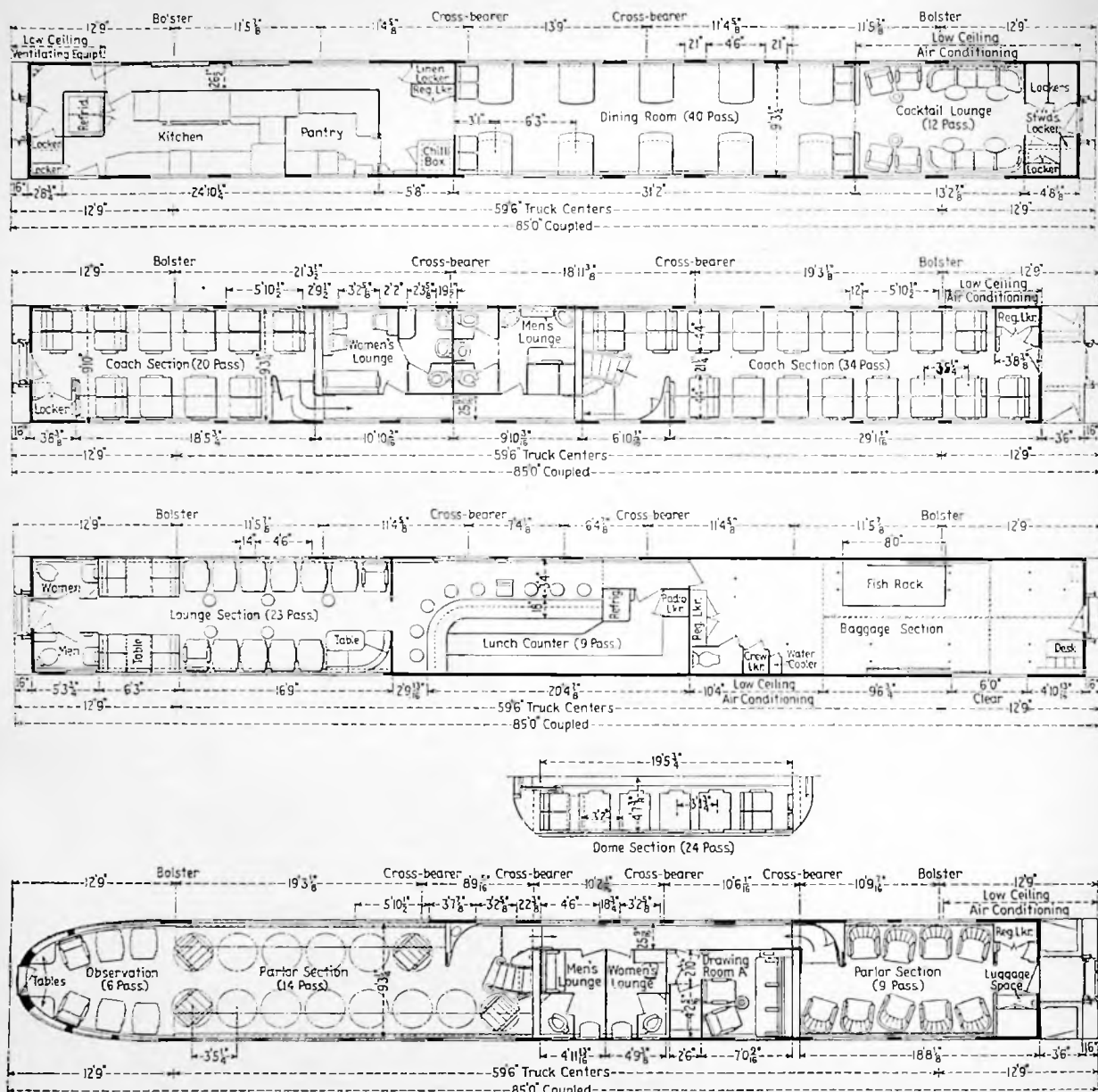
lighting is furnished by motor alternators. One 2-kw. machine is installed on each chair car and on the combination car, one 3-kw. machine on the parlor-observation car, and two 2-kw. machines on the dining car. Batteries are Exide, of 1,294 amp.hr. capacity.

Air conditioning is the Frigidaire electro-mechanical system of 10 tons' capacity. Condensers are the full flooded type. On the dome cars there are two evaporators, one of six tons' capacity for the main passenger compartments and the under-dome space, and one of four tons' capacity for the dome space.

Recirculated air passes through electrostatic Air-mats and Dorex activated carbon deodorizers. In the dome chair cars and the parlor-observation car air is distributed through Multi-vent ceiling panels in the main passenger compartments and through outlets along the sides of the ceiling duct in the domes. Side outlets are also employed in the dining room of the diner and in the lounge in the combination car. Anemostats are employed in the cocktail lounge of the diner and in the lunch-counter section of the combination car.

Heating is the Vapor zone-control system. A main control panel both for heating and air cooling is installed in a control locker. Changeover from heating to cooling, or vice versa, is manual. Overhead heat is supplied from a steam coil in the evaporator; floor heat, from fin-tube radiators. Both are thermostatically controlled. Steam-heat train lines are 2½ in., with Vapor flexible metallic connections and end valves.

Kitchen ventilation is supplied from three sources. An air curtain at the doorway between the foyer and pantry supplies 500 cu. ft. per min. of air taken from the dining room through a grill in the foyer ceiling. At the front end of the kitchen a blower supplies 1,000 cu. ft. per min., of which 800 cu. ft. is fresh air from outside the car and 200 cu. ft. is recirculated air taken from the passageway through a ceiling grill. The air supplied by this fan is heated by a steam coil under thermostatic control. There is no provision for cooling. An exhaust fan located over the range discharges air at the rate of 1,600 cu. ft. per min. and 100 cu. ft. per



Floor plans of the cars in the Wabash six-car "Blue Bird." The three chair cars and the parlor-observation car have dome observation compartments

min. is removed from the regulator locker through a separate fan.

Air is exhausted from the lunch-counter area of the combination car through a fan of 450 cu. ft. per min. capacity.

Frigidaire refrigerators are installed in the dining car and at the lunch counter. One of the refrigerators in each of these cars provides for ice-cube manufacture.

Fluorescent lighting is extensively used in all the

cars. In the chair cars fluorescent fixtures are set in the center of the ceilings of the main passenger compartments, and are placed at the sides of the central ceiling panel in the domes. Reading lights under the bag racks are incandescent. The parlor-observation car has fluorescent fixtures both in the center of the ceiling and under the bag racks. In the dining room and cocktail lounge of the dining car and the lounge in the combination car fluorescent fixtures are arranged continuously around the sides at the ceiling. In the lunch-

PARTIAL LIST OF MATERIALS AND EQUIPMENT ON THE WABASH "BLUE BIRD"

Truck castings; bolster anchors General Steel Castings Corp., Granite City, Ill.

Wheels; axles Bethlehem Steel Co., Bethlehem, Pa.

Journal boxes Hyatt Bearings Div., General Motors Corp., Harrison, N. J.

Sound insulating pads United States Rubber Co., New York

Couplers and coupler yokes National Malleable & Steel Castings Co., Cleveland, Ohio

Draft gear Waugh Equipment Co., New York

Center pins W. H. Miner, Inc., Chicago

Air-brake and signal equipment Westinghouse Air Brake Co., Wilmerding, Pa.

Clasp brakes American Steel Foundries, Chicago

Hand brakes National Brake Co., New York

Air-conditioning equipment Frigidaire Div., General Motors Corp., Dayton, Ohio

Air diffusers Anemostat Corp. of America, New York

Air-diffuser panels Pyle-National Co., Chicago

Air filters — fresh and return air Farr Filter Co., Los Angeles, Calif.

Air filters — electrostatic American Air Filter Co., Louisville, Ky.

Ventilating fans B. F. Sturtevant Div., Westinghouse Electric Corp., Boston, Mass.

Dorex activated carbon Turco Products Corp., New York

Heating and air-conditioning controls, train-line connector Vapor Heating Corp., Chicago

Train line A. M. Byers Co., Pittsburgh, Pa.

Insulation — steam train line Johns-Manville, New York

Batteries Union Asbestos & Rubber Co., Cicero, Ill.

Electric Storage Battery Co., Philadelphia, Pa.

Battery charging and train-line receptacles Pyle-National Co., Chicago

Communication circuit receptacles and connectors Mines Equipment Co., St. Louis, Mo.

Generator; motor alternator Safety Car Heating & Lighting Co., New York

Spicer drive Spicer Manufacturing Div., Dana Corp., Toledo, Ohio

Inner diaphragm; vestibule curtains; window sash; window-shade mechanism; closure rubber Adams & Westlake Co., Elkhart, Ind.

Glass windows Libbey-Owens-Ford Glass Co., Toledo, Ohio

Insulmat Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Insulation J. W. Mortell Co., Kankakee, Ill.

Diner and baggage cars Johns-Manville, New York

Dome cars Gustin-Bacon Manufacturing Co., Kansas City, Mo.

Floor rivets Cherry Rivet Co., Los Angeles, Cal.

Venellian blinds Ajax-Consolidated Co., Chicago

Smoking stands Marshall Field & Co., Chicago

Vestibule flooring Alan Wood Steel Co., Conshohocken, Pa.

Step treads Morton Manufacturing Co., Chicago

Floor covering Beck & Blatchford Co., Chicago

Carpet Goodyear Tire & Rubber Co., Akron, Ohio

Carpet pad James Lees & Sons Co., New York

Chairs and tables Koylon Div., United States Rubber Co., New York

General Fireproofing Co., Youngstown, Ohio

S. Karpen & Bros., Chicago

Seats — chair cars and dome Heywood-Wakefield Co., Gardner, Mass.

Light fixtures Luminaior, Inc., Chicago

Safety Car Heating & Lighting Co., New York

Radio and public address system Farnsworth Television & Radio Corp., Fort Wayne, Ind.

Metal-covered plywood Hasckelite Manufacturing Co., Grand Rapids, Mich.

Met-L-Wood Corp., Chicago

Kitchen, pantry, and lunch-counter equipment Walrus Manufacturing Co., Decatur, Ill.

Table tops Formica Co., Cincinnati, Ohio

Refrigerators General Electric Co., Schenectady, N. Y.

Counter and window sills Formica Co., Cincinnati, Ohio

Northern Industrial Chemical Co., Boston, Mass.

Odor absorbers Turco Products Corp., New York

Lucite in screens E. I. du Pont de Nemours & Co., Wilmington, Del.

Wash stands Crane Co., Chicago

Paper towel dispensers A. P. W. Products Co., New York

Hoppers Duner Co., Chicago

Copper tubing and sweat fittings Chase Brass & Copper Co., Waterbury, Conn.

Mueller Brass Co., Port Huron, Mich.

Northern Indiana Brass Co., Elkhart, Ind.

Vapor Heating Corp., Chicago

Henry Giesel Co., Chicago

Fire extinguishers Sunroc Refrigeration Co., Glen Riddle, Pa.

Pyrene Manufacturing Co., Newark, N. J.

Door operators National Pneumatic Co., Rahway, N. J.

Door closers Russell & Erwin Div., American Hardware Corp., New Britain, Conn.

Yale & Towne Manufacturing Co., Norton Door Closer Div., Chicago

Midland Co., South Milwaukee, Wis.

P. & F. Corbin Div., American Hardware Corp., New Britain, Conn.

Emergency rear light Mars Signal Light Co., Chicago

counter area the lights are in individual incandescent fixtures. The lighting in all main passageways and in the underdome wash rooms is also fluorescent. The kitchen and pantry of the dining car and all vestibule lights are incandescent.

The train is equipped with the Farnsworth radio and public address system and two wire recorder channels. The antenna is on the combination car and the receiving set and master control station are in the lunch-counter section of this car. Loud-speakers are placed in the ceilings of the chair cars, parlor-observation car, dining car and lounge of the combination car.

There is also one in the drawing room in the parlor-observation car controlled by a five-point selector switch. This permits the choice of the public address circuit, the radio, either one of the two recorded programs available, or off. A door switch opens the speaker circuit when the drawing-room door is opened.

There are two public-address hand sets on the train, one at the steward's station in the dining car and the other at the radio locker in the counter section of the combination car. There is no telephone train line. At the rear end of the parlor-observation car, however, is a jack and telephone set for plugging into the Bell System at terminals.

Water is carried in two 150-gal. tanks under each car. There are two additional 75-gal. tanks overhead

in the kitchen of the dining car and two 50-gal. tanks at the lunch counter. In each case one is for hot water and one for cold. There are fillers on each side of the car for the overhead tanks. Electro-mechanical drinking-water coolers are placed in each dome car at the end of the under-dome corridor beside the stairway to the dome.

The air brakes are Westinghouse HSC type with 250 per cent braking ratio and 100 lb. cylinder pressure, with electro-pneumatic straight-air control. The equipment includes Westinghouse speed governors and decelostats without sand. There are no retaining valves.

The trucks are General Steel Castings equalizer type with combination coil and elliptical bolster springs and without shock absorbers. The wheel base is 8 ft. 6 in. and all axles are 6-in. by 11-in., equipped with Hyatt roller bearings. The wheels are 36-in. multiple-wear wrought steel. Sound-deadening pads of rubberized fabric are applied on the center plates, equalizer spring seats, side bearings and swing hangers.

The cars have National Malleable tight-lock couplers and Waughmat draft gears. There is an uncoupling mechanism on one side only. No buffers are on the cars now, but provision has been made for their future application. The closures between the ends of the cars include both inner and outer diaphragms. End doors are operated pneumatically.