Beyond Interurban but not Quite Steam Railroad: A Comparison of the South Shore Line "Special" Deluxe Cars with Their Interurban and Steam Railroad Contemporaries

"We believe that the general public prefers electric transportation to steam transportation…. However, the [electric] road must be in position to utilize to the fullest extent the high speed desired by the public…. And it requires modern cars that are comfortable to the verge of luxury. There is so much money in this country and so many to spend it…."

– James Walker, Consulting Engineer, 1 September 1927[1]

The interurban era was short – the average lifespan for the interurbans was 28 years and nine months.[2] The average lifespan of deluxe services on those interurbans that offered it was even more dismal – 13 years and seven months. A deluxe car with limited capacity and a short life was a poor investment. Indiana Service Corporation bought two parlor-buffet cars in 1926 for $35,000 each and ran them for just over four years and three months.[3] The South Shore Line paid $46,113 for each of two dining cars in original cost and betterments in 1927.[4] Revenues in 1928 averaged $1.10 per meal against expenses of $1.44 exclusive of the capital cost of the dining cars.[5] After losing 34 cents per customer for five years and two months, the dining cars were out-of-service.[6]

With that kind of performance, it was expected that few interurbans would pick up the challenge of operating any kind of deluxe services, and only twenty-seven interurbans did so. Interurbans that ran from a small town to a crossroads did not have a market for an expensive ride on a rotating chair. For many of the interurbans in better markets, the runs were too short for dining or sleeping. That said, for those interurbans that felt that they could attract longer-distance passengers, there was a perceived need to compete against their original competitors – the parallel steam railroads – and to provide amenities more lavish than the coach seat.

There were some corporate and geographic patterns as to which deluxe interurban services were offered. Parlor seats were most prevalent, sleeping berths the least. The Insull Group represents seven of the twenty-seven companies that operated deluxe services. Of the interurbans operating deluxe services, five were in Indiana – operating almost a quarter of the total mileage of interurban deluxe

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[1] James Walker, A Report on Operating Conditions on Illinois Traction System: With Particular Reference to Improvement of Earnings Through Rehabilitation and Extensions 129-30 (1927).
[2] George Hilton & John Due, The Electric Interurban Railways in America 248 (1960).
[3] Indiana Service Corporation brochure, undated.
[4] Chicago, South Shore and South Bend Railroad, equipment ledger.
[5] L.J. Hile, *Along the South Shore Line: Dining and Parlor Cars*, The Pantagraph, May 1928, at 5.
[6] Chicago, South Shore and South Bend Railroad, *supra* note 4.

services and the greatest mileage of any state. In Indiana at least, interurban deluxe services were significant to the mobility of Hoosiers and likely contributed to their cultural norms.

There were hubs that generated the greatest networks of deluxe interurban services just as there were hubs for the interurban networks generally. The hubs for deluxe interurban services were Chicago, Milwaukee, Dallas, and Indianapolis with the latter being the greatest. Cars with parlor car seats operated to the south, east, north, and west of Indianapolis at one time or another, but equipment limitations on the line to Terre Haute ended that service after just fifteen days.

Parlor-buffet cars operated north from Indianapolis to Fort Wayne for nearly 25 years. But success eluded the Indianapolis to Louisville interurban parlor-dining car service as it only lasted six years. If longevity is a good measure of success, the deluxe service to the east from Indianapolis was little better. Parlor seats were available from Indianapolis to Dayton, in a joint service operated by the Terre Haute, Indianapolis & Eastern and the Dayton & Western, but the service ended after seven years.[7]

Interurban sleeping cars operated to the south from Indianapolis for eight years despite the short run to Louisville. To make the 117-mile run from Indianapolis to Louisville work, the sleeping cars were hauled to intermediate sidings to sit out much of the night.[8] Sleeping car service in Indiana was a financial failure, but lasted eight years, two years longer than the parlor-dining cars. It is likely that the Insull Group's experience with sleeping car service on the Illinois Traction System gave them hope for the Indiana operation – interurban sleeping cars served the Prairie State for 34 years.

The arc of success of the deluxe cars on the South Shore Line was typical. The deluxe services were successful enough for a time to justify the purchase of additional cars and to hire professional staff to attend to the small percentage of riders who would indulge themselves in the privacy of a parlor car chair or those who wanted to tackle a steak dinner at 70 miles-per-hour while the train was jostled by the track joints and switch frogs.

Yet even before the Insull Group went bankrupt on 6 June 1932, the dining cars on the South Shore Line were removed from service – dining on the South Shore Line ended on 24 April. The parlor cars fared only a little better as they continued in regular service for another year. But for the popularity of Notre Dame football home games, the four parlor cars would have expired on 30 April 1933. Football special trains and occasional charters sustained the parlor cars for a time. The parlor-observation cars were converted to single-compartment coaches after

[7] Hilton & Due, *supra* note 1, at 279.

[8] Interstate Public Service Company, The Interstate: The Electric Way 22 (1924).

ridership rose during 1937. The parlor-observation-buffet cars were converted to coaches after the United States entered World War II.

The South Shore Line deluxe cars were neither typical interurbans, nor were they typical of steam railroad equipment. The best way to describe the cars is to call them hybrids. What follows is a discussion of where the cars diverged from interurban and steam railroad practice.

Car Framing:

As with the South Shore Line coaches described in that section, the parlor and dining cars were framed with the truss-side design, a method unique to the interurbans not capable of sustaining the longitudinal forces of locomotive-hauled train service. Because the framing of the South Shore Line parlor and dining cars was consistent with that for interurban cars, therefore the parlor and dining cars were not framed to steam railroad standards.

Car Construction:

The South Shore Line parlor and dining cars were constructed of materials similar to that of the South Shore Line coaches. The roofs of all six of the deluxe cars consisted of wood carlines and decking, all of material being poplar. This was consistent with interurban cars throughout North America, but only occasionally seen on the steam railroads.

Poplar was also used to line the interiors of the South Shore Line dining cars, and the interiors were given a painted finish. Contemporaneous steam railroad dining cars were lined with painted steel. The interiors of the parlor-observation-buffet cars were varnished walnut; the parlor-observation cars were lined with varnished mahogany. As discussed above, wooden interiors were not seen in the steel cars on the steam railroads in great numbers and were rare on the interurbans by the late 1920s. The interiors of the South Shore Line parlor and dining cars were lavish when compared with steam and electric railroad equipment built in the same time frame.

The floors of both the parlor and dining cars on the South Shore Line were two layers of long-leaf yellow pine as on the South Shore Line coaches. This was universal in interurban practice, and not seen on the steam railroads aside from the Northern Pacific and the Canadian roads.

Because the builders of the South Shore Line deluxe cars made liberal use of wood in their construction, they were constructed to the standards of typical steel interurban cars of the 1920s, and therefore not the construction standards of steam

railroad cars for any class of equipment either locomotive-hauled or electric self-propelled.

Car Coupling and Draft Hardware:

The South Shore Line parlor and dining cars were equipped with coupling and draft equipment identical to that used on the South Shore Line coaches. This consisted of an Ohio Brass Form 23 coupler and ball anchor creating a ball-and-socket arrangement. Coupler swing was guided by a radius bar at the car end. This arrangement was consistent with all interurban railroads.

Diaphragms were fitted to the ends of the cars with diaphragm buffing devices identical to those on contemporary steam railroad equipment, this arrangement was unique among the interurbans with two exceptions noted in the discussion of the South Shore Line coaches.

The ball-and-socket and radius bar coupler arrangement was needed to allow coupled South Shore Line cars to negotiate tight radius curvature found in the street trackage at South Bend and Michigan City. The diaphragms allowed passengers and crew an all-weather passage between cars, made necessary as passengers were expected to move from car-to-car for dining car service.

As the other operator of full dining cars, the North Shore Line had tried various remedies to the problem of passengers trying to navigate between cars at speed when there was no continuous passage. The North Shore Line developed a detachable diaphragm that was latched together to its mate when cars were coupled. A removable step plate covered the gap between cars at the floor. The system was not capable of negotiating tight curvature and was disconnected when trains approached the street running in Milwaukee and the 'L' in Chicago.[9]

Because the South Shore Line deluxe cars used elements of both interurban and steam railroad coupling and draft equipment, therefore this created a hybrid system for coupling cars and absorbing the longitudinal forces of cars in train service not seen on either the steam railroads or other heavyweight steel interurbans.

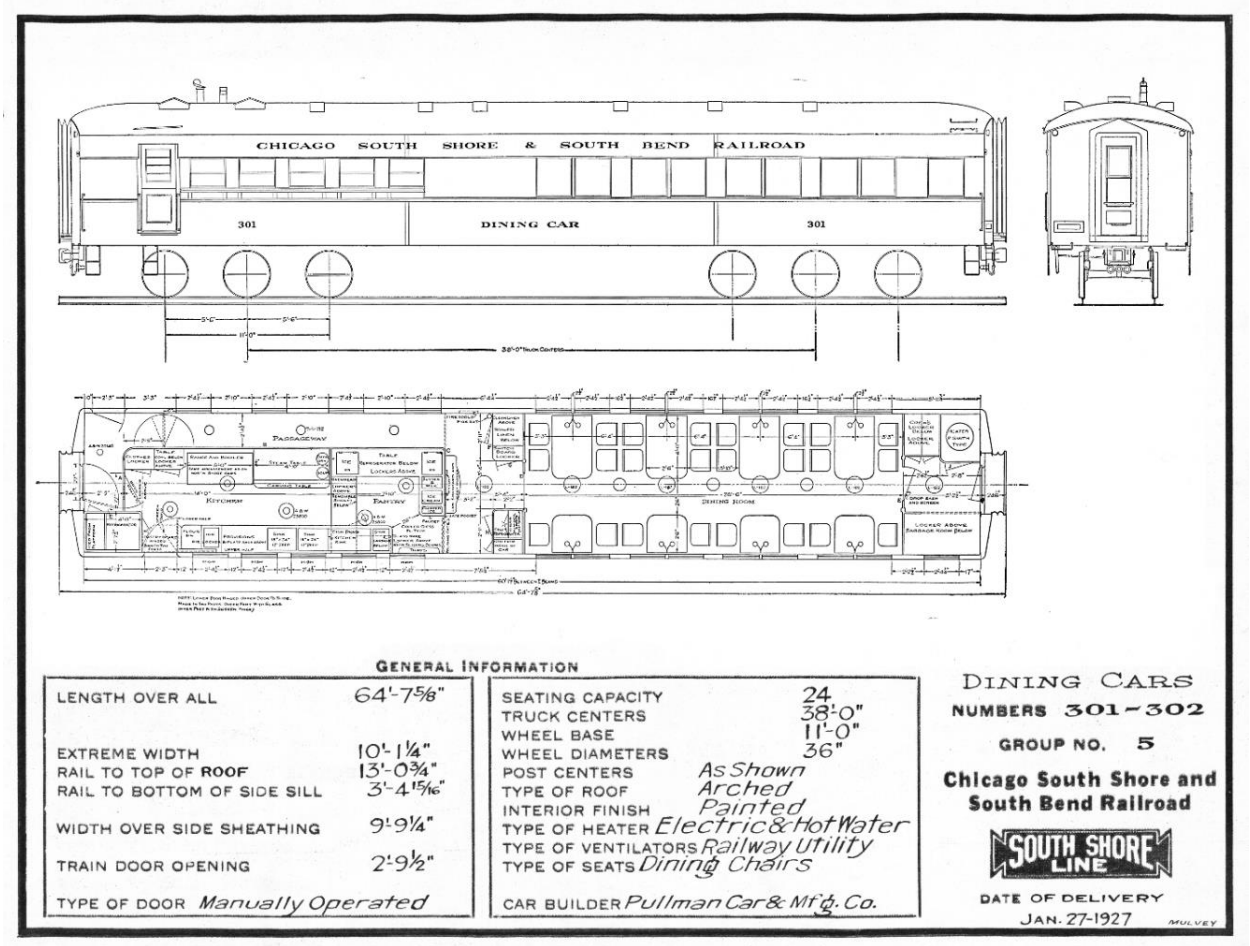
[9] Central Electric Railfans Association, Route of the Electroliners 147 (1963).

Dining Car Interior Appointments:

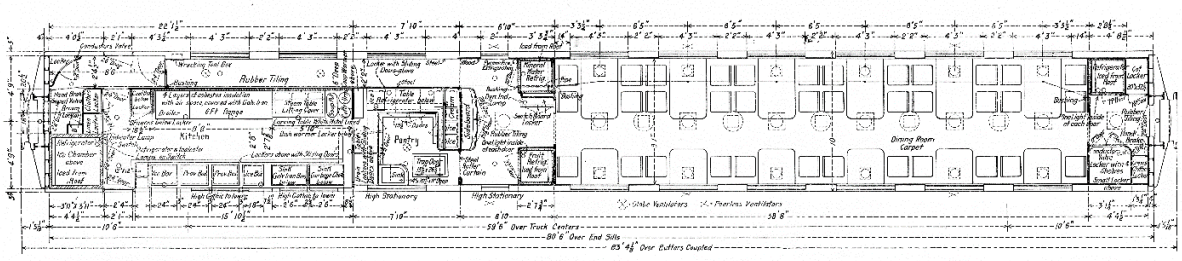
The interiors of the South Shore Line dining cars were arranged in a manner that was typical of Pullman Company dining cars. There were not many ways a dining car can be arranged as kitchen space was limited by the aisle necessary for passage to and through the dining car and the seating area was most often at the other end of the car.[10] This pattern for dining car layout was set in the 1880s; the only change being the elimination of vestibules beginning in 1914.[11] As passengers did not generally board their trains at the dining car, eliminating the vestibules added 8' to the length of the car and improved seating capacity, kitchen floor space, or both.

The South Shore Line dining cars were only 75% of the length of their steam railroad contemporaries and had to pack a full kitchen and space for 24 diners into these relatively diminutive cars. A typical steam railroad dining car built in the mid-1920s was 18' to 19' longer than those of the South Shore Line with a concomitant increase in workspace in the kitchen and pantry and seating capacity.

[10] John H. White, Jr., The American Railroad Passenger Car 321 (1978).
[11] *Id.* at 323.



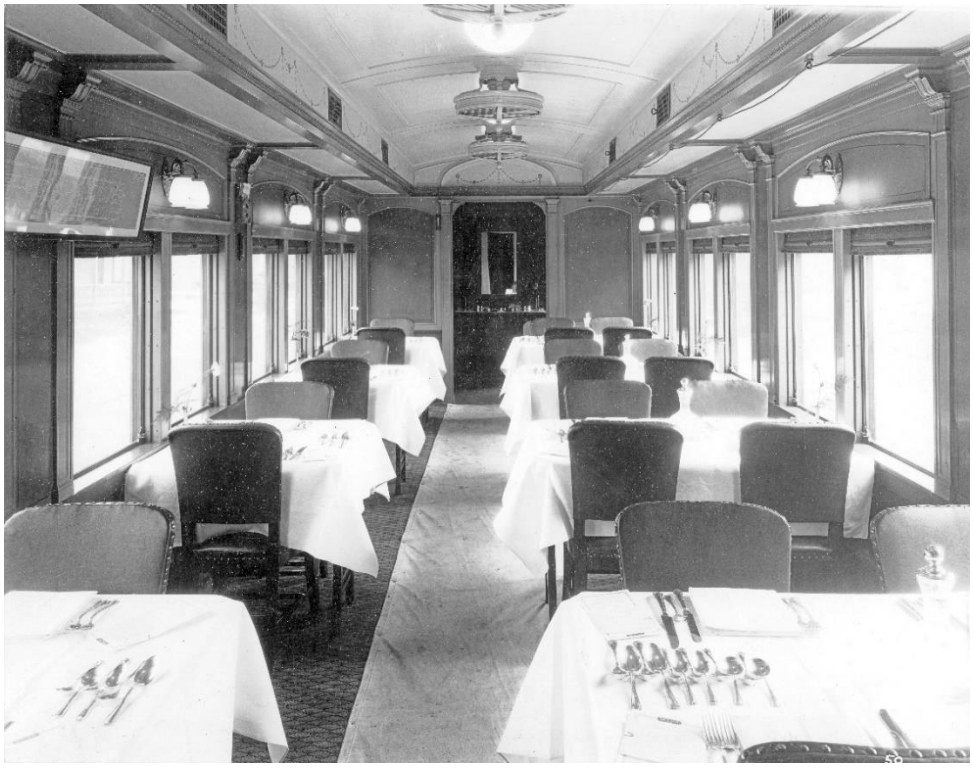
Group drawing of South Shore Line dining cars, 27 January 1927. The layout is in keeping with their steam railroad contemporaries, but the South Shore Line dining cars were 25% shorter than the dining cars of the steam railroads.



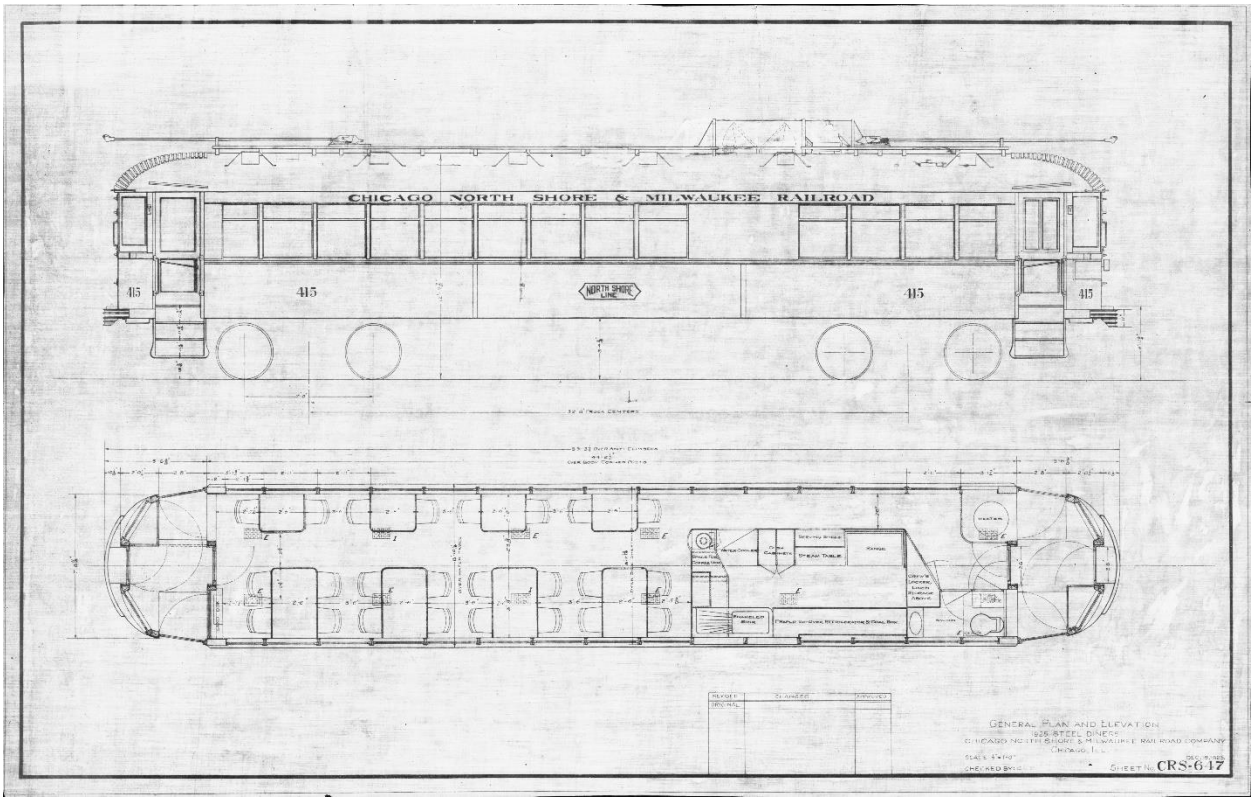
Floor Plan of Dining Car for Atchison, Topeka & Santa Fe

The dimensions of this dining car built for the Atchison, Topeka & Santa Fe (ATSF) allow for table space for 12 more guests and 44' of additional square feet of floor area in the kitchen. The table spacing is 1" greater than that of the South Shore Line dining cars.

Louisville & Nashville dining car, circa 1929. Seating for thirty-six and wide windows were typical for steam railroad dining cars by the mid-1920s. The South Shore Line dining cars had seating for twenty-four with the tables situated at paired windows (below; photographer credit E.C. Calvert, Photographer, Michigan City, Indiana).

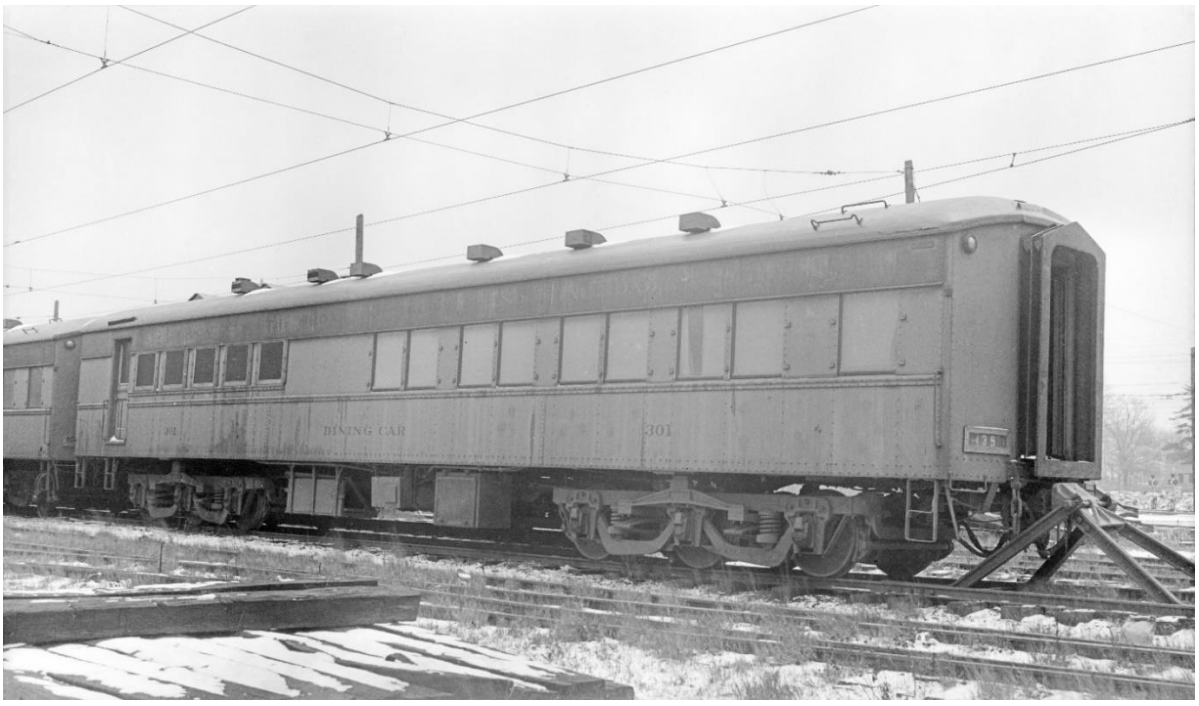


Dining car #409 on the North Shore Line, 1923. The Insull Group's North Shore Line was the only other interurban that operated dedicated full dining cars. The 44' 2½" bodies of the North Shore Line dining cars were 20' shorter than their South Shore Line counterparts but this car could serve as many passengers. A cramped kitchen and 4" less space between each table allowed seating for twenty-four.



North Shore Line dining car #415. If this is where you work every day, size matters – the kitchen on car #415 covers 65 square feet. The kitchen on the South Shore Line dining car above covers 166 square feet. The ATSF dining car crew had 210 square feet to roam in the dining car above.

Train of chartered North Shore Line dining cars at Oakton St., Niles Center, Illinois, 1928. The exteriors of the North Shore Line dining cars were indistinguishable from the North Shore Line coaches. The first car in this train is a coach; the rear three cars are dining cars.



South Shore Line dining car #301, Michigan City, 1940. The paired windows and 3-axle trucks distinguished the parlor-observation-buffet and dining cars from the South Shore Line coach fleet.

All other interurban dining car operators bought cars that were set up for dual use as parlor and dining cars – either tables were placed between parlor car chairs at mealtime, or the cars had permanent small sections for dining and parlor car seating. The Milwaukee Electric Railway & Light Company had two-section articulated diner-coaches. The South Shore Line and North Shore Line dining cars were not typical of either interurban or steam railroad practice but were appointed to emulate dining cars of the steam railroads even if the scale of the equipment was smaller.

Parlor-Observation-Buffet Car Interior Appointments:

Dual use interurban parlor-dining cars are difficult to compare to the single use South Shore Line parlor cars which were arranged for only one class of service. Steam railroad parlor cars came in an incredible variety of arrangements making any comparison with the South Shore Line parlor cars difficult.[12] The steam railroads had an incentive to create diversions for first-class (aka sleeping car) passengers on long trips – extra revenue. A parlor car had a dizzying array of services and products available even if there was no seat charge. A buffet could serve snacks and light meals, lounges could sell drinks, and barbershops could sell haircuts. A small library was available for those inclined to read. All these services could be found between the partitions of a parlor car.

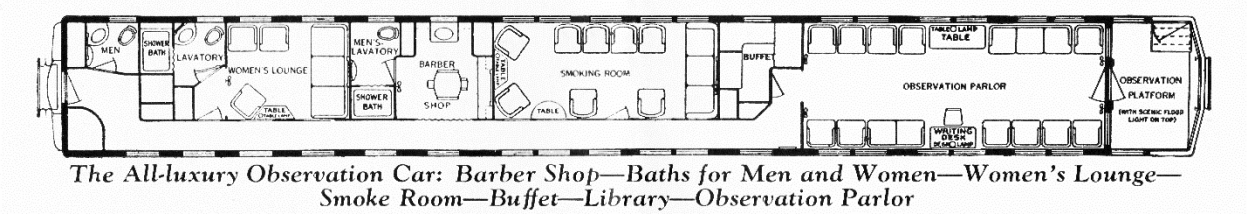
If there were amenities that passengers had come to expect on steam railroad parlor cars, they included the privacy of individual chairs, a men's smoking room that doubled as a club room, a ladies' lounging area (at least through the mid-1920s when women were not expected to smoke in public), and some space at the rear of the car to enjoy watching the far horizon recede in the distance. All of this and more were available to first-class passengers without an extra fare.

On the interurbans, there was rarely a first-class section (that is sleeping accommodations) aside from the parlor car. Most often the charge to occupy a parlor car chair is what made the parlor car a first-class car. Therefore, the most common element in interurban parlor cars were parlor car chairs, and in about 37% of American interurban parlor cars, a buffet kitchen. A lounge selling liquor came only after prohibition, and only to the North Shore Line. Magazines were often available, but not a full library. There never was a rolling interurban barbershop.

A common arrangement for a steam railroad parlor car from front to back began with the ladies' lounging room, barbershop, men's smoking room, buffet, a parlor room, and ending with an open-air platform with heavy folding chairs right above the draft gear carrying the rear coupler. The ladies' lounge and the men's smoking room most often had their own saloons or lavatories; the barbershop would sometimes include a shower. Tables were provided for both women and men in

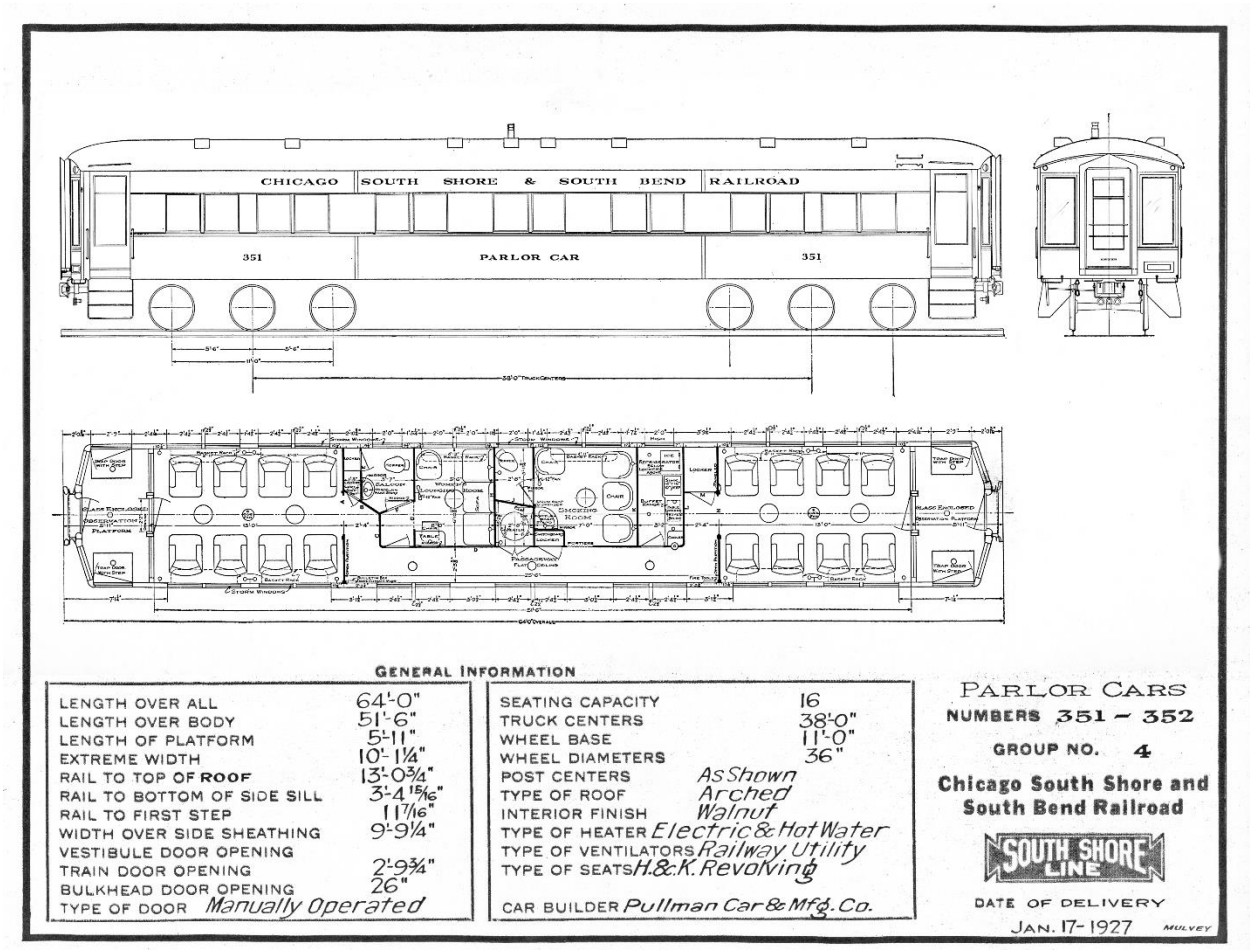
[12] White, *supra* note 9, at 299.

their lounge and smoking rooms, and a writing desk with a small chair was provided in the parlor room.



The All-luxury Observation Car: Barber Shop—Baths for Men and Women—Women's Lounge—Smoke Room—Buffet—Library—Observation Parlor

Chicago, Milwaukee and St. Paul Railway (Milwaukee Road) parlor car floor plan, 1927. Many variations on parlor cars were built including some with bedrooms and soda fountains.

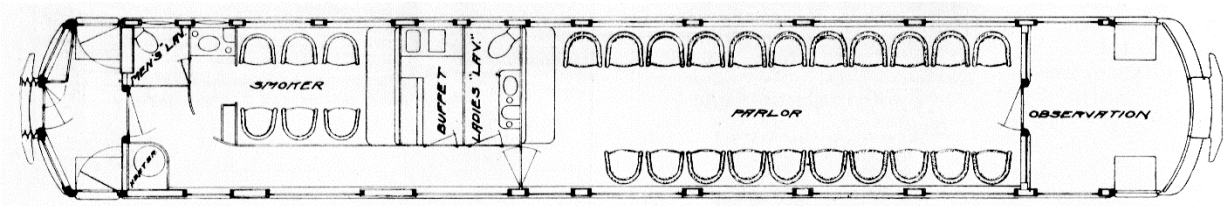


The South Shore Line parlor-observation-buffet cars were a reasonable attempt to include the amenities expected in a steam railroad parlor car into a small double-ended version suitable for South Shore Line operating conditions. The men's smoking room and women's lounging room translated well from the Milwaukee Road plan, above. A writing desk was included on the original plan for the South Shore Line parlor-observation-buffet cars but was omitted when revolving chairs replaced the original barrel chairs in the parlor rooms.

Milwaukee Road parlor car, circa 1930. Rotating chairs replaced sofas and barrel chairs on steam railroad parlor cars coincidentally with the end of 1920s prosperity. Staring at the people across from you can be socially uncomfortable; being able to stare at the scenery is one of the great benefits of riding the railroad. Staring at a continuum of asphalt or scenery from 30,000 feet does not have the same charm as scenery seen from the railroad.

The ultimate view: Chicago, Rock Island and Pacific open observation platform, circa 1930. Steam railroads embraced the open observation platform despite the disadvantages – they were seasonal, fair weather places to ride a train, and the smoke and cinders from the locomotive were a constant nuisance.

Electric interurbans emulated the open platform experience without the smoke and cinders. Open platform observation cars prevailed on interurbans in Oregon (as above at Salem), Washington, California, Utah, Iowa, Illinois, and New York State. Oregon Electric parlor-observation-buffet car Sacajawea*, circa 1910.*



Floor Plan of Observation Parlor Car for Oregon Electric Railway

Oregon Electric parlor-observation-buffet car floor plan, 1910. The arrangement of the Oregon Electric cars was seen on Midwestern interurbans as well; similarly arranged cars ran on the Waterloo, Cedar Falls & Northern and the North Shore Line. Parlor cars on the Columbus, Delaware and Marion were arranged much the same, but without the buffet.

Three interurbans providing service between Indianapolis and Fort Wayne in Indiana and Lima in Ohio pioneered an alternative to the open-end observation platform in 1906 – the solarium observation room or sun-room parlor. Interurbans in Wisconsin, Michigan, and Ohio adopted the solarium observation room over the next two decades. One of the features of the interurban solarium observation room not seen on the later steam railroad observation cars was a glass wall starting just above the floor and continuing nearly to the ceiling dome across the width of the car.

There were seven identical cars in the Indiana – Ohio equipment pool. Here, Union Traction car #298 used two panes of curved glass for a particularly graceful end to its single-car train. Union Traction contributed two cars, the Fort Wayne & Wabash Valley contributed four cars, and the Lima & Toledo contributed one car. Clearance issues on the Lima & Toledo ended the Fort Wayne – Lima service after a brief trial, and their car was sold to Union Traction.[13]

[13] George K. Bradley, Fort Wayne and Wabash Valley Trolleys, 215-16 (1983).

Lehigh Valley Black Diamond at Mauch Chunk, Pennsylvania, circa 1929. The end of the steam railroad solarium car was considered an ugly alternative to the open-end observation car that robbed the rider of the visibility of the open platform. John White claimed that the flat solarium end was a blunt, inconclusive end to the train.[14]

The first solarium end cars on the steam railroads were built by the Chicago, Burlington and Quincy in 1909.[15] *Solarium end cars were also seen on the Canadian railroads and their U.S. subsidiaries such as the Soo Line. The Great Northern and Northern Pacific favored them for their year-round utility.*

[14] White, *supra* note 9, at 309.
[15] *Id*. at 307.

Burlington Light*, Solarium Observation car at Pullman, 15 June 1926. The all-steel interior was decorated with fanciful wallpapers, and a limited view out from the rear of the car; even the rear door had light dividers. (Photographer credit: John P. Van Vorst for Pullman Car & Manufacturing).*

South Shore Line parlor-observation-buffet car #351 at Pullman, 17 January 1927. The varnished walnut had little ostentatious decoration, but the wood has a warm, welcoming feel. Beyond the vestibule partition is the view of the horizon receding in the distance. (Photographer credit: John P. Van Vorst for Pullman Car & Manufacturing).

The solarium end of South Shore Line car #352 was in keeping with the Indiana interurban tradition of keeping the passengers safely behind a near floor-to-ceiling glass window wall. Pullman Car & Manufacturing, 17 January 1927. (Photographer credit: John P. Van Vorst for Pullman Car & Manufacturing).

The Insull Group used single-ended open-platform observation cars on the North Shore Line despite stub end terminal facilities in Chicago and Milwaukee. Lengthy back-up movements to turn the cars end-for-end to begin the next trip were likely a headache in Milwaukee streets and on Chicago's 'L'.

North Shore Line parlor-observation car #410, Kenosha, Wisconsin, circa 1923. Because the North Shore Line had no wye or loop tracks at their terminals, these single-ended cars had to be turned at the end of each run. In their respective cities, the cars had to be pushed out of the terminals into street traffic in Milwaukee or 'L' congestion in Chicago to be correctly positioned for the next run.

Apparently learning a lesson from their experience on the North Shore Line, the Insull Group ordered all the South Shore Line parlor cars as double-ended cars that did not need to be turned. South Shore Line parlor-observation-buffet cars were not the first cars that the Insull Group had built with solarium observation platforms; six coach-observation cars in operation on their Interstate Public Service Company in 1921 had observation platforms at both ends.[16]

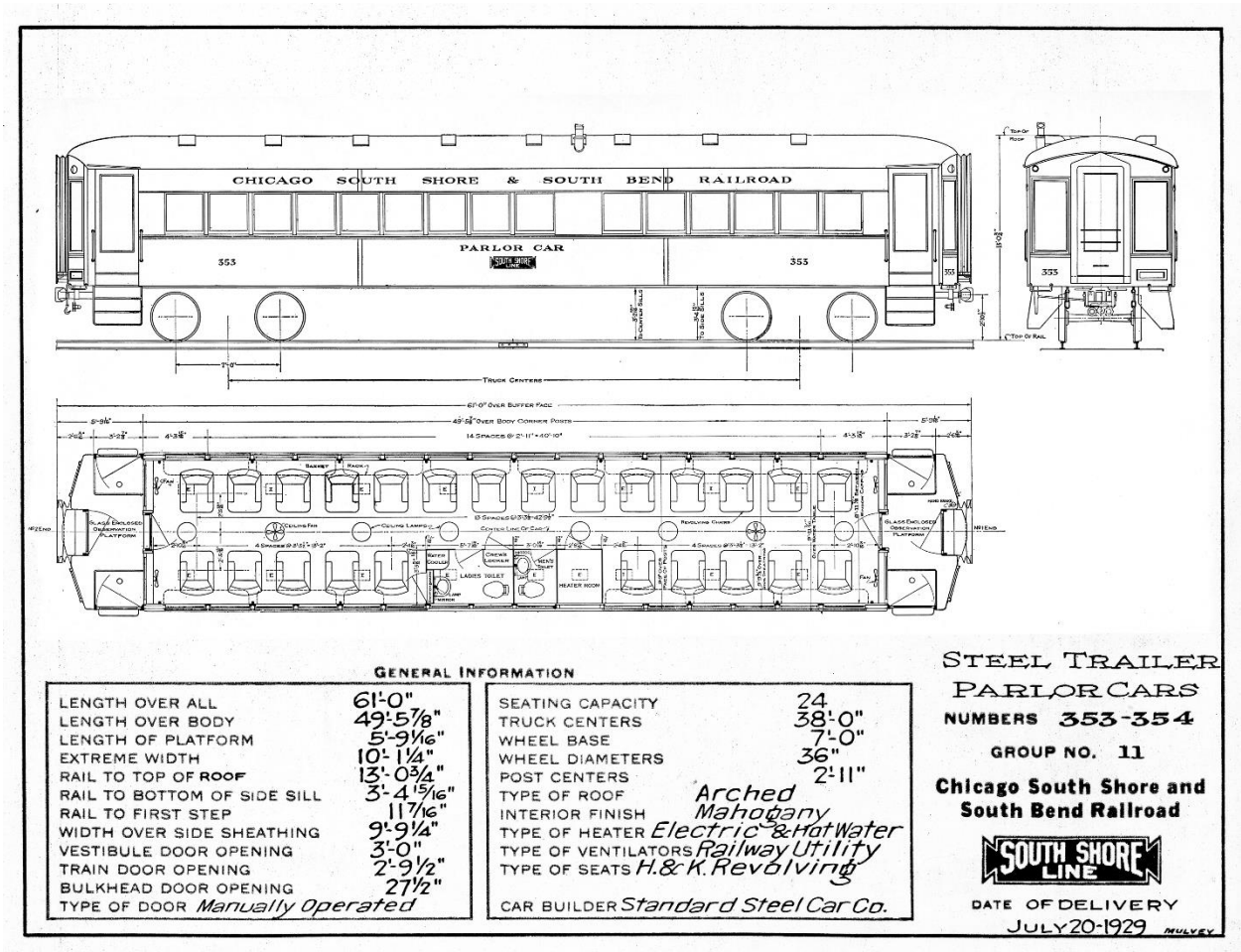
[16] Jerry Marlette, Interstate: A History of the Interstate Public Service Rail Operations 133 (1990).

Interstate Public Service (IPS) subsidiary Indianapolis & Louisville Traction coach-observation car #304, at American Car & Foundry, Jeffersonville, Indiana, 26 May 1921. The arrangement of the vestibuled solarium-observation platforms on the IPS cars was similar to those of the South Shore Line parlor-observation-buffet and parlor-observation cars built six years later. (Photographer credit: American Car & Foundry Company).

Because the interior appointments of the South Shore Line parlor-observation-buffet cars appear to be derived from the approximate floor plan of a steam railroad parlor car combined with the traditions of the Indiana interurban solarium room end, therefore these cars are a hybrid design built to neither a fully steam railroad nor a fully interurban standard.

Parlor-Observation Car Interior Appointments:

The South Shore Line parlor-observation cars were purchased for operation in conjunction with the dining cars. The parlor-observation cars were a single-compartment car with rotating chairs throughout and folding chairs for use on the observation platform. Two small toilets were located at the center of the car. There was no compartment for smoking aside from the solarium platforms.



South Shore Line parlor-observation cars did not have the elaborate interiors of the parlor-observation-buffet cars but were single-compartment cars built inside a standard South Shore Line coach body.

South Shore Line parlor-observation car #353 at Standard Steel Car Company, Hammond, Indiana, 1929, before the installation of carpeting. The South Shore Line parlor-observation cars were unusual because they lacked a smoking compartment. Steam railroad and interurban parlor-observation cars uniformly had a separate club room for smoking even when smoking was permitted on the rear platform. (Photographer credit: Standard Steel Car Company).

The end windows in the vestibule partition were near floor to ceiling in the parlor-observation cars, an improvement over the half-height partition windows in the parlor-observation-buffet cars built a little over two years earlier.

Because the parlor-observation cars were unusual in having a large single compartment rather than a separate smoking room, they were not appointed in a manner consistent with either interurban or steam railroad standards.

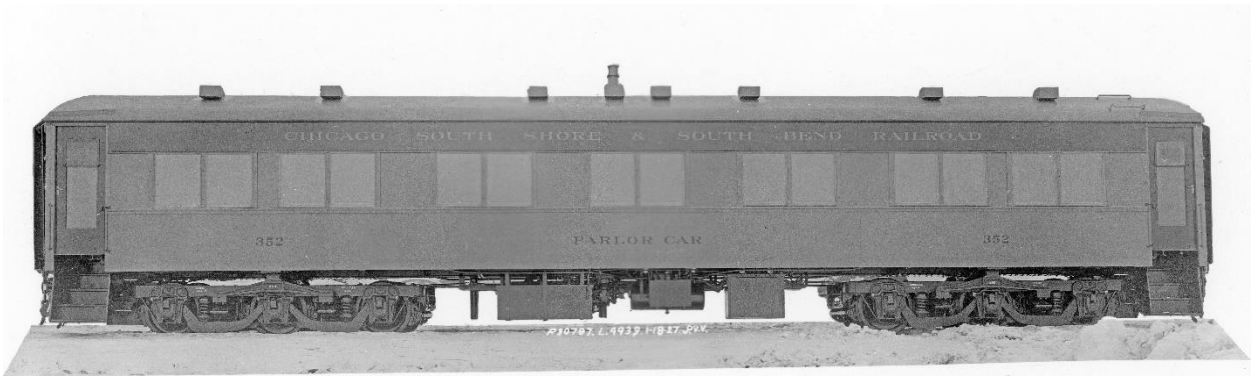
Trucks for the Parlor-Observation-Buffet and Dining Cars:

The South Shore Line parlor-observation-buffet and dining cars rode on cast steel six-wheel trucks. These four cars were the only steel interurban cars in revenue service that did so. On the steam railroads, heavyweight cars built by

Pullman nearly always appear mounted on six-wheel trucks. Pullman did not record the manufacturer of the trucks for the South Shore Line cars, but they are presumed to have been manufactured by Commonwealth Steel Company.

It is not clear as to why the South Shore Line cars rode on six-wheel trucks. Because the weight of the deluxe cars was lower than the motorized coaches, therefore weight distribution was not at issue. Because the length of the cars was shorter than most eight-wheel steam railroad cars, therefore the length of the cars was not at issue. Because the ride quality of six-wheel trucks was no better than that of four-wheel trucks,[17] therefore the ride quality was not at issue. What was at issue was Samuel Insull, Jr.'s insistence that the South Shore Line cars be built to steam railroad standards.[18] Perhaps the six-wheel trucks were little more than a nod on the part of the engineering department to Insull Jr.'s desires as six-wheel trucks were a visual hallmark of heavyweight steam railroad car construction and performance.

The trucks under the South Shore Line deluxe cars were not the ordinary cast steel six-wheel trucks of their time. Because the South Shore Line deluxe cars were framed to interurban standards, the weight the trucks carried was lower than that of a typical Pullman parlor or dining car. Therefore, the trucks supplied with the South Shore Line deluxe cars had smaller journals, equalizers, and springs than those of Pullman parlor or dining cars of the same era.



South Shore Line parlor-observation-buffet car #352 at Pullman, 18 January 1927. The 11' wheelbase trucks were an outdated design intended for this lightweight service. The journal bearings were 4¼" x 8" – the size of caboose truck bearings; heavyweight Pullman cars rode on 5" x 9" or larger bearings. The pedestals that the journal boxes slide in were bolted to the truck frame – this at a time when steam railroads were transitioning to one-piece trucks with integral pedestals. The trucks are fully equalized by the curved, heavy forgings that span the journal boxes. Contemporary truck design often used lighter, straight equalizers. (Photographer credit: John P. Van Vorst for Pullman Car & Manufacturing).

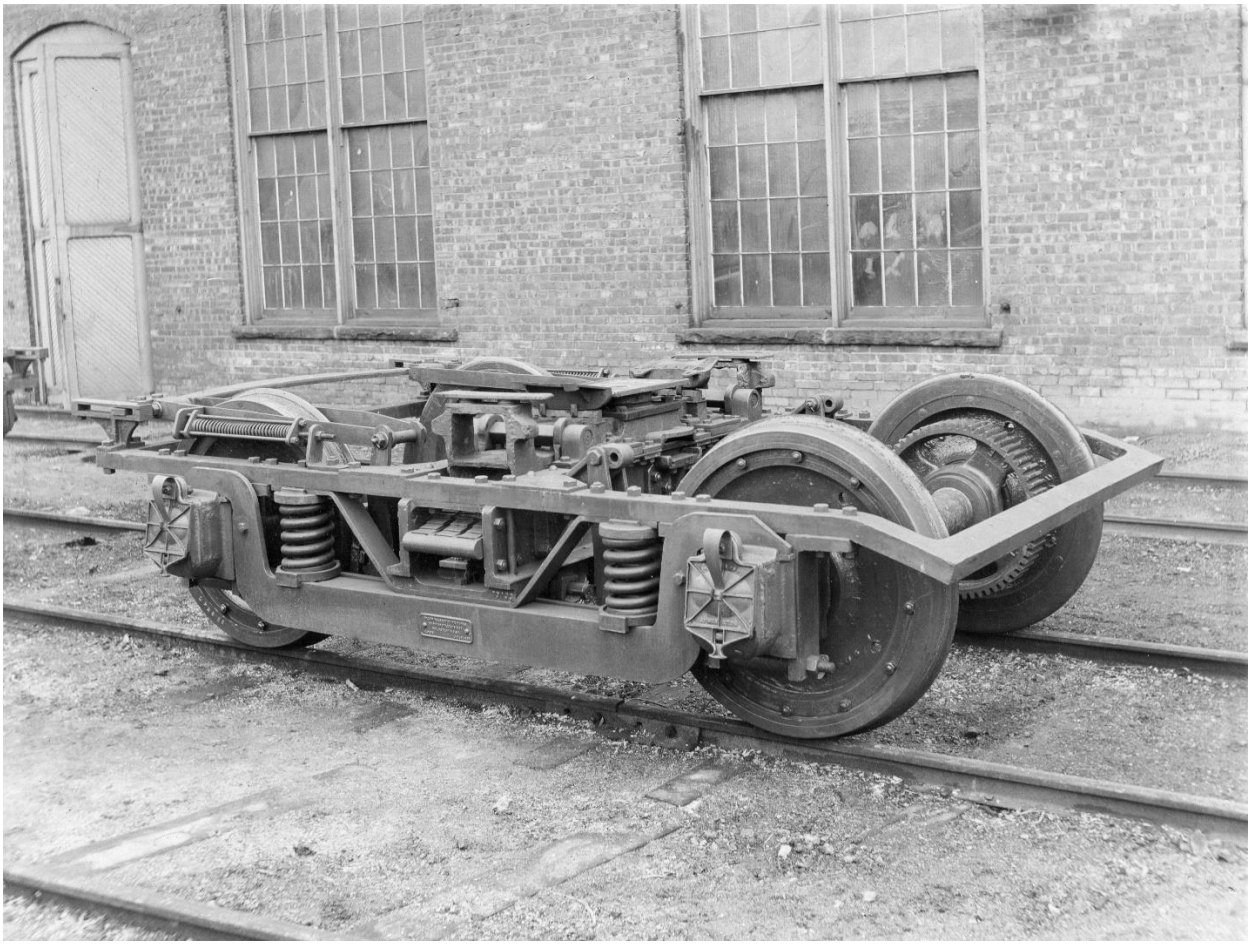
[17] White, p 502.
[18] Personal interview, 1978.

Pullman observation car Great Northern *at Pullman, 21 May 1924. The trucks under the Great Northern are one-piece castings with 5" x 9" journals and with straight equalizers – a modern truck for their time built over two years before the trucks under the South Shore Line deluxe cars. (Photographer credit: John P. Van Vorst for Pullman Car & Manufacturing).*

The cast steel trucks for the South Shore Line parlor-observation-buffet and dining cars were unique among the interurbans, but because they were built to a light weight standard commensurate with the light carbodies that they carried, therefore the South Shore Line six-wheel trucks were not built to contemporary steam railroad standards.

Trucks for the Parlor-Observation Cars:

The trucks under the parlor-observation cars were identical to those under the coaches and described in the section covering those cars. These trucks are the Baldwin Locomotive Works design most prevalent on the interurbans and not seen elsewhere. Baldwin designed these trucks to be fabricated from steel shapes using an equalized arch bar frame with the bolster mounted on swing-links. This type of fabricated truck was not used on the steam railroads.



Baldwin Locomotive Works interurban motor truck at Niles Car & Manufacturing, Niles, Ohio, 1907. Baldwin built trucks of this general design for the interurbans until the coming of lightweight cars in 1930. The trucks under the South Shore Line parlor-observation cars were similar. (Photographer credit: Niles Car & Manufacturing Company).

Dimensions and Weight:

The dimensions of interurban cars were most often dictated by the clearance standards of the elevated and street railways over which the interurbans operated in large cities and small towns. There are three dimensions to consider:

1) Width,
2) Height,
3) And length.

Width and Height:

As discussed in the section on coaches, the width and height of the South Shore Line cars across the entire fleet was dictated by the restricted clearances on the South Shore Line itself, and the Illinois Central as the host railroad into Chicago. The width of the South Shore Line deluxe cars is consistent with interurban cars in similar service where freight operations shared the same tracks and there were no other restrictions on width. The height of the South Shore Line cars was consistent with interurban cars in similar service where low clearances created by trolley wire height, platform canopies, or other structures in the built environment restricted car height to less than that of typical steam railroad cars.

Length:

The length of interurban cars operated over the Indiana-Ohio network were most often 60' to 62' in length and parlor cars were not often an exception to the rule. The South Shore Line parlor-observation-buffet cars were 64' long and a model of inefficiency – they sat only sixteen passengers.[19] For a fair comparison, the combination coach-baggage cars built for Union Traction in 1925 were two inches longer than the South Shore Line parlor-observation-buffet cars and seated sixty. Steam railroad parlor cars were most often 80' in length and could be less efficient than their South Shore Line counterparts – the Milwaukee Road parlor cars also had seating for sixteen in the main compartment.

Steam railroad dining cars in 1886 had 64' bodies,[20] but by 1927 dining cars were most often 80' long and not vestibuled allowing the entire length of the car to be used for the kitchen and seating.[21] The Atchison, Topeka & Santa Fe (ATSF) operated single-unit dining cars that were 83' 4⅛" long,[22] and had two two-unit

[19] As-built, the South Shore Line parlor-observation-buffet cars had barrel chairs in the main compartment and seated 21. Rotating chairs were substituted in January 1929 reducing the seating capacity to sixteen.
[20] White, *supra* note 9, at 322.
[21] *Id.* at 323.
[22] The Master Car Builders' Association, Car Builders' Cyclopedia of American Practice 486 (1928).

dining cars as well.[23] The South Shore Line dining cars were 64' 7⅝" long – not quite six inches longer than the Union Traction combination coach-baggage cars and nearly 19' shorter than the single-unit ATSF cars.

The South Shore Line parlor-observation cars were the length of the South Shore Line coaches built at the same time – 61' – and were therefore built to a standard consistent with interurban cars of the Indiana-Ohio network.

Because the length of the South Shore Line deluxe cars was consistent with cars of the Indiana-Ohio interurban network, therefore their length is to the standards of interurban cars and not to the standards of their steam railroad contemporaries.

Weight of the Dining Cars:

As above, deluxe interurban cars are notoriously unproductive pieces of equipment seating few people in large spaces. Because the differences in the degree of unproductivity is significant, there is no rationale for comparing the weight per passenger of deluxe equipment. However, as deluxe cars are rarely powered, it is proper to compare the South Shore Line deluxe cars with their unpowered counterparts on the steam railroads and other interurbans.

Dining cars were the heaviest and most costly car in railroad revenue service both in terms of first cost and operating costs; dining car operations were rarely profitable.[24] But dining cars largely had a common floor plan, their weights are more consistent and easy to compare across the North American railroad spectrum.

The South Shore Line dining cars weighed 113,400 lbs. John White found that most often steam railroad steel dining cars weighed between 160,000 and 170,000 lbs.[25] A Pennsylvania Railroad (PRR) steel dining car built on its' proprietary box-girder framing plan weighed 160,000 lbs., proving perhaps that there was a benefit to box-girder framing: lighter cars.[26] But dining cars for most other steam railroads in America used the standard fishbelly framing scheme and were at least 10,000 lbs. heavier; a steel dining car built for the Philadelphia and Reading (RDG) weighed 175,000 lbs.[27]

The weight per square foot of floor area of the South Shore Line dining cars was 180 lbs. The weight per square foot of floor area of the PRR steel dining car was 195.8 lbs. The RDG dining car weighed in 214.2 lbs. per square foot of floor

[23] White, *supra* note 9, at 324.
[24] *Id.* at 311, 320.
[25] *Id.* at 322-23,
[26] The Master Car Builder's Association, Car Builders' Cyclopedia of American Practice 294-95 (1925).
[27] *Id.* at 296.

area. The other heavyweight-era steel dining cars fell within that range or 8% to 16% heavier than the South Shore Line dining cars on the basis of weight per square foot of floor area.

The North Shore Line was the only other operator of dedicated dining cars among the interurbans. The North Shore Line full dining cars served the Chicago-Milwaukee corridor for sixteen years, longer than the average lifespan for interurban deluxe services of 13 years and seven months. Tavern lounge service ended the 54 years of deluxe services on the North Shore Line at abandonment on 21 January 1963. The North Shore Line full dining cars were a model of compact efficiency which may have led to their longevity. The North Shore Line dining cars are unique in this discussion – they rode on four-wheel trucks. The North Shore Line dining cars' weight per square foot of floor area was only 169.9, or 5.7% lighter than the dining cars on the South Shore Line.

North Shore Line dining car #415 at the builder, Cincinnati Car Company, 1926. Discounting the wasted space of the vestibules, at 383.1 square feet of usable floor area, the North Shore Line dining cars may have been the smallest full dining cars on any American standard gauge railroad – steam or electric. Lacking vestibules, the South Shore Line dining cars had 630.2 square feet of usable floor area, and the PRR dining car discussed above had 817. Yet the North Shore Line managed to seat 23 at tables in car #415. (Photographer credit: Cincinnati Car Company).

Weight of the Parlor-Observation-Buffet Cars:

The weight of the South Shore Line parlor-observation-buffet cars is 111,400 lbs.[28] As there were no standard floor plans for steam railroad parlor cars, car weights fall inside of a wide range. An 82' 11½" steel parlor-observation car for the Union

[28] Chicago, South Shore and South Bend Railroad, *in* equipment roster 2 (1945).

Pacific (UP) weighed 154,500 lbs.[29] Northern Pacific (NP) bought ten observation-club cars in 1926; each car weighed 170,000 lbs.[30] The South Shore Line parlor-observation-buffet cars weigh 178.5 lbs. per square foot of floor area. The UP car weighed 186.2 lbs. per square foot of floor area. The NP cars weighed in at 205 lbs. per square foot of floor area. The weight of the South Shore Line parlor-observation-buffet cars per square foot of floor area is 4.2% and 13% lighter than their counterparts on the UP and the NP respectively.

Weight of the Parlor-Observation Cars:

There were few examples of non-motorized eight-wheel interurban steel cars dedicated solely to service as parlor cars. The Salt Lake & Utah (SL&U) had two parlor-observation cars built by Niles Car & Manufacturing in 1916 that weighed 92.8 lbs. per square foot of floor area. The South Shore Line parlor cars were significantly heavier than the Salt Lake & Utah parlor cars at 155.5 lbs. per square foot of floor area.

SL&U parlor-observation car at Salt Lake City, circa 1946. The builder, Niles Car & Manufacturing (Niles) primarily built wood interurbans and streetcars. This steel car constructed in 1916 was exceptionally light weight at 52,500 lbs. Niles did not survive long into the steel car era and was out of the carbuilding business in 1917.[31]

[29] The Master Car Builders' Association, *supra* note 21, at 479.
[30] White, *supra* note 9, at 304.
[31] Lawrence A. Brough, The Electric Pullman 42-4 (2013).

North Shore Line parlor cars built by Cincinnati Car Company were significantly heavier than the South Shore Line parlor cars at 164.4 lbs. per square foot of floor area. But despite being non-motorized trailers, the North Shore Line parlor-observation cars carried mechanical equipment that the South Shore Line cars did not including air compressors.

North Shore Line parlor-observation car #410, Highwood, Illinois, 1923. An air compressor was not often standard equipment on a non-motorized car, but car #410 has a compressor just ahead of the rear truck. Most often, non-motorized cars received their air supply from powered cars in the same way that a locomotive supplies air to all the cars in a passenger or freight train. Here, the air compressor has the effect of making this car heavier than it would be without this mechanical equipment, and makes it more difficult to compare the finished weight of the car with other cars of the same class of service including the South Shore Line parlor-observation cars. (Photographer credit: Commercial Department, Chicago, North Shore and Milwaukee Railroad).

The weight per square foot of floor area of the South Shore Line deluxe cars is both heavier than their interurban contemporaries, and lighter than those of the

steam railroads. This suggests that the parlor and dining cars of the South Shore Line were hybrids built to neither typical interurban nor steam railroad standards.

Conclusion

Given their car appointments, the South Shore Line deluxe cars were meant to emulate the look of steam railroad equipment to take good advantage of the monied in the country and their proclivity to spend it on luxury real or imagined. While the South Shore Line deluxe cars were subjectively at least as luxurious as their steam railroad counterparts, the South Shore Line deluxe cars fell short of steam railroad dimensions and construction standards including height, length, weight, and construction materials.