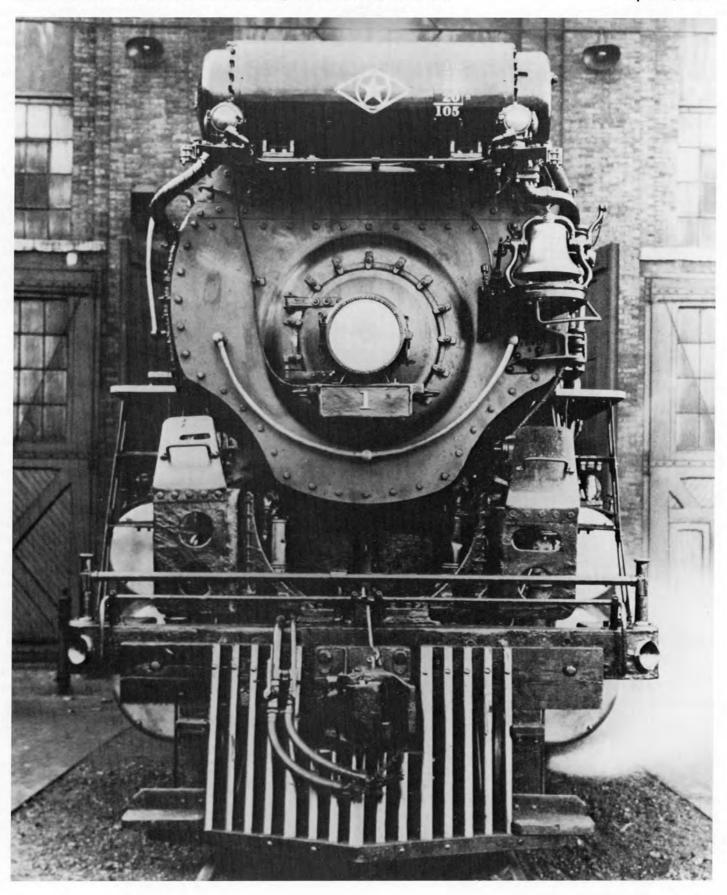
GREEN DIAMOND ISSUE #14

ISSUE #14 \$2.25

ILLINOIS CENTRAL HISTORICAL SOCIETY



Illinois Central Historical Society



ILLINOIS CENTRAL HISTORICAL SOCIETY

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Thanks to the following people who contributed photos or information to this issue of the Green Diamond:

Gerry Carson
C.T. Felstead
ICGRR
Bruce Meyer
Walter Peters
Ted Richardson
George Rondelli
Elizabeth Z. Winter
Rev. R. Milton Winter

THE GREEN DIAMOND published by the Illinois Central Historical Society, a Nonprofit Illinois Corporation organized to preserve historical material, and collect data on the former Illinois Central Railroad. Membership in the society is available anyone interested in the Illinois Central Railroad or it's predecessor lines.

DUES

Regular \$10.00 Sustaining \$15.00 Life \$100.00

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THE GREEN DIAMOND is in need of articles and photographs for publication. submitted Materials done so with the understanding that no monetary compensation is paid. Photographs and written materials will be returned if requested. Send materials for publication to Publications Chairman Tom Grant.

NEXT ICHS BOARD MEETING NOV.10, 1984 at NOON RAMADA INN - CARBONDALE IL

GREEN DIAMOND Page 2

The 1984 Annual meeting was held at Elgin Illinois on August 11 & 12. Attendance was lower than anticipated with only about 75 members at the dinner on Saturday. We are unsure why more members did not attend and would be interested in your comments as to what you would like to have happening the annual meeting. Please write if you would care to comment.

Those attending did have a busy and I think interesting two day event prepared for Saturday them. morning started with registration and the Railroadiana Show and Sale spilling over into two rooms. In the afternoon, IC slides and movies were shown in a third room while Railroadiana the Show continued. A board meeting was held following the show and prior to dinner. The dinner was fine and all vou could eat. After dinner elections were held and our quiz annual ICHS was presented by Bob O'Brien with door prizes awarded afterwards. Next was auction of railroad items conducted by Nita Fraser and Jack Laude. The auction brought in about \$340.00 to the treasury and was alot of fun for everyone.



ICHS 1985 ANNUAL MEETING
AUGUST 10 & 11, 1985
JACKSON MISSISSIPPI
RAILROADIANA
SHOW AND SALE

On Sunday morning there was a transitional board meeting for the newly elected officers and board members where president Dave Fraser assigned committee chairmanships and discussed proceedures and goals for the society. Following the board meeting a bus took members to the Illinois Railway Museum at Union and to the Fox Valley Trolley Museum at South Elgin. The bus returned to the hotel about 3:00 pm and members using the bus service back to downtown Chicago and their connections Amtrak then departed. All things considered the weekend was a success with many activities for IC fans. Plan ahead now to come to the 1985 Annual Meeting in Jackson issippi on August 10 & 11.

LETTERS TO THE EDITOR

Number 13 is positively the luckiest. It is supurb reproduction, almost photographic. That hopper just bounced out at me when the magazine came out of it's envelope. Tom's use of a computer helps and will be a real asset. Now it just comes down to how well members will help with interesting copy and good photos, doesn't it? The center spread of #2409 with train is a treasure. Wish location the and other detail had been included. Congratulations to the Society and Tom! Editor Clark Sudduth.

Thanks Clark, We don't have a date for the 2409 photo, but my guess is Freeport IL. for the location. Our thanks again to Paul Slager for the use of the photo. We welcome any storys or photos...even short ones. Tom.

MODEL CONTEST COMMITTEE FORMED

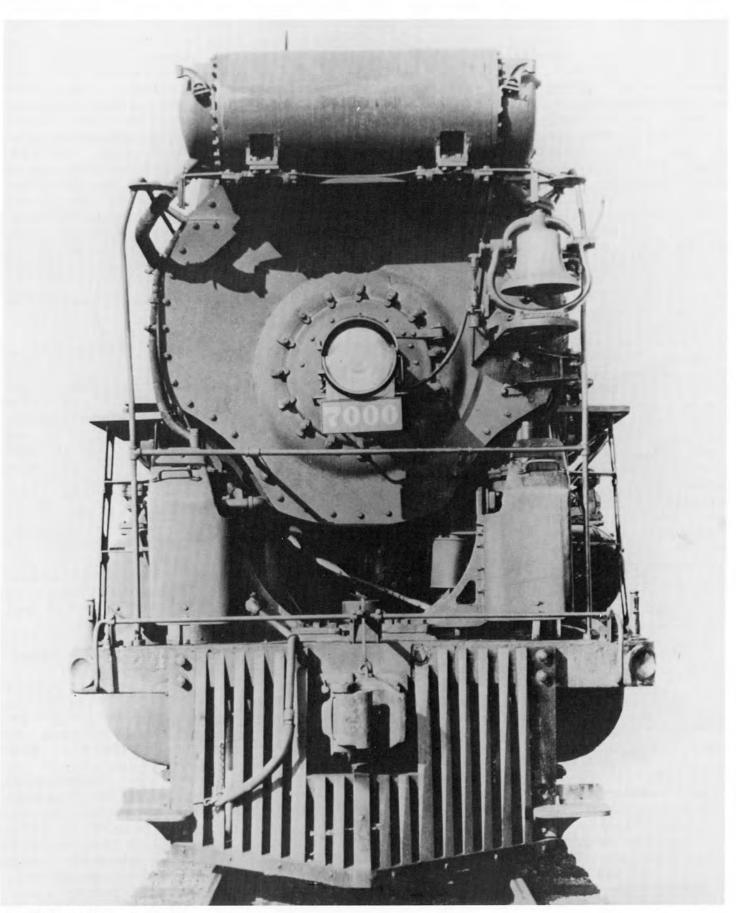
Many ICHS members contribute to the ICRR preservation effort by building fine models of rolling stock or structures. These modelers deserve recognition for their efforts. The ICHS Model Contest Committee was formed at the 1984 Annual Meeting to formulate rules for future model contests. Chairman of the committee is Jack Laude. If you have any comments about the contests at past meetings, or want to make suggestions, please write Jack Laude. 5244 Howard st., Western Springs, IL 60558.

IC TRAK

There seems to be a good deal of interest in having an operating modular layout IC using prototype locations, equipment...among our members. If you interested in the IC TRAK idea contact one of these people: Paul Turner, Rt. 1 Box 141, Cairo. IL 62914 (Board Member) or Kerry Doyle. 530 Norwood. Collinsville, IL 62234. If you think you will be able to bring a module to next years Annual Meeting in Jackson, MS contact Paul Turner or Jack Laude.

THE I.C. HISTORICAL SOCIETY IS ACTIVELY SEEKING PERMANENT HOME FOR THE SOCIETY - A BUILDING -RR STATION - OR MUSEUM - WHERE WE CAN KEEP AND DISPLAY OUR LIBRARY AND RAILROADIANA ITEMS. ANYONE WHO KNOWS OF SPACE OR AVAILABLE A POSSIBLE LOCATION FOR A HOME FOR THE I.C.H.S. IS URGED TO CONTACT PRESIDENT FRASER OR ANY BOARD MEMBER.

STEAM ON THE ILLINOIS CENTRAL



by Ted Richardson

Photos - C.T. Felstead Collection except as noted.

America, having emerged from World War I as a world class power, recognized untapped potential. Flexing her industrial muscle in earnest, businesses involved in the effort to produce consumer goods did so accelerated pace. Speed at efficiency became the rule for survival. All of these products and the materials needed to produce them needed transported marketplace. The to the American transportation industry worked to meet the demands of moving these huge loads at an ever increasing pace. The railroads, being the primary means of moving tonnage, were working with equipment developed for the concept of slow speeds with everything in the yard tied to the drawbar. The need to provide high speed service was obvious to the progressive railroad companies, who began to look for a solution to the problem.

The answer for the Illinois Central and other roads, came from Lima Locomotive Works of Lima Ohio in the form of a demonstrator engine called the A-1. The A-1 was a beetle browed brute of a steam locomotive using a new wheel arrangement,

2-8-4. She carried 385,000 lbs. on 63.5" drivers using 240 lbs. boiler pressure with a 337 sq. ft. firebox and 27" x 30" cylinders producing 69,400 lbs. of tractive effort. The A-1 was sent across the country to show the railroads what Lima called "Super Power". The A-1 tested on Illinois Central in 1925 working the main lines of Illinois, primarily between Centralia and Cairo. There she eliminated helpers and doubling hills along the hill and dale terrain forced on the IC by the southern Illinois geography. Management and everyone associated with the engine were so impressed that an order for 50 engines was promptly made.

The new engines were delivered in 1926 and numbered 7000 - 7049. They were used on dispatch freights between Chicago and St. Louis. This group of 50 engines was built in two configurations; 7000 - 7039 had Elesco feedwater heaters, hence the beetle brow look of the A-1; 7040 - 7049 had Worthington BL feedwater heaters mounted on the left hand side above the forth driver. Later the A-1 engine was purchased and numbered 7050.

#7000 shown some years after delivery from Lima. The smokestack has been extended and the white striping is gone now in favor of the basic black normally worn by IC steam engines.



Company records gave vital statistics of the engines as delivered as 248,000 lbs. on drivers, 388,000 lbs.total engine weight, 286,000 lbs. tender weight loaded with 20 tons of coal and 15,000 gallons of water. The total engine and tender loaded weight came to 674,000 1bs. (variations statistics from different sources and different years reflect modifications made to the engines. Ed) They were equipped with Duplex stokers and had a factor of adhesion of 3.52. The engines were delivered with large wooden pilots, a throwback to an earlier age, not in keeping with revolutionary design created by Mr. W.E. Woodard, Lima's Vice president in charge of design. Some wore the large IC diamond herald on the tender sides with white pin striping on the running board sides and tires. (see photo of #7008 - eventually all seem to have received the standard IC look, numbered tenders, ICRR under windows, and no white striping, but some variations crept in during the process. see also photo of #7005 without cab lettering, and #7045 with numbers on cab and tender. Ed.)

For all their successes, the 7000's had one major drawback, the engines vibrated badly at high speeds (70+ mph) to the extent of occasionally stripping themselves of side rods. All in all they showed the IC how to move more tonnage at greater speeds, earning more money for the railroad. Although they were the last new power purchased by the IC, the 7000's broke new ground in high speed freight service and set standards that would be followed for

years to come. (IC built the 2600's at Paducah from the ground up in 1942-43, but they were not purchased from one of the major locomotive manufacturers. Ed)

The great Paducah renaissance of IC steam in the years to come produced engines in the mold of what the 7000's were, fast, powerful and efficient money makers. In fact the author would like to forward a personal observation that the ten engines numbered 7040 - 7049 were used as the basis for the family look IC steam was given by Paducah.

Also of interest was the later proposal by IC management to convert the entire group of 2-8-4's into 4-6-4 Hudsons for high speed priority freight and passenger service. The proposal ended with the one example of engine #7038 being converted into the #1. #1 was an engine that was very hard to handle and not up to IC standards of performance. Management decided to leave well enough alone and concentrated correcting the deficiencies and improving the 7000's as Paducah began to work its' magic on this group of engines. In tribute to the company who built them and the record that they made on the Illinois Central, the IC called it's 2-8-4's Limas rather than Berkshires.

(Part 2 of "The Limas" will appear in a future issue. We will include Loco Diagrams of the 7000's, 8000's, and the #1 Hudson in part 2. Ed.)

#7005 in a photo taken before WWII. Note the absence of the ICRR lettering on the cab.





#7008 at E. St. Louis, IL in 1933 - Note the number on the cab and the (Courtesy - Efficient - Service - Always) Diamond on the tender.



The 7045 at E. St. Louis, IL. in 1934. Note the engine number on the cab. photo G.V. Carson.

The 7047 at E. St. Louis, IL. Engines 7040 - 7049 had Worthington BL feedwater heaters instead of the smokebox mounted Elesco type on the rest of the 7000 class.



GREEN DIAMOND Page 7



Lima's A-1 Demonstrator

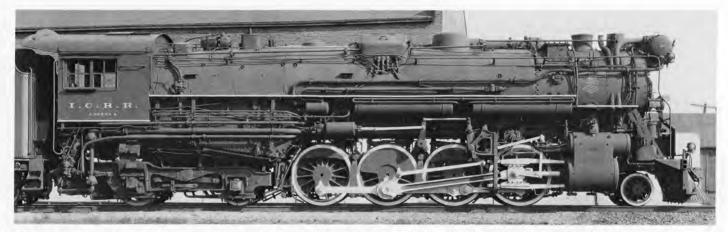
By 1926 Lima had developed their demonstratorengine and it had tested well on the IC and other roads. Lima's stated objectives when developing the A-1 were: to haul heavier trains faster; to increase the capacity of the railroads; to reduce the number of locomotives needed for a given operation; to reduce the costs of train movement and overtime: to maintenance costs; to save fuel; to get maximum power output per driving axle; to gain the most economical use of steam the cylinders under all conditions service; and to provide a boiler - furnace assembly capable of suppling efficiently a super abundance of steam.

After World War I there had been a number of advances in locomotive design. Features such as brick firebox arches, arch tubes, thermic syphons, reliable stokers, E-type superheaters, and boosters had been developed, but even in 1924 some of these were still regarded as tentative. Lima set out to incorporate as standard in the A-1, all of these modern construction features in a design that would advance power proportions, and utilize progressive ideas.

A major innovation in the Lima A-1 was the four wheel trailing truck. This made many of the other features practical, and permitted sustained power outputs that justified Lima's Super-Power advertising slogan. The four wheel trailing pivoted at the front, 33 inches behind the rear driving axle, with the whole back end weight of the engine taken on it through two sets of rollers towards the rear. trailing truck also acted as the frame at the rear of the locomotive. The main frame of the engine ended just behind the fourth pair of drivers. Pull from the main cylinders came back through a pivot pin to the trailing truck frame. Pull from the booster cylinders was added through the truck axle box guides, and the combined pull passed on to the tender through the drawbar which was attached to the trailing truck frame rather than the main frame. This arrangement justified Lima's terminology of an articulated rear truck.

The weight of the firebox was transfered to the rollers on the trailing truck through steel castings attached to the mud ring back and corners and having large slides above the rear axle of the truck. At each side of the forward pivot there were flat surfaces with a small gap between prevent relative tilt between the main engine frame and the trailing truck frame. The entire ashpan was carried on trailing truck and was not secured to firebox in any way. This gave maximum capacity and simplicity, as no clearance for side to side movement had to provided. and it permitted better air supply.

Other features of the A-1 on the steam generating side were; high pressure of 240 PSI; the type E superheater; and an unusual arrangement of an outside dry pipe from the steam dome to the superheater header in the smokebox. This was supplemented by throttle outside the smokebox in front of the stack, controlled by outside rodding running back along the right side of engine to the cab. With this new front throttle, the steam pipes from the steam dome went down through the smokebox to cylinders, making superheated available to the cylinders as soon throttle was opened. Another advantage claimed for the outside dry pipe was a 5 percent increase in boiler steam space.



#7000 as delivered from Lima with white striping and specifications stenciled on the cab. photo Walter Peters.

Limited cut-off was the most controversial feature of Lima Super Power. Higher boiler pressure and limited cut-off were standard on early Lima Super Power engines. latter needing the former to be effective. To be equal in slow speed tractive effort to an engine with more conventional 85 - 90 percent cut-off, a design like the A-l with 50 percent maximum cut-off needed either an increase of 25% in boiler pressure or a like increase in cylinder volume, combination of both.

A normal maximum of 60% cut-off was eventually adopted for the IC's 2-8-4's. disadvantage of the 60% maximum cut-off was the larger cylinders and higher piston loads needed. In the A-1 and early Lima 2-8-4's, piston load was 148,000 lbs. Such thrust led to increased weights of reciprocating and revolving parts and to the forces on them, and to difficulties in crankpin performance and balancing. To meet

the

tandem drive

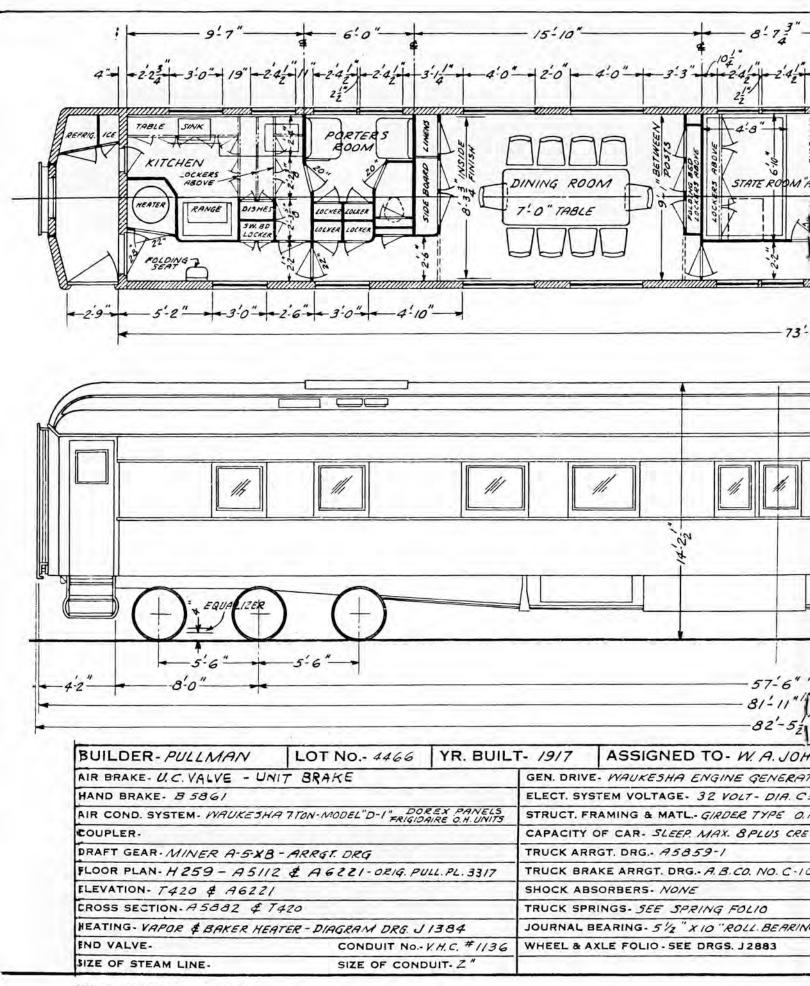
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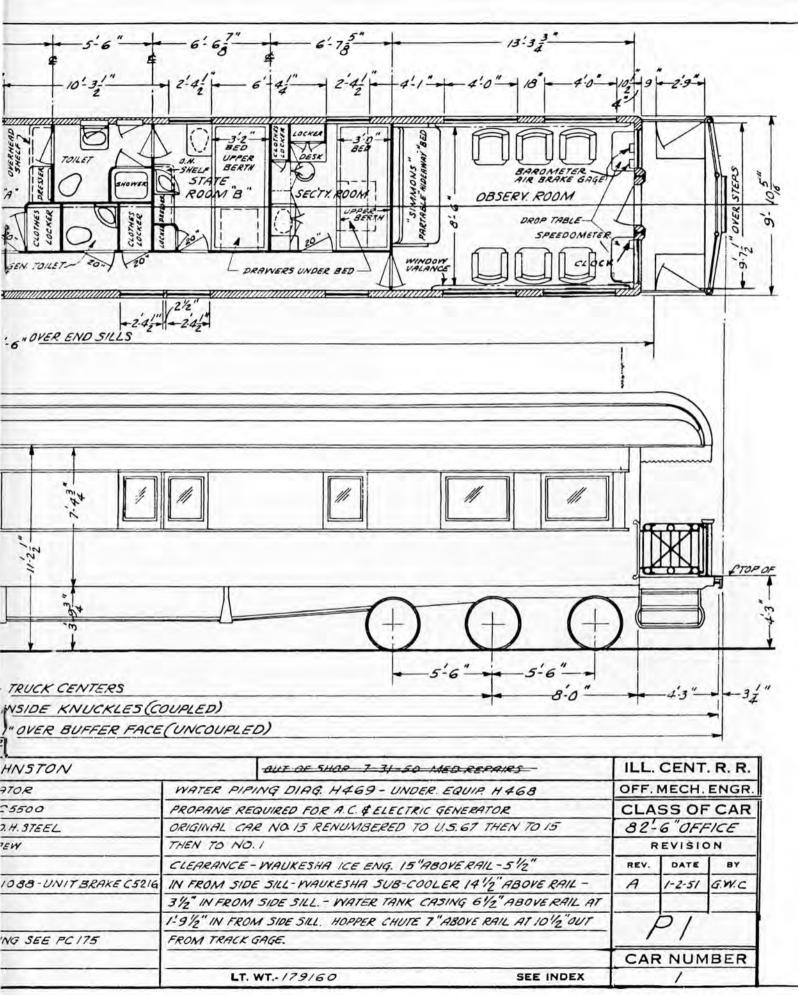
developed. The end of the main rod was forked and ran on a steel bushing along with a blade of the side rod leading backward from the main driver to the forth driver. This section of the side rod was in effect, part of the main rod, dividing the thrust between two axles without the whole load first going through the main crankpin. and so the bearing pressures and stresses were reduced.

These then were the new ideas that went into the A-1 Demonstrator and the 7000 class of IC 2-8-4's, engines that led the way to the high speed freight service era on the Illinois Central and led to ongoing developement of steam power on the IC. It is unfortunate that the coming of diesel power put an end to improvements in the steam engine before the full potential of modern steam power could be explored. The 7000 class Limas were the first of a special breed of steam power that ended only twenty years later on the IC with the 2600 class Mountains.

The A-1 was purchased and numbered 7050. In 1941 she was rebuilt and renumbered to 8049. This photo was taken at Bluford, IL in 1948.







ILLINOIS CENTRAL CAR #1

Here are photos and plans for Office car #1, assigned to the President of the Railroad. Both photos were taken at Carbondale, IL. The early photo, taken in 1951 is from the collection of G.V. Carson. The other photos were taken in 1971, and show the modernized #1 in streamlined colors. Modernized photos - Tom Grant



Heavyweight #1 was replaced by streamlined car #1 in 1956. We will run plans of streamlined car #1 in a future issue. The car shell for new car #1 was built by Pullman Standard and completed by the IC.









The 7044 at E. St. Louis, IL. showing the Worthington BL feedwater heater and a bell mounted high on the smokebox. Note also the riveted, shorter, open type pilot.

Northbound Football Special at Champaign, IL, 1958. Train is just south of the station which can be seen in the background. photo by Bruce Meyer.



Crewmen leave the yard office to board IC switcher 3666 at Nonconnah yard in South Memphis during summer of 1948. Named for the creek which runs just the facility, south of Nonconnah yard was one of the busiest spots along the Illinois Central during World War II. One day in May, 1944, a record 11,678 freight cars moved through yard. the During this period, 190 trains a day passed through Memphis - an average of one every seven or eight minutes! In April, 1949, a million dollar renovation of Nonconnah yard completed. was and facility was renamed in honor of IC President Wayne A. Johnston. The 3666 was an ex-mike 0-8-2, built in the series 3650 - 3699 by Baldwin. (1911 - 1914). Some of these engines, including the 3666 were modified for yard service by lopping off the pilot truck. photo Elizabeth Z. Winter.

(see photo of #3668 on page 15)





NEW... Our ICHS HO model car for 1984 is this Cement Covered Hopper made by Roundhouse and painted by CM Shops. An order form is available separately with this mailing.



Here is one of the IC's lesser known passenger trains, with one of the lesser known, but certainly interesting passenger engines. The location is Memphis TN. and the time is shown on the photo as "in the 40's". The train ran between the Memphis roundhouse and Nonconnah Yard.

What was the name of this train? The first correct answer we receive with the earliest postmark will win something.

#9275 was a GE 44 ton engine developing 380 horsepower and weighing in at 88,500 lbs. Built in 11/47 and sold in 11/61 to the Ormet Corporation, in Burnside LA. Relettered for their subsidiary Burnside Bulk Terminal and renumbered as #10 or #110. Does anyone know if this engine is still in service?

Shown here is #3668, a close relative to #3666. G.V. Carson found 3668 at Fulton, KY in 1951. (see text on page 14)



ILLINOIS CENTRAL FREIGHT CARS

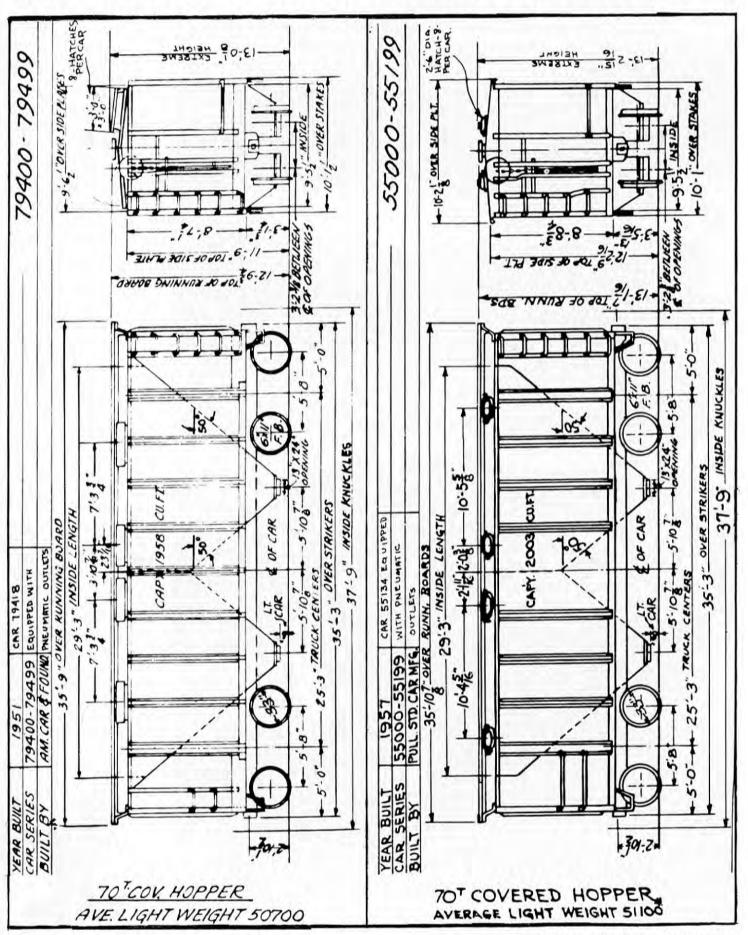


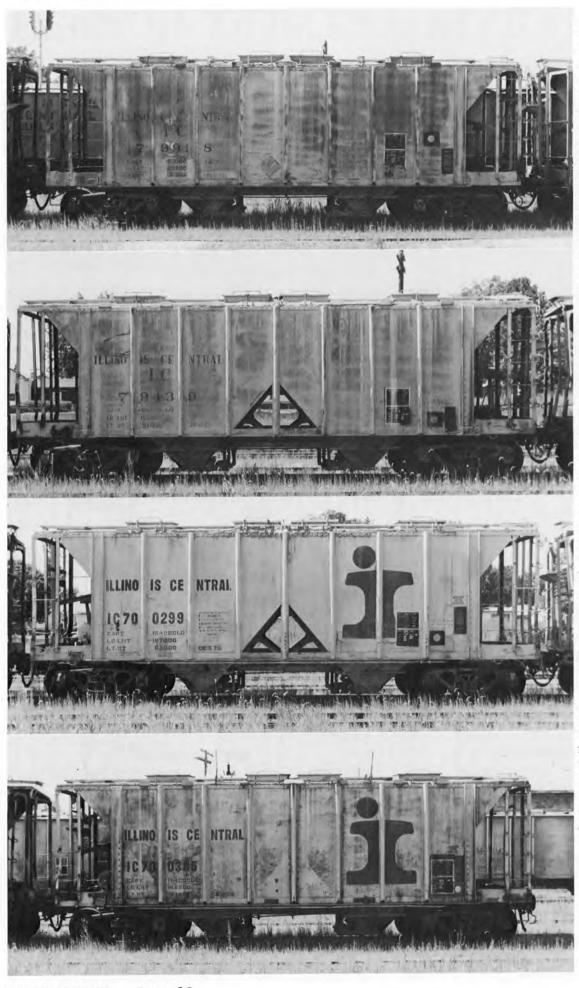
ILLINOIS CENTRAL COVERED HOPPERS

1929 - 1955

B1t	Capy	Length	Number	r Series	Avg L	t.Wt.	Cu.Ft.	Builder		Note	.s
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	70T	41'0"	54100	-54149			2893		"	**	
	70T	35'3"	54150	-54299			2006		**	**	
	70T	35'3"	55000	-55199			2003		"		
	70T	35'3"	55200	-55299			2006		**	**	
	70T	39'6"	59010	-59034			2600		air	slid	le steel
	70T	39'6"	59035	-59059			2600		**	"	"
	70T	39'6"	59060	-59096			2600		**	"	"
153	70T	35'3"	79000	-79029	50,0	000	1958	PS	cal	cium	carbide
154	70T	35'3"	79030	-79044	52,0	000	1958	AC&F	cal	ciul	carbide
155	70T	39'6"	79090	-79099	57,0		2600	GATC	airs	slide	
155	70T	47'0"	79100	-79199	61,7	700	2893	PS			
154	70T	35'3"	79200	-79299	52,0	000	1958	AC&F			
153	70T	35'3"	79300	-79311	50,6	500	1958	PS			
153	70T	35'3"	79312	-79369	50,1	100	1958	PS			
153	70T	35'3"	79370	-79399	50,8		1958	PS			
151	70T	35'3"	79400	-79499	50,7		1958	AC&F			
'40	70T	35'3"	79500	-79561	52,3	300	1958	GATC			
'41	70T	35'3"	79562	-79676	52,7	700	1958	GATC			
.41	70T	35'3"	79677	-79776	51,1	100	1958	GATC			
147	70T	35'3"	79777	-79876	51,1	100	1958	PS			
'47	70T	35'3"	79877	-79881	52,4	400	1958	AC&F			
149	70T	35'3"	79882	-79981	51,1	100	1958	GATC			
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ILLINOIS CENTRAL CEMENT HOPPERS





Variations These photos show some of the variations in Cement Covered Hoppers. Notice that the photo of car 54182 on page 16 and our 1984 model car (see photo page 14) have round hatch covers. The four cars shown on this page all have square hatch covers. Another important variation is the car type. Car 79918 and 700385 have solid side panels, while 79439 and 700299 are AC&F cars with the open inverted V between the slope sheets. The later solid panel type cars also have a center rib, while the older cars such as our model car (and Diagram of 55000 series cars on page 17) did not the center have E&B rib. Valley made a model of the AC&F style car and square hatch covers are also available for models. The photos also show two different paint schemes used these cars. The IC split rail logo was used until the GM&O merger in 1972. These pictures were taken at Lasalle IL in August of 1984. by Tom photos Grant.

ic

WANT ADS - FREE TO MEMBERS FOR SALE ADS - \$3.00 for first 15 words - additional words \$.10 each.

COMMERCIAL FOR SALE - \$5.00 first 15 words additional words \$.10 each. 1/9 page \$7.50 - 1/4 page \$20.00

Copy should be clearly printed or typed. We reserve the right to edit copy and the right to refuse ads. Send your copy with a check or money order payable to ILLINOIS CENTRAL HISTORICAL SOCIETY.

Custom Painted E Units Model Power E7 / E9 Athearn Cars - Prepainted Orange and ready for decals. Headquarters for IC / ICG Models. DONS HOBBY WORLD. 18447 S. Halsted, Glenwood, (312) 754-7988. II. 60425 WANTED: INEXPENSIVE RUBBER STAMP. Green Diamond with "ILLINOIS CENRTRAL" through middle, similar to membership folder. Kerry Doyle, 530 Norwood, Collinsville IL 62234

FOR SALE: OVERLAND MODELS HO cushion coil cars-custom painted \$128.00 O Gauge E-8 \$385.00 HOBBY CUSTOM PAINT 530 Norwood. & FINISH, Collinsville IL 62234

WANTED: ANY LIONEL, AMERICAN FLYER, MARX rolling stock, engines, and accessories. Any scale - Any condition -Will pay a fair price. Cindy Winger, Box 143, West Union, IL 62477

WANTED: PHOTOS of DUQUOIN IC STATION Richardson, 431 Briar Place, Libertyville, IL 60048

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NEXT ICHS BOARD MEETING NOV.10, 1984 at NOON RAMADA INN - CARBONDALE IL

on 12", 33.3 rpm records. Record No. 7, N&W/IC has IC #2727 switching at Horse Branch, KY, then whistling in the flag and pulling out, and the 2507 leaving a red with thundering exhausts. Record SP-5. Soo Line/IC has switcher #3509 vard chores Centralia, IL. Each record is \$8.75 postpaid in USA. Wisc. residents (only) add state tax. RAILROAD RECORD CLUB

P.O. Box 2432 Hawkins, WI 54530

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Wanted: Looking interested members to trade 35mm slides. I have KCS, MP and others from New Orleans area. I am interested in whatever you have. Danny W. Bonnin Jr. 3704 E. Grandlake Blvd., Kenner LA 70065 *****************

Wanted: ICG Iowa Missouri Division employee timetables, track charts, and slides of these lines. Norman F. Ford Jr. P. O. Box 93, Exton PA 19341

If you would like additional copies of our membership brochure to distribute at your local hobbyshop or RR swap meet, send postcard telling us how many you need and we will send them to you. We can always use more new members.

HOBBYSHOP HELP

If your local hobbyshop proprietor would like to sell the GREEN DIAMOND, have him drop us a postcard and we will send him a complimentary copy of the magazine and ordering information.

FOR SALE - PHOTOS Member Gerald Carson has an extensive collection steam and diesel ILLINOIS CENTRAL equipment. Send for list. Gerald Carson, 10065 Mountain Rd. Chipita Park, CO. 80809

Wanted: Photos and information on IC Green Diamond and City of Miami trains for use in THE GREEN DIAMOND. Publications Chairman Tom Grant.



NEW ... This ICHS patch showing a streamlined E unit and train in six colors is now available individually or on mens caps. To order use the ICHS order form in this mailing. Patch design by member Kip Van Linden of Chicago.



Here's a nice photo of IC's aluminum hopper car fleet. There were five cars total. Hedrich - Blessing photo, courtesy ICGRR.

If you look around during your railfan adventures along the old IC you will find some interesting and sometimes curious monuments commemorating some interesting and curious events associated with the railroad. This is one of the curious ones. This monument stands at Makanda, IL. west of the mainline tracks and just north of the bridge...

