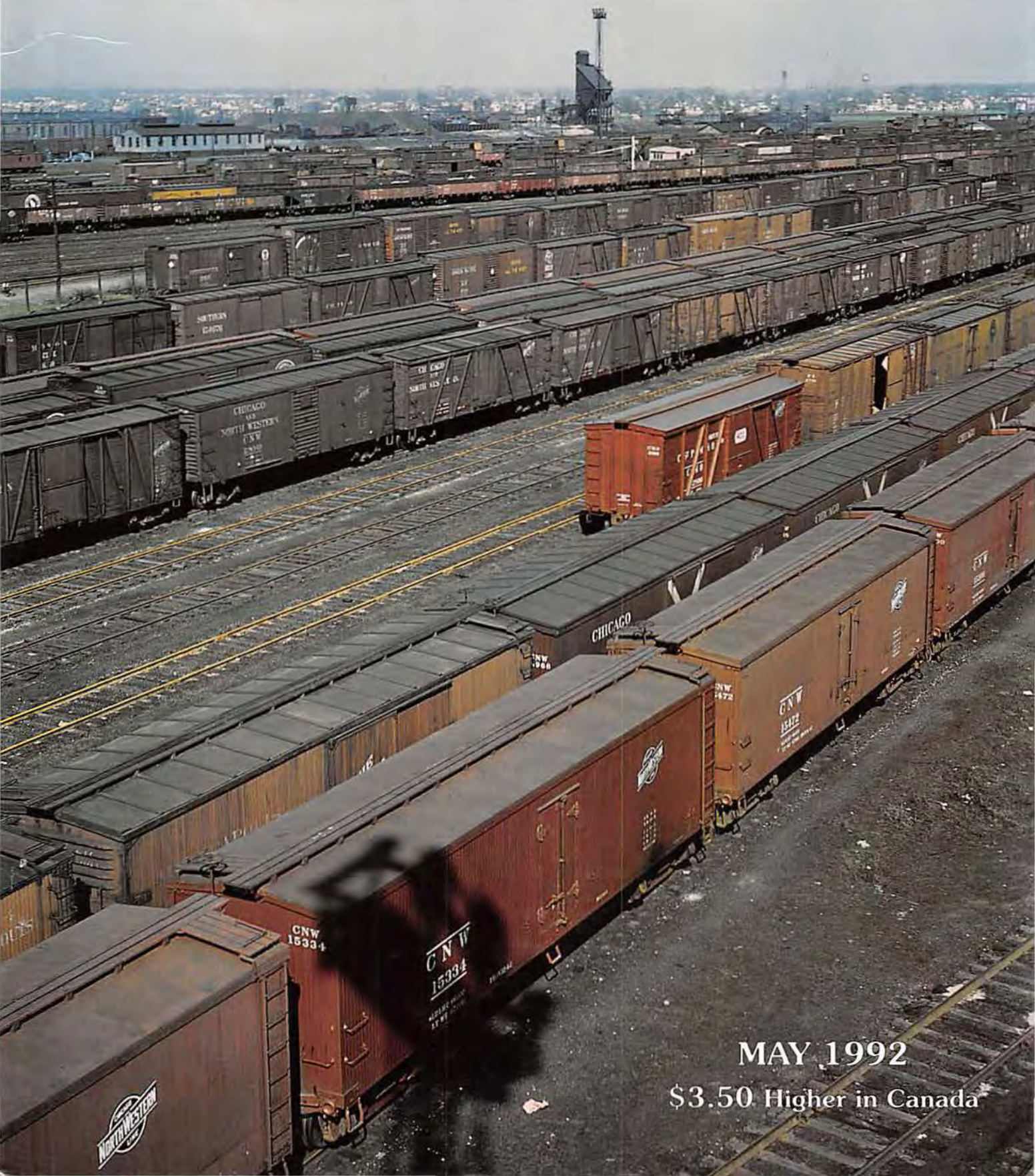


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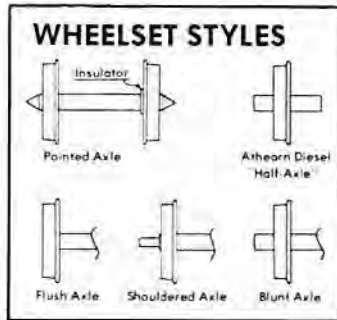


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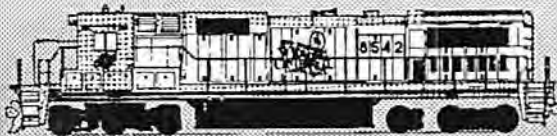
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**MAINLINE MODELER (ISSN 0199-5421)** is published monthly (12 times per year) by Hundman Publishing, 5115 Monticello Drive, Edmonds, WA 98026. Second class postage paid at Edmonds, Washington, and additional offices.

POSTMASTER: Send address changes to:  
 MAINLINE MODELER  
 5115 Monticello Drive  
 Edmonds, WA 98026  
 (206) 743-2607

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Rarely does a single photo give as much information as this one. The photo is taken from the article beginning on page 76, titled WW II Yards. And the information displayed on the cars in use at that time is great support for last month's article by John Nehrich. The photo was supplied by Paul Swanson.

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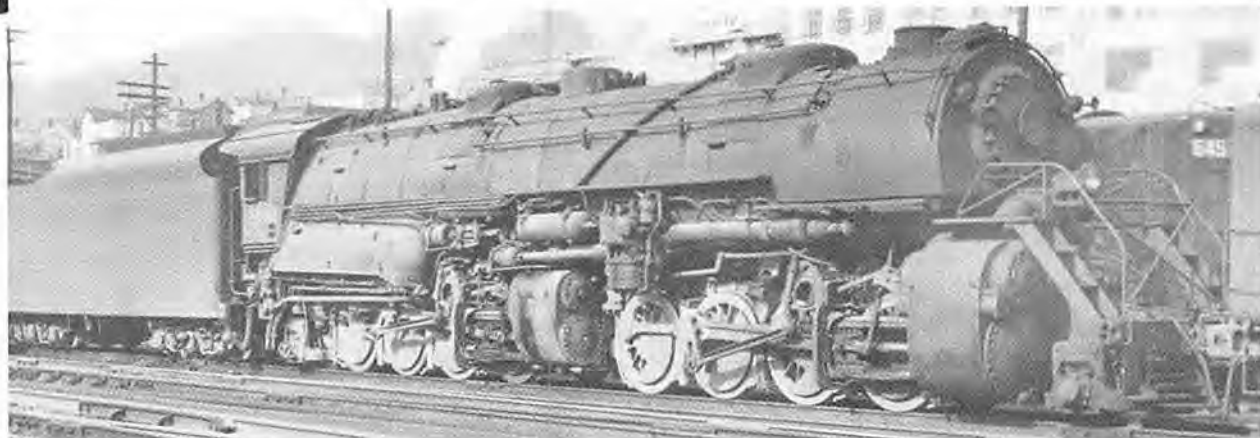
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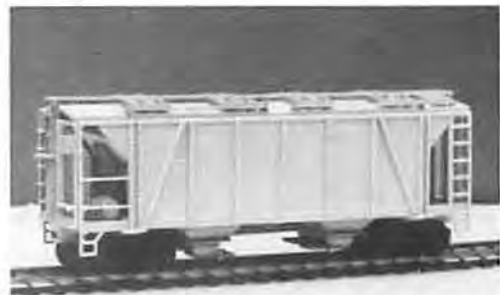
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**March '84 Vol 5-3** - Street Bridges • EMD's G17 & GP9 Spotting Guide • EP&SW 4-8-2 • Virginian Trainmaster Painting Guide • Building Construction Part II • CN Caboose • Part Gamble Church  
**April '84 Vol 5-4** - DL&W 4-8-4 • SIBR Modeling • Modeling a Coal Yard • EMD G19 Phase II • SP Stock Car • PAWV 2-8-0 • Union RR Engine Terminal • Canal Overpass • IAR BL2 Painting Guide

**May '84 Vol 5-5** - Building a Self-Propped Welder • Ore Docks • Rocky River Depot • Maine Central 4-6-2 • Alco HL103 • An International Building • ACL Flat Car • NYC Newark Branch • C&O BL2 Painting Guide • Pullman-Standard Covered Hopper  
**June '84 Vol 5-6** - Ore Docks • D&H Crane • C&N E-Unit Painting Guide • Posing Board • Amtrak F40PH Phase 1 • C&O Automobile Box Car • SP Passenger Car Lettering • Timber Truss Ivy Bridge • C&L 4-6-2 • Painting Techniques • CB&Q Coaling Tower  
**July '84 Vol 5-7** - Inlets of the Ore Docks • Modeling the Stone Avenue Depot • H&SF 0-6-0 • Chelsea Depot • Strengthened Underframes • N&W's Finest: Class A 2-6-4-4 • Convention Photography • Greenview 60' Box Car • Alco 1000 HP Diesel • EMD E-Unit Painting Guide  
**August '84 Vol 5-8** - N&W's Finest: Class A 2-6-4-4 Part Two • Experimental End PS-1 Box Car • Loading Ramps • Modeling the Loading Ramps • GM&O Cantilever Signal • ALCO R53 • KCS Automobile Box Car • Modeling the Stone Avenue Depot Part Two • Frisco 4-8-2 • PS-1 Modifications • KCS SD40/SD40-2/SD40X (S10) Painting Guide  
**September '84 Sold out**  
**October '84 Vol 5-10** - NYC Bay Window Caboose • Krauss-Maffei M1A000C • W&LE Shops: Brewer, Ohio - Part Two • Stainless Steel Boiler Jackets • Pullman Heavyweight Passenger Car • Retrofitting with Altherm's GP Truck • N&W Depots • W&LE Coal Dock • NMRA Contest Winners • FEC 4-6-2 • Frisco E-Unit Painting Guide  
**November '84 Vol 5-11** - Hopper Car Loading Mine #5 • Wheeling & Lake Erie Shops • Construction of a Single-Sheathed Box Car • Pullman Heavyweight Passenger Car • Cheap Chopped Challenger • DM&M Superpower Locomotive • Blending Plant for Dairy Feed • Savannah & Atlanta 4-6-2 • Alton Aluminum Box Car • BAR GP's Painting Guide  
**December '84 Vol 5-12** - Heavy Pacifics • The Dixon's Hollow Bridge • IH-2 Detailing • Upgrading a Toy Train Tank Car • The N&W Powhatan Arrow Coach • Windows • C&E GP's Painting Guide • NYC Bridge • MP Greenville Gondola • EMD G19 Phase III  
**January '85 Sold out**  
**February '85 Sold out**  
**March '85 Vol 6-3** - USRA Single-Sheathed Box Car • W&LE Caboose • Union 10,000-Gallon Tank Car • The 1894 Trip • An Omaha Tool Shed • Conclusion of the S Scale GP50 • Pullman Heavyweight Passenger Car • Improved Windows • Phippsburg, CO on the DL&GW • N&W 4-8-4 • Ice Reefer to Box Car • C&N F-Unit Painting Guide  
**April '85 Vol 6-4** - 1984 Trip • C&N Coaling Tower • Krauss-Maffei M1A000C • Lehigh Valley 2-8-2 • Pullman Heavyweight Passenger Car • Construction of a C&N Coaling Tower • BN Hopper • Erie Depot • N&W 4-8-4 • Golf Road & Raymond Street Overpasses • Marjorie Refrigeration Cars • NP Freight F-Unit Painting Guide  
**May '85 Vol 6-5** - Progress on the Franklin & South Manchester Railroad • Construction of a Standard Coaling Tower • The Grand View Depot • Poww Arrow Flatbed • Green Springs Depot • The N&W Powhatan Arrow Compartment Coach • Derelict Hudson • Illinois River Bridge Alterations • USRA Light 2-8-2 • Westerfield Modifications • Denver & Rio Grande Caboose • IAR F-Unit Painting Guide  
**June '85 Vol 6-6** - Dominion Box Car: Part One • Ballasted Deck Trestle: The Model • Nickel Plate Interlocking Tower • USRA 2-8-2 Originals • Illinois Central City of Miami Baggage Coach • Missouri Pacific Box Car • P&H Illinois River Bridge • Southern Pacific Flat Fare 4-8-8-2 • Ballasted Deck Trestle: The Prototype • Baby Tunnel  
**July '85 Vol 6-7** - Crossing Tender's Shanty • Rowland's Depot • The Dominion Box Car: Part Two • Chester, Vermont • PRR K31 Round-Roof Box Car • EMD GP18 • Pullman Heavyweight Passenger Car • Three-Bay Covered Hopper • Tebachi; at a glance • Washburn L-1 2-10-2 • SP AC-6 • MC Coaling Tower • SP EMD SD77 "Caddisflies"  
**August '85 Vol 6-8** - Parlor Cars & Service on the W&LE • NP Roundhouse: Prototype • SP&S C-536 Painting Guide • APL Containers • Heavyweight Passenger Cars • N&W Hopper • Brighton Crane • Southern 2-8-8-2 La-1 • CP Dominion Car Modeling • Texas Electric Freight Motor  
**September '85 Vol 6-9** - Photos with Filters • GN Box Car: Prototype • Chatham, NY Police Station • N&W Coal Trestle • GN Box Car: Modeling • Roundhouse Modeling: Part Two • 12-1 Pullman Heavyweight • Fairbanks Coal Tipple • Milwaukee SDL 39 • L&N C-1 0-8-0 • Thoritic • ALCO DII-643 • B&O Wagon-Top Box Car • RFP& GP7 Painting Guide  
**October '85 Vol 6-10** - EMD TR-2 Modeling • Lev-Town Fire Engine • Canadian USRA Engines • Standard Tool House • Modeling the NP S-6 • TV Monitor • Chemical Unloading • Pullman Heavyweight • Frisco Hopper • EMD SD46 • Gould/Atherm Tank Car • Coffin Feed-water System • PFC: III-2 Painting Guide  
**November '85 Vol 6-11** - SD46 Pictorial • Storefronts as Backdrops • NS Painting Guide • CN Box Car • Memories • Southern Caboose • Horse Cars • Pullman Heavyweight 8-4 • Santa Fe Section House • Pennsy Double Header • C&O 2-6-0-0 • 1830's House • Baggage Cars  
**December '85 Sold out**  
**January '86 Sold out**  
**February '86 Vol 7-2** - Wrought Iron Highway Bridge • Wagon-Top Caboose • Templeton Depot • 50-ft. Piggback • BR2 Box Car • NYS&W Depots • 6-6 Pullman Heavyweight • Hand Brakes • Wooden Through Truss Bridge • Electro-Motive TR2 • N&W II-4 Modeling • GM&O GP8 Painting • Troy, NY  
**March '86 Vol 7-3** - MIT Reefer • CNW Crossing Shanty • NP Caboose • Copy Machine • Gas Storage Facility • MIT Reefer Modeling • Powhatan Arrow Coach • 85-ft. Piggback • Backdrop Painting • DL&W 4-8-4 • Wooden Deck Truss • 1920 Photos • Crossing Shanty Modeling  
**April '86 Vol 7-4** - Fremont, Ohio • CN Roundhouse • GPEX Express Reefer • F&NM • N&W Turntable • 8-5 Pullman Heavyweight • SP 40-foot Express Reefer • Dominion Look-Alikes • Amtrak • ALCO R53 Phase III • From the Left Hand Side • Televuever • Southern Covered Hopper • Monon Two-Hay Covered Hopper  
**May '86 Vol 7-5** - Fremont, Ohio Part II • GTW Painting Guide • C&O Box Car • Hobbytown • 1842 Expansion • PFE R40-2 • Pullman Heavyweight • Texas Electric RPO • Landmark Elevator • EMD E7 • Omaha Trestle • Piano Workshop • SP 2-6-0  
**June '86 Vol 7-6** - EMD E7 • NKP Caboose Modeling • Walls • B&LE Hopper • CoNJ Box Car • C&O Handcar Hopper • UP Handcar House • Pullman Heavyweight 2412 • NY&W Station • Stuck Throttle • Grangeville Extra • SP Builders Photo • General Store • CP Painting • GN Box Car • Boats  
**July '86 Vol 7-7** - Water Tanks Pt. I • CoNJ 1926 Steel Auto Car • Washburn Pump House • Calliper Use • Central GP15 Painting • Cleveland Bridges • Pullman Ivy, Wt. 3897A • CP Freonless Water Car • UP 24450 Pt. Station • Expo Steam Fair • MP 2-8-4 • Dental Wax Castings • Erie Depots • Airbrushing Brass • Vgn. Shed • B&M Single-Sheathed Box Car  
**August '86 Vol 7-8** - Water Tanks Pt. 2 - IC Pullman • Central 40-Ft. Modern Van • ARA 1924 Box Car • CSX Diesel Painting • SP Tool House • O Scale Covered Hopper • Pullman Heavyweight 3079A • Weed Train to Lenore • Sand Towers • EMD BL2 Phase 1 • CN Articulated Grain Car • Summit Station/Rutland • NYC&SL Elev. Gate House • Super Detailing Older Brass

**September '86 Vol 7-9** - SP C50-9 • IT&I Painting • Twin-Bay Hopper • NY&W Water Tower Pt. 1 • Six Blocks West of the Train Yard • Fyler Tool House • IC City of Miami • Saratoga, New York • Truck Work • DT&I 2-8-2 & 2-8-4 • Erie Sanding Facility • MKT Timber Trestle • Sanding Tower Modeling • 1940 Covered Hopper • UP Depot  
**October '86 Vol 7-10** - 1880's Mofw Cars • C&O RSD12 Painting • NY&W Water Tanks • Incident at Yoncalla • Solar Army • Saratoga, NY • Pullman Ivy, Wt. 3837A • D&H Tool House • GM&O Flat Car • Thurmond, W.V.A. • EMD HL2 Ph. II • O&W Sand Tower Modeling • Solderless Brass Detailing • MKT Wooden Platform • 1940's House • MP 2-8-4  
**November '86 Vol 7-11** - W&LE Tunnels • E7 Modeling • Mather Patent Box Car • TP&W R511 • NKP Cross Buck • PRR H31C • C&O Coal Houses • B&O Rebuilt Ivy, Wt. 4090G • Viking Roof • C&O Engine House • MP 2100 4-8-4 • Passenger Service Memories • Crossing Towers • Passenger Car Painting • Interlocking Towers • SP&S Flat Car • N&W Stock Pens  
**December '86 Vol 7-12** - Erie Sand Facility • Box Car Modeling • UP Handcar House • Proto 48: Wheels • B&O FA Painting • Special Tank Cars • ALCO PA-1 & 2 • Pullman Ivy, Wt. 4090, 400H&P • SP Trestle • NP Caboose • Thurmond Pt. II • NY&W Coaling Tower • CN Flat Car • Murphy Ends • Airside Covered Hopper • N&W Coal Wharf  
**January '87 Vol 8-1** - Pennsy 4-8-2 Pt. 1 • MP FA Painting • C&N #2 Depot • Texas Fuel Dealer • Monon Covered Hopper • ALCO PA/PT 1&2 Pt. II • Pullman Heavyweight 4084A • Rutland RPO • UP Waterman's House • 35mm IR&W Photos • Thurmond Part II • Airside Covered Hopper • Pullman Display Model • D&H Two-Story Home • GN Y1a Model  
**February '87 Vol 8-2** - C&O/L&N Ky. Depot • Lehigh Valley GP38/GP38-2 Modeling • Julet Elevator-Barge-Rail Main Line • GN R53 Painting • Washburn Coal-Oil Lamphouse • More Ends • Pullman Ivy, Wt. 3880, 3880 B&H • NY&W Erie Canal Bridge #50 • CP's West Shore Terminal • Pennsy 4-8-2 Pt. II • APL Container Cars • Flat Car Ramp • NKP, ALCO, EMD Rebuilds • Virginia & Truckee Scene  
**March '87 Vol 8-3** - W&LE Depot • NYC E-Unit Painting • Pullman Ivy, NY • N&W Sectionman's House • GM&O Offset Side Hopper • Green Island, Wt. 4158 & 4172 • CP Engineer's Spare Room • 1880's Log Dump • ALCO PA3 • Stone Foundations • AT&SF Stock Fence/Guard • Santa Fe Passenger Car Painting • UP at Gering, Nebraska • APL Container Cars • C&N Toolhouse • Milwaukee Road Flanger Sign  
**April '87 Vol 8-4** - Airside Modeling • P&N Diesels • SP's Problems with Jobbers • Chessie GP40 Painting • GM&O Depressed Center Flat • C&O Dynamometer Car • 40-ft. Rail Van • D&H Agent's House • Thurmond Depot • NY&W Scales • USRA Heavy 2-8-2 • IH/FRisco Hopper • Washburn Tool House • Water Softener • Auto Rack Unloader • Erie Depots  
**May '87 Vol 8-5** - Rutland Covered Bridge Modeling • Timber Loading Ramp • Frisco Covered Hopper • Wooden Bridge Pier • UP Standard Cattle Crossing • Front Runner Modeling • D&H Overhead Crane • N&W Powhatan Arrow Diner • MSU Car Shaker • APL 45-Ft. Container Car • EMD F45/F45 Pt. 1 • IS-1 Ends • MP Privy • MP Telephone Booth • L&N R53 Painting • USRA Heavy 2-8-2's/Copies  
**June '87 Vol 8-6** - East Bridge Jet • Washburn, PA • GN Hopper Model • SP Train Indicators • SR GP50 Painting • MP 4-8-4 Model • NY&W Standard Outhouse • AT&SF Standard Pamphlet • Powhatan Arrow • Photo-Etching • IH Coaling Tower • NKP 4-6-4 • Dental Castings • Southern TOFC Model • D&H Reefer • PM Lake Odessa Depot  
**July '87 Vol 8-7** - NKP 4-6-4 Part II • B&M Whipple Truss • PRR R13B Model • SP Wrecking Cranes • Keep Your Cool • C&O Stream-lined Coach • R Covered Hopper • MP Tool House • Hocking Valley Depot • EMD F745 Part II • Atlanta's General Store • NKP ALCO PA Painting • Modernized Steel Snowplows • Omaha Standard Drawings • Frisco Ballast Car  
**August '87 Vol 8-8** - Eugene Yard • Steam Shovels, Cranes and Draglines • D&H Barrel Racks • Lehigh Valley Painting Guide • Offset Side Hoppers • NP Parker Car #1732 • Monon's ALCO C-420's • N&W Standard • CN Thurmond Yard • USRA 4-6-2 • Pronto 48: EA Junction • Vinegar Industry • Modifying the Weaver ALCO R53 • Concrete Coal Bins • NY&W Depot • Erie Depots  
**September '87 Vol 8-9** - Offset Side Hoppers Part II • N&W Sectionman's House • Oldsmobile Antique Truck • Central of Georgia's Decatur Depot • Modeling Monon's ALCO C-420 • C&O Launch Control/Buffer/Lounge • NY&W Coal Trestle • Lineside Industries • The Universal Reefer • ALCO RSD12 • Alaska Highway Signs • B&O's Mather Stock Car • Victorian House • Hayes Details • Detailing Stewart's R51 Phase 3 • Erie Depots  
**October '87 Vol 8-10** - Great Northern Electrics Part I • GTW Reefer • Cotton Belt GP40-2 Painting Guide • Piggback Trailer • Northern Pacific Combines • Mainline Award • D&H Lineside Industries • MKT Handcar • Prairie's Truck Plan • NY&W Depot • Offset Side Hoppers Part III • N&W Outhouse • View from a Cab-Forward • N&W 100-ton Hopper • GBA's "Mike" Tower • SP&S Mofw Equipment • New Haven T-2b 0-6-0  
**November '87 Vol 8-11** - N&W's Norton Branch • Cyclopedias • Chinesfield SD-40 Painting Guide • GN Electrification Part II • NP Passenger Car • Southern's Kingston, NC Freight Station • AT&SF Standard • CP Standards • Blue Sky Photography • GNY-1 Electric • West Shore Class C Depot • SP Passenger Train Meet • Erie Depots • Pere Marquette Standard • Offset Side Hoppers Part IV • Southern Gondola Modeling • Penn Central Box Car  
**December '87 Vol 8-12** - N&W's Norton Branch Part II • VIA F40ph Modeling • Seaboard Air Line GP40 Painting • D&H Seely Hopper • C&O Mineral Depot • Rutland Fence • AT&SF Gate • Covered Hopper Improvements • Canadian National Articulated • Southern MS1 2-8-2 • Huey P. Long Bridge Part I • Detailing Rio Grande's SD45 • GTW-CV Box Car  
**January '88 Vol 9-1** - UP Truss Bridge of 1917 • Ontario Northern Depot • Southern SD40-2 • Structures - Get Looking • Fruit Growers Express Reefer • C&O, D&H, DL&GW Passenger Car • Norfolk Southern Cranes • The Columbia Gorge • ALCO RSD7&15 • Missouri Pacific Composite Hopper • C&O Four-Room Cottage • CRO Pile Trestle • Huey P. Long Bridge Part II • Pere Marquette Stone Culvert  
**February '88 Vol 9-2** - Conrail U25H Modeling • C&O Company House • CN Grain Car Modeling • FEC Ortner Aggregate Rapid Discharge Hopper • Pullman 1940 Welded Box Car • Kitchen Drumratty Car Part I • NKP B&E Depot • Columbia Gorge Part II • ALCO RSD15 • Van Cott Siles • C&M SBR3 Painting Guide • Monon Reefer Modeling • Fairmont Section Car





## More on Brass Today...

Last month we talked about the importance of Advance Reservations (ARs) and how you can reserve your brass models in advance to be certain the importer manufacturers what you want. This month, we want to address some of the hottest new projects coming your way in 1992 and 1993. . . *Reserve them today!*

### Great Northern M-2 2-6-8-0, 2 Versions in HO

are due in October 1992 from Challenger Imports. Both models will be available only in beautiful Glacier Park factory paint. Version one is specifically modeled after GN #1973 with Vanderbilt tender. Version two is a replica of GN #1977 with correct rectangular tender. Both of these models are completely different than earlier imports by Oriental and PFM, and they will be extremely accurate.

### Soo Line Long Wood Cabooses, 4 Versions in HO

are due in 1993 coming from our good friends at W&R Enterprises. This is the follow-up HO caboose project to the wonderful NP Wood Cabooses that are sold out now. Don't miss this one. Versions include an original as-built wood sided car, and three rebuilt varieties including wood and plywood sides. These cars lasted in service until 1981. Only coming around once folks. . .

### D.M. & I.R. Class M-4 2-8-8-4s in HO and O

are coming from Precision Scale and Samhonga. Forget what you read from the other dealers two years ago. Here's the real story from the dealer who put the plans and photos together for PSC (i.e. *we did!*) Both HO and O scale models are being made at Samhonga with delivery scheduled for late '92/early '93 (this gives you time to save your \$\$\$.) In either scale, choose Elesco or Worthington feedwater heater, unpainted, black scheme, or gray scheme. Look for truly state-of-the-art details across the board, with the O scale model to be a real work of art, right down to see-through running boards. This is *THE* articulated project to own in either scale. The day after you take possession, it'll be worth more than you paid for it. Believe it. Reservations are filling up fast. Don't be left on the ore dock when this one heads north for more ore!

### EMD GP35 in 19 Versions in O Scale

are coming from Overland Models and Ajin Precision later this year. Versions specifically detailed for Ann Arbor, AT&SF, C&NW, D&RGW, E-L, Frisco, GN, GM&O, NYC, NKP, N&W, PRR, Reading, Southern, SP, UP, Wabash, WM and WP. What a series! O scale muscle for a 26" minimum radius. Again, only coming around once, and we urge you to reserve today what will certainly become a classic O scale piece.

As always, friendly service is just a phone call away. Get the inside scoop on today's brass market from **BRASSplus** and put aside your worries about missing out on tomorrow's new models. Buy your brass from the dealer who helps research it.

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AHM 40' Gons — Utah Coal/UP/Norfolk &  
South ..... 3 for \$36  
Atlas Ore Cars — B&E/Can Nat/M&R/UP 3 for \$36  
AHM Flats — Southern/Milwaukee/Great Northern  
..... \$8 each or 3 for \$15  
Atlas F-9s, used ..... \$40

### BRASS

Overland Reading 4-8-4 T-1  
SALE...SALE...SALE...SALE ..... 880  
Sunset UP 4-6-6-4 oil fired unpntd orig box... 1350  
Westside UP 4-8-8-4 Big Boy custom pntd, full  
backhead ..... 2800  
Williams UP 4-6-6-4 Challenger, factory painted,  
2 rail ..... 1200  
Overland UP 4-6-4 strmlnd Pacific  
SALE...SALE ..... 780  
Sunset Great North 0-5 2-8-2 factory pntd/  
orig. box, exc. .... 1250  
Westside NYC 4-6-4 J-3a Convntl w/12 whl. 24T  
tender, mint ..... 1600  
PSC South Pac 4-6-0 T-31 "no tender" unpntd,  
orig. box ..... 575  
USH South Pac 4-8-4 Daylight 2 Gen/ pntd/  
litrtd/orig. box ..... 1380  
Williams South Pac 4-8-8-4 cab ahead, factory  
painted "3 rail" ..... 1070  
USH B&O 0-4-0 C-16a pntd w/engineer &  
fireman, "cute" ..... 375  
MG NKP 2-8-4 Berkshire pntd fair/no box ..... 570  
Williams PRR 4-6-2 K-4, factory pntd ..... 425  
Williams PRR 2-8-2 L-1, factory pntd ..... 375  
Max Gray 2 Trx Shay (missing air tank on  
running board) ..... 825  
Lobaugh UP 4-6-6-4 Challenger (basket case) . 680  
Overland UP M-10000 3 car set, needs minor  
repair/unpntd/ob ..... 890  
USH SD-45, unpainted, orig. box ..... 475  
Key ATSF E-8 A/B, factory pntd, war bonnet/  
orig. box ..... 1475  
Oriental ATSF NW-2, custom pntd (blue & yellow),  
orig. box ..... 575  
Pecos ATSF hvywght RPD, custom pntd #79 . . . 390  
Pecos ATSF hvywght baggage "REA" custom  
pntd #1826 ..... 390  
Pecos ATSF hvywght chair w/acc. #3052 ..... 425  
Sunset ATSF strmlnd Pullman 10-5 Sleeper  
"Cascade Mills" ..... 350  
PSC 80' pull stand hvywght solarium c/pntd  
"Crystal Beach" ..... 325  
PSC 80' pull stand hvywght club buffet,  
unpntd ..... 325  
PSC NYC standard hvywght coach, factory painted,  
qty. 3, closeout ..... 280  
PSC NYC standard hvywght combine, factory  
painted, last one ..... 280  
Pecos ATSF 1950's wood caboose, custom  
painted/lettered ..... 175  
Pecos ATSF covered hopper, custom painted,  
#182008 ..... 175  
PSC NYC 50' dbl. dr. box, custom painted,  
"Early Bird Service" ..... 175  
PSC PRR (REA) 40' X-29 box, custom painted,  
w/heavy weathering ..... 140  
PSC PRR 40' composite refer, factory pntd ..... 125  
PSC PRR G-26 65' Mill Gon, custom pntd ..... 175  
PSC Reading 65' Mill Gon, custom pntd ..... 175  
PSC 70T Mill Gon, new, orig. box ..... 125  
USH #246 40' steel refer, unpntd (qty. 3) ..... 85  
Code 175 nickel silver rail 100' \$48 or 1000' for \$400  
Code 172 steel ..... 100' for 25  
Code 100 NS #8 Turnouts (3 right/3 left)  
..... each 35  
Atlas Remote Switchers R&L ..... each 5  
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Hennings Cattle Pen ..... 15

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	(M)	Erie built A & B roadsw	350
	(GE)	U-25B road switcher	99
	(PALE)	A-2 class 2-8-4	375
	(PRR)	N-5c stl caboose w/ant. C/P NLR	110
	(PRR)	P-5b heavy boxcab electric	229
BSM	(ALCO)	PA-3 pass cab unit C/P	99
CuSB	(BNLL)	LA-1 gas-electric car & car F/P	450
	(NYG&W)	V-2 class 4-8-2, PTD w/ptow	299
Fom	(CNJ)	4-2-41 inspection loco F/P	150
GBF	(PULLMAN)	Imperial series LW 41/2 Pmo	429
Gem	(N&W)	1-11 4-4-4, C/P #91	208
	(ROG)	4-wheel bobber caboose	69
	(ANY)	traction line (MOVY) car, pwr	229
	(AMTRAK)	25000 series Amfleet 2 roadsw	169
	(AMTRAK)	28000 series Amfleet 2 lounge	169
	(ITS)	4273-283 interurban combine	199
	(ITS)	#516-527 interurban coach	199
	(ITS)	#28, artic. interurban coach	199
	(WBA)	#28, artic. interurban coach	349
GSB	(GHE)	Texas "Bluebird" int car C/P	279
Hmk	(EMD)	SD-7 road switcher (KMT) NB	69
	(M)	H-20-44 switcher (Lowry/KMT)	69
	(AT&SF EMD)	GP-50 road diesel, w/dyn	129
Jon	(D&R)	4 window railbus, w/dyn	60
	(ANY)	1054w 8000psi Andrew tank LT	169
Key	(ALCO)	RS-2 road switcher, std vers.	229
	(ALCO)	RS-3 std vers. road switcher	199
	(BA)	FA/FB-2 cab unit set F/P b&g	699
	(ALCO)	Y-6b class 2-8-2	449
	(NYC)	F-6b class 2-8-2	999
	(ALCO)	RS-1 comm vers. road switcher	299
	(SP)	AC-6 cab w/rd 4-8-2 F/P NLR	199
	(ALCO)	GS-4 strmid 4-8-4 F/P F/S #2	499
	(ALCO)	PA/PB-3 cab unit set F/P day	699
	(ALCO)	PA/PB-3 cab unit set F/P day	699
LMS	(NYC)	L-3 Mohawk 4-8-2	278
NPF	(SEA)	A-12 class 2-8-4, F/P #1441	375
	(CB&Q)	M-4 class 2-10-4 F/P, weight	299
	(LV)	steel NE caboose, c/p tuscany	110
	(PHILA)	Liberty Liner 4-unit train	299
	(PRR)	Pittsburgher HW bus car C/P	199
	(ROG)	Northeastern style steel cabs	89
NWSL	(BLW)	Baldwin 70R logging 2-8-2	399
OMI	(EMD)	SD-45 #6500 w/interment trks	432
	(BORDEN)	milk tank car, end fins only	99
	(C&O)	"1926" wood caboose	99
	(CM&P&P)	Class A strmid 4-2 mod. F/P	699
	(CNJ)	2-wood caboose, 2-versions	107
	(CNJ)	wood caboose, 2-versions	107
	(CR EMD)	SD-50 road diesel, NLR	199
	(N&W)	EP-5 electric wiscrans F/P	599
	(NH)	EP-5 electric, original F/P	599
	(NYC)	N-10 class 2-8-2 Mod vers NLR	350
	(NYC)	P-2b heavy electric #223-242	359
	(NYC FM)	Erie int cab unit #4400-05	349
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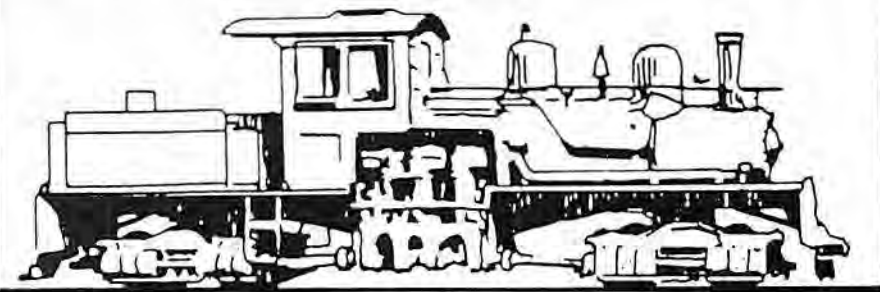
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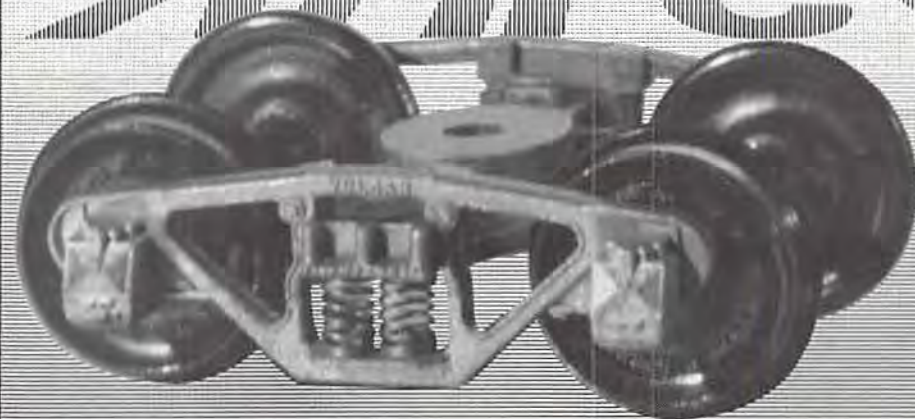
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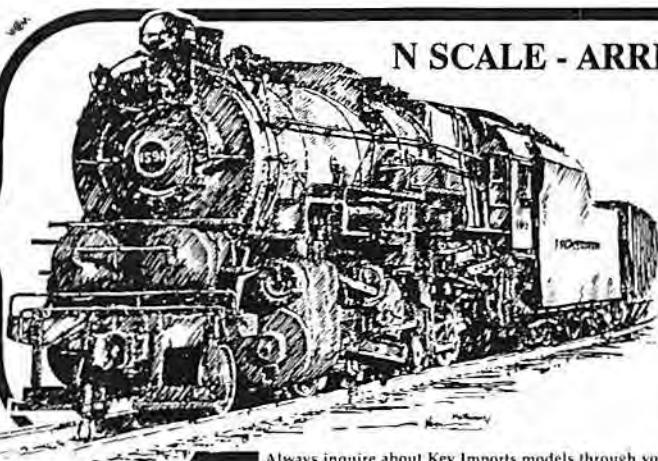
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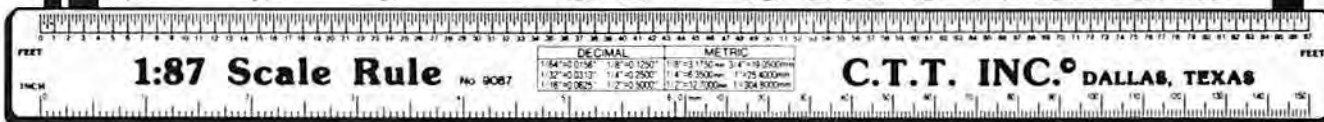
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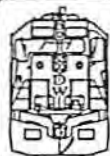
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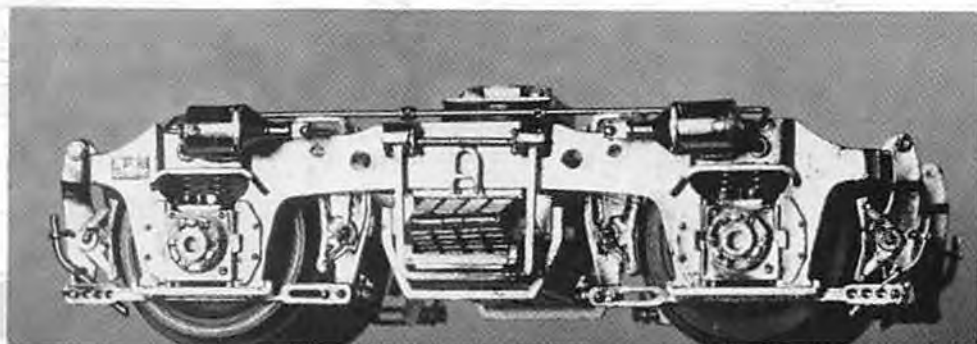
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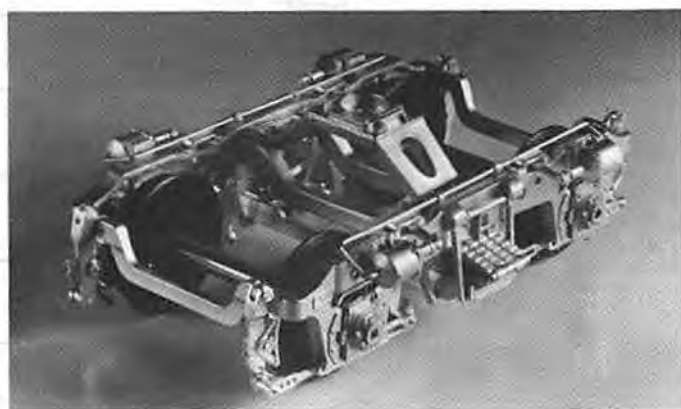
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<b>LDS ANGELES</b> ALLIED MODEL TRAINS 4411 SEPULVEDA BLVD. 90230 (213) 313-9353	<b>DENVER</b> TRAINMASTER OF DENVER 3700 HAVANA WAY SUITE 214 80239 (303) 371-8444	<b>W. PALM BEACH</b> CRAFT HOUSE HOBBY SHOP 1079 N. MILITARY TRAIL 33409 (407) 683-0764	<b>GLENWOOD</b> DON'S HOBBY WORLD 18447 S. HALSTED AVE. 60425 (312) 754-7988	<b>SHREVEPORT</b> COOK'S COLLECTORS CORNER 4402 YOUREE DR. 71105 (318) 665-7632	<b>KALAMAZOO</b> RIDER'S HOBBY SHOP 3417 S. WESTNEDGE 49008 (616) 349-2666
<b>LOS ANGELES</b> NATICK STAMPS & HOBBIES ARCO PLAZA, C LEVEL 505 S. FLOWER ST. 90071 (213) 626-3339	<b>WESTMINSTER</b> MIZELL TRAINS, INC. 3051 W. 74TH AVENUE 80030 (303) 429-4811	<b>GEORGIA</b>	<b>MT. PROSPECT</b> HIS & HERS HOBBIES 15 WEST BUSSE AVE 60056 (312) 392-2668	<b>MARYLAND</b>	<b>LANSING</b> TRACK TWO HOBBIES 4324 W. SAGINAW 48917 (517) 321-6422
<b>LOS ANGELES</b> Troxel Models 4319 W. 2ND ST. 90034 (213) 382-6626	<b>CONNECTICUT</b>	<b>CHAMBLEE</b> GANDY DANCERS 5460 PEACHTREE ROAD 30341 (404) 237-6245	<b>MUNDELEIN</b> RON'S MUNDELEIN HOBBIES 431 N. LAKE ST. 60060 (312) 949-8680	<b>CATONSVILLE</b> PRO CUSTOM HOBBIES 721 FREDERICK RD. 21229 (301) 768-8770	<b>LOWELL</b> EARL'S TRAIN WORLD 10560 CASCADE RD. SE 49331 (616) 868-7495
<b>NORTHBRIDGE</b> SMITH BROS. HOBBY CENTER 8941 RESEDA BLVD. 91324 (818) 685-8636	<b>CANAAN</b> BERKSHIRE HILLS MODEL RR CHURCH STREET 06018 (203) 824-0927	<b>CHAMBLEE</b> ATLANTA TRAIN WAREHOUSE 5726 NEW PEACH TREE RD. 30341 (404) 458-1010	<b>PALATINE</b> PALATINE HOBBY LTD. 43 E. NORTHWEST HWY. 60067	<b>MASSACHUSETTS</b>	<b>ROCHESTER</b> JOE'S HOBBY CENTERS INC. 105 S. LIVERNOIS 48063 (313) 651-8842
<b>PALMDALE</b> BIG BOYS TOYS 2127 E. PALMDALE BLVD 93550 (805) 273-6229	<b>COS COB</b> HOBBY HOUSE 405 EAST PUTMAN AVE. 05807 (203) 869-0969	<b>LAWRENCEVILLE</b> TRAIN WORKS 251F HURRICANE SHOALS RD. 30245	<b>PALOS HEIGHTS</b> THE RIGHT TRACK 6521 W. 127TH ST. 60463 (708) 388-3008	<b>BEDFORD</b> BEDFORD TRAIN SHOP 32 SHAWSHEN AVE. 01730 (617) 275-7525	<b>ROYAL OAK</b> TRAIN CENTER HOBBIES 4508 N. WOODWARD AVE. 48072 (313) 649-6800
<b>PASADENA</b> THE ORIGINAL WHISTLE STOP 2490 E. COLORADO BLVD. 91107 (818) 796-7791	<b>MANCHESTER</b> NEW ENGLAND HOBBY SUPPLY 71 HILLIARD ST. 06040 (203) 646-0610	<b>RIVERDALE</b> RIVERDALE STATION 8504 CHURCH STREET, SUITE 8 30274 (404) 991-6085	<b>PARK RIDGE</b> HILLS HOBBY & COLLECTORS SHOP 10 PRAIRIE 60068 (312) 823-4464	<b>DANVERS</b> NE MODEL RR SUPPLY 467 MAPLE STREET RTES 1 & 62 01937 (508) 777-1387	<b>ST. CLAIR SHORES</b> WHISTLE STOP HOBBIES 21714 HARPER AVE. 48080 (916) 485-5288
<b>REDONDO BEACH</b> SOUTH BAY MODEL RR SUPPLY 2503 ARTESIA BLVD 90278 (310) 542-3688	<b>UNCASVILLE</b> TRACKSIDE 63 MOXLEY RD. 06382 (203) 849-0460	<b>SAVANNAH</b> BULL STREET STATION 151 BULL ST. 31401 (912) 236-4344	<b>ROCKFORD</b> BRASS WHISTLE INC. 630 HOLLISTER AVE. 61109 (815) 398-2877	<b>GROVELAND</b> BAY STATE MODELS 8 ROLLINS ST. 01834-1804 (508) 372-8828	<b>WESTLAND</b> DAVE'S HOBBY & TV 29026 WARREN RD. 48165 (313) 422-4444



























































# the hobby shop pages

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<b>ST. LOUIS</b> TINKER TOWN INC. 9656 CLAYTON RD. 63124 (314) 991-4311	<b>NEW MEXICO</b>	<b>AKRON (CUYAHOGA FALLS)</b> RAIL CROSSING 119 PORTAGE TRAIL 44221 (216) 945-5552	<b>MONTOURSVILLE</b> ENGLISH'S MODEL RR BOX 122 17754 (609) 733-2101	<b>RICHMOND</b> THE TOY CENTER 10441 MIDLOTHIAN 23235 (804) 323-5773	<b>MANITOBA</b> GOLDEN SPIKE MODEL SHOP 185 STADACONA WINNIPEG, MANITOBA R2K 1R8 (204) 667-2080
<b>NEBRASKA</b>	<b>ALBUQUERQUE</b> ABAJO DEPOT 3301 MENAUL NE. STE. 16 87107 (505) 881-2322	<b>CINCINNATI</b> GOLF MAJOR HOBBIES 2235 LOSANTVILLE AVE. 45237 (513) 351-3849	<b>PITTSBURGH</b> A. B. CHARLES & SON 3213 W. LIBERTY AVENUE 15216 (412) 561-3068	<b>ROANOKE</b> ROANOKE RAILS 11 S. JEFFERSON ST 24011 (703) 342-5930	<b>ONTARIO</b> HUTCH'S TRAINS INC. 490 BRANT STREET BURLINGTON, ONTARIO L7R 2G4 (416) 637-3721
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<b>OMAHA</b> SCALE-RAIL 4205 S. 87TH ST. / BOX 27242 68122 (402) 339-3380	<b>BUFFALO</b> K-VAL HOBBIES 277 HINMAN 14216 (716) 875-2837	<b>LAKEWOOD</b> WINGS HOBBY SHOP INC. 1712 DETROIT AVE. 44107 (216) 221-5383	<b>WEST CHESTER</b> BRANDYWINE HOBBIES 1502 WEST CHESTER PIKE 19382 (215) 696-9049	<b>CHEHALIS</b> NORTHWEST TRAIN DEPOT 1671 N. NATIONAL AVENUE 98532 (206) 748-6536	<b>ENGLAND</b>
<b>NEVADA</b>	<b>HICKSVILLE</b> HOBBY IMAGES 89 JERUSALEM AVE. 11801 (516) 822-8259	<b>LORAIN</b> THE CORNER STORE 1249 COLORADO AVE. 44052 (216) 288-2351	<b>SOUTH CAROLINA</b>	<b>FERNDALE</b> M & M DEPOT 2032 MAIN ST. 98248 (206) 384-2552	<b>CORNWALL</b> AMERICAN RAILROAD CENTRE 15 LOWER BORE ST. BODMIN, CORNWALL PL31 2JR (0208) 2025
<b>LAS VEGAS</b> TRAIN EXCHANGE 6008 BOULDER HIGHWAY 89122 (702) 456-8766	<b>HUNTINGTON</b> CABOOSE INC. 208 WALL ST. 11743 (516) 427-8288	<b>NORTH CANTON</b> NICK'S SALES & SERVICE 7251 MIDDLEBRANCH NE 44721 (216) 494-0125	<b>GREENVILLE</b> THE GREAT ESCAPE PLEASANTBURG SHOPPING CTR. 1426 LAURENS ROAD 29607 (803) 235-8320	<b>PASCO</b> PF & S RAILWAY SUPPLY 560 IONE RD. 99301 (509) 266-4384	<b>SOMERSET</b> CAMDEN MINIATURE STEAM 13 HIGH ST. RODE NR BATH, SOMERSET BA3 6NZ (0373) 830151
<b>RENO</b> HIGH SIERRA MODELS 3677 KINGS ROW 89503 (702) 747-7444	<b>JOHNSON CITY</b> THE TRAIN SHOP 210 GRAND AVE., PO BOX 345 13790 (607) 787-0035	<b>OKLAHOMA</b>	<b>NORTH AUGUSTA (AUGUSTA, GA)</b> THE UNION STATION 785 MURRAH ROAD 29841 (803) 279-5975	<b>SEATTLE</b> AMERICAN EAGLE 2220 NW MARKET ST. 98117 (206) 782-9446	<b>JAPAN</b>
<b>RENO</b> HOBBIES EMPORIUM INC. 5001 S. McCARRAN BLVD RENO, NV 89502 (702) 825-9670	<b>NEW YORK</b> THE TRAIN SHOP 23 W. 45TH ST. 10036 (212) 730-0409	<b>OKLAHOMA CITY</b> WHISTLE STOP TRAINS 1313 W. BITTON ROAD 73114 (415) 842-4846	<b>TENNESSEE</b>	<b>SEATTLE</b> NORTH END TRAINS 9524 ROOSEVELT WAY 98115 (206) 524-4424	<b>OHTA-KU / TOKYO</b> HIT INTERNATIONAL 2-12-6 HIGASHI-HOKUGO 144 03-731-0469
<b>NEW HAMPSHIRE</b>	<b>PATCHOGUE</b> HARRY'S DEPOT 128 MEDFORD AVE 11772 (516) 415-9056	<b>TULSA</b> WINGS 'N THINGS HOBBY SUPPLY 5153 SO. PEORIA AVE 74105 (918) 745-0034	<b>ANTIOCH</b> DAS HOBBY HOUSS 5364 MT. VIEW RD. 37013 (615) 731-3827	<b>SEATTLE / TUKWILA</b> EXPRESS STATION INC. 668 STRANDER BLVD 98188 (206) 228-7750	<b>TOKYO</b> TENSHODO MODEL SECTION 4-3-9 GINZA 104 (03) 562-0021
<b>BOSCAWEN</b> CONCORD CAR SHOPS 115 KING ST. 03303 (603) 796-2320	<b>ROCHESTER</b> THE WHISTLE STOP 1967 RIDGE RD. E. 14622 (716) 467-7590	<b>OREGON</b>	<b>TEXAS</b>	<b>TACOMA</b> PACIFIC RAILWAY HOBBIES 5115 100TH ST. SW #7 98499 (206) 581-4453	<b>SWITZERLAND</b>
<b>NASHUA</b> HOBBY EMPORIUM ROYAL RIDGE MALL CIRCLE 03060 (603) 888-3366	<b>SMITHTOWN</b> 3 GUY'S HOBBIES 99 E. MAIN ST. 11787 (516) 265-8303	<b>BEAVERTON</b> TAMMIES HOBBIES 3645 SW HALL 97005 (503) 644-4535	<b>FORT WORTH</b> OLD TIME HOBBIES 3501A BLUEBONNET CIRCLE 76109 (817) 927-5208	<b>WISCONSIN</b>	<b>KILCHBERG</b> TRAINMASTER BY WERNER MEER 135 SEESTRASSE CH-8802 (01) 715-3666

# Historical Societies

An alphabetical listing for quick reference to historical society information and data.

<p><b>ACL &amp; SAL</b>            • Annual Dues: \$15            Quarterly Nowa Magazine            c/o Joseph L. Oates            4007 Paddockwood Drvo            Brandon, FL 33511</p> 	<p><b>Illinois Traction</b>            • Annual Dues: \$10 reg.; \$15 reg.; \$25 sust.; \$50 corp.            • The Illinois Traction Society            Mark Barnett            1124 Barker St.            Bloomington, IL 61701</p> 	<p><b>Railway &amp; Locomotive Hist. Soc.</b>            • Annual Dues: \$18            • Railway &amp; Locomotive            Bruce W. Kirschman, Membership Sec.            115 "I" St. - Milepost 1            Sacramento, CA 95814-2204</p> 
<p><b>Anthracite Railroads</b>            • Dues: \$20            • Anthracite Railroads Hist. Soc.            PO Box 519            Lensdale, PA 19446</p> 	<p><b>Kansas City Southern</b>            • Annual Dues: \$15            • KCS Hist. Soc.            PO Box 5332            Shreveport, LA 71135-5332</p> 	<p><b>Reading</b>            • Annual Dues: \$20            • RICT &amp; HS            Membership Committee            PO Box 15143            Reading, PA 19612-5143</p> 
<p><b>Baltimore &amp; Ohio</b>            • Annual Dues: \$18            • B &amp; O RR Hist. Soc.            PO Box 13573            Baltimore, MD 21203</p> 	<p><b>Louisville &amp; Nashville</b>            • Annual Dues: \$15 / \$30 sust.            \$20 foreign            • L&amp;N Hist. Soc.            PO Box 17122            Louisville, KY 40217</p> 	<p><b>Rock Island</b>            • Annual Dues: \$10            • Rock Island Tech. Soc.            David J. Engle            6746 North Troost            Kansas City, MO 64155</p> 
<p><b>Boston &amp; Maine</b>            • Annual Dues: \$18 / \$30 For.            • B&amp;MRRHS, Inc.            PO Box 2936            Middlesex Essex            GMF Woburn, MA 01888-9998</p> 	<p><b>Ma &amp; Pa RR</b>            • Annual Dues: \$15; Contr. \$25            • Ma &amp; Pa RR Preservation and Hist. Soc.            Fred Voelcker, Jr.            P.O. Box 224            Spring Grove, PA 17362</p> 	<p><b>Rutland Railroad</b>            • Annual Dues: \$15            • Rutland Railroad Hist. Soc.            PO Box 6262            Rutland, VT 05701</p> 
<p><b>BN Historical Society</b>            • Annual Dues: \$10            PO Box 2480            Monrovia, CA 91017</p> 	<p><b>Milwaukee Road</b>            • Annual Dues: \$14 / \$28 sust.            • Milwaukee Road Hist. Assoc.            c/o Wendell Murphy            7504 W. Ruby Ave.            Milwaukee, WI 53218-5458</p> 	<p><b>St. Louis &amp; San Francisco</b>            • Annual Dues: Variable            • FMIG            c/o Charles Dischinger            2541 W. Allen Dr.            Springfield, MO 65810</p> 
<p><b>Canadian National</b>            • Arthur R. Thomas            RD 1, Box 295            Alum Bank, PA 15521-9659</p> 	<p><b>Missouri Kansas &amp; Texas</b>            • Annual Dues: \$15 (regular)            \$13 (-18/65+) \$50 (supporting)            • KATY RR Hist. Soc.            c/o Roy V. Jackson II,            732 Via Marmonito, Mesquite, TX 75150</p> 	<p><b>Cotton Belt Rail</b>            • Annual Dues: \$20 / \$200 lfo            • Cotton Belt Rail            PO Box 2044            Pine Bluff, AR 71613</p> 
<p><b>Central Vermont Railway</b>            • Annual Dues: \$15 / \$20 sust.            c/o John Maropoulos, Secretary            1070 Batmore St.            Manchester, NH 03104</p> 	<p><b>Monon</b>            • Annual Dues: \$10 / \$15 sust.            • Monon RR Hist. &amp; Tech. Soc., Inc.            c/o James Strother            3876 Kensington Dr            Lafayette, IN 47905</p> 	<p><b>Santa Fe</b>            • Annual Dues: \$12 / \$18 + sust.            \$2.00 additional family member            • Santa Fe Ry Hist. Soc., Inc.            PO Box 92687            Long Beach, CA 90809-2687</p> 
<p><b>Chesapeake &amp; Ohio</b>            • Annual Dues: \$17 / \$34 sust.            • C&amp;O Hist. Soc.            PO Box 79            Clifton Forge, VA 24422</p> 	<p><b>MP / TP</b>            • Annual Dues: \$15 / \$20 contr.;            \$23 for / \$18 surface            • Missouri Pacific Hist. Soc.            PO Box 187            Addis, LA 70710</p> 	<p><b>Santa Fe Modeler</b>            • Annual Dues: \$18 / \$28 sust.            • Santa Fe Modelers Organization            1704 Valley Ridge Road            Norman, OK 73072</p> 
<p><b>Chicago Burlington &amp; Quincy</b>            • Annual Dues: \$17.50 / \$35 sust.            • Burlington Route Hist. Soc.            PO Box 456            LaGrange, IL 60525</p> 	<p><b>National Railway Hist. Soc.</b>            • Annual Dues: Variable            • National Railway Hist. Soc.            PO Box 58153            Philadelphia, PA 19102</p> 	<p><b>Southern</b>            • Annual Dues: \$15            • Southern Ry Hist. Soc.            c/o B.F. Roberts            PO Box 204094            Augusta, GA 30917-4094</p> 
<p><b>Chicago &amp; Eastern Illinois</b>            • Annual Dues: \$15 / \$25 sust.            • CA&amp;E HS            P.O. Box 608            Crestwood, IL 60445-0606</p> 	<p><b>New Haven</b>            • Annual Dues: \$25 / \$35 sust.            • Membership Chairman / NHRHTA, Inc.            PO Box 122            Wallingford, CT 06492</p> 	<p><b>Southern Railway Hist. Assn.</b>            • Annual Dues: \$15 / \$25 sust.            • PO Box 32            Spencer, NC 28159</p> 
<p><b>Chicago &amp; North Western</b>            • Annual Dues: \$15.50 / \$27.50 overseas            • C&amp;NWH Hist. Soc.            Lou Hamilton            P.O. Box 1438            Elmhurst, IL 60120-9988</p> 	<p><b>New York Central</b>            • Annual Dues: \$15; \$20 foreign;            \$25 contr.; \$50 sust.            • New York Central Syst. Hist. Soc.            PO Box 745            Mentor, OH 44061-0745</p> 	<p><b>Southern Pacific</b>            • Annual Dues: \$12.50 / \$18.75;            \$18.75 / \$25            • SP Hist. &amp; Tech. Soc.            PO Box 11118            Santa Ana, CA 92711</p> 
<p><b>Colorado Midland</b>            • Subscription: \$10            • Colorado Midland Quarterly            1731 N. Cooper            Colorado Springs, CO 80907</p> 	<p><b>NYS&amp;W T&amp;H, Inc.</b>            • Dues \$15            PO Box 272            Netcong, NJ 07857</p> 	<p><b>The Soo Line</b>            • Annual Dues: \$16 / \$30 contr.            • The SOO Line Hist. &amp; Tech. Soc.            c/o Michael Harrington, Treas.            3410 Kazeton Ct.            Middleton, WI 53562</p> 
<p><b>Duluth Missabe &amp; Iron Range</b>            • Annual Dues: \$12.50 / \$20 sust.            • Missabo Hist. Soc.            719 Northland Ave.            Stillwater, MN 55082-5208</p> 	<p><b>Nickel Plate Road</b>            • Annual Dues: \$18            • NKPHTS            PO Box 54027            Cincinnati, OH 45254-0027</p> 	<p><b>Spokane Portland &amp; Seattle</b>            • Annual Dues: \$15 / \$25 sust. / \$25 for.            • SP&amp;S Ry Hist. Soc. &amp; SIG            8002 N.E. Hwy. 99 #40            Vancouver, WA 98665</p> 
<p><b>Erie Lackawanna</b>            • Annual Dues: \$18            • Erie Lackawanna Hist. Soc.            c/o Dave Olesen            116 Kitcham Rd.            Hackensack, NJ 07940</p> 	<p><b>Norfolk &amp; Western</b>            • Annual Dues: \$14 / \$16 overseas / \$25 sust.            • Norfolk &amp; Western Hist. Soc.            PO Box 201            Forest, VA 24551-0201</p> 	<p><b>Terminal RR of St. Louis</b>            • Annual Dues: \$15 reg.; \$100 lfo;            \$25 sust.            • TRRA H&amp;TS, Inc.            PO Box 1858            St. Louis, MO 63188-1688</p> 
<p><b>ET &amp; WNC R.R.H.S.</b>            • Annual Dues: \$10            • John R. Walto            604 N. 11th            DeSoto, MO 63020</p> 	<p><b>Northern Pacific Railway</b>            • Annual Dues: \$17 / \$32 sust.            • Richard Loop            550 Amy Lane            Idaho Falls, ID 83406</p> 	<p><b>Toledo Peoria &amp; Western</b>            • Annual Dues: \$12 / \$15 contr.            • TP&amp;W Hist. Soc.            615 Bullock St.            Euroka, IL 61530</p> 
<p><b>Great Northern</b>            • Annual Dues: \$17.50            • Great Northern Ry. Hist. Soc.            1781 Griffith            Barkley, MI 48072</p> 	<p><b>Northwestern Pacific</b>            • Annual Dues: \$12.50            • Northwestern Pacific RR Hist. Soc.            PO Box 667            Santa Rosa, CA 95402-0667</p> 	<p><b>Union Pacific</b>            • Annual Dues: \$15 / \$30 sust.            • Union Pacific Hist. Soc.            c/o Membership Secretary            PO Box 5653            Arvada, CO 80005-0653</p> 
<p><b>Gulf Mobile &amp; Ohio</b>            • Annual Dues: \$15            • GM&amp;O Hist. Soc., Inc.            PO Box 463            Fairfield, IL 62837</p> 	<p><b>Ontario &amp; Western</b>            • Annual Dues: \$30 incl. NRHS            \$18 subscription            • Ont. &amp; Western Ry Hist. Soc., Inc.            Box 713            Middletown, NY 10940</p> 	<p><b>Wabash</b>            • Annual Dues: \$12 / \$15 contr.            • Wabash RR Hist. Soc.            c/o Vance C. Lischet, Jr. Secretary            535 Dittman Rd.            St. Louis, MO 63132</p> 
<p><b>GTWHS</b>            • Annual Dues: \$12            PO Box 2100            Mt. Pleasant, MI 48304-2100</p> 	<p><b>Pennsylvania Railroad</b>            • Annual Dues: \$25            • PRR RR Tech. &amp; Hist. Soc., Inc.            Box 389            Upper Darby, PA 19082</p> 	<p><b>Western Maryland</b>            • Annual Dues: \$18 / \$20 outside US            • West. Maryland RH            Hist. Soc., Inc.            PO Box 395            Union Bridge, MD 21791</p> 
<p><b>Illinois Central</b>            • Annual Dues: \$15            • ICHS Membership Dept.            Jim Kubejak            14818 Clinton Park            Moline, IL 60445</p> 	<p><b>Piedmont &amp; Northern</b>            • Annual Dues: \$10            • Piedmont &amp; Northern Railway            Hist. Assoc.            Craig A. Myers            PO Box 5481 Greenville, SC 29606</p> 	<p><b>Western Pacific</b>            Annual Dues: \$15 assoc.;            \$25 active; \$30 family; \$300 lfo            • Feather River Rail Society            PO Box 808            Portola, CA 96122</p> 
<p><b>Illinois Terminal Railroad</b>            • Annual Dues: \$15            • IT RR Hist. Soc.            PO Box 251            Washington, IL 61571</p> 	<p><b>Railroad Hist. Soc. of Maine</b>            • Annual Dues: \$10 / \$20 contr.            • Railroad Soc. of Maine            PO Box 6647            Portland, ME 04104</p> 	<p>For additional information from these societies, please send them a self-addressed, stamped envelope.</p>



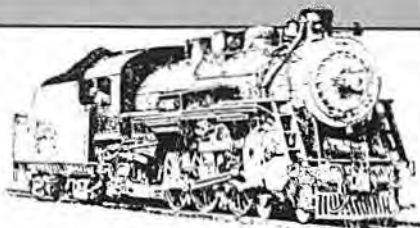
Dear Mr. Jordan

Read with great interest the article on "Auto Rack Cars; One of the Largest." Sorry that the article did not include plans, or a list of who makes these monsters as kits or RTR in the different scales. Duplicating the perforated sides would be difficult in any scale, as the round holes are approximately 1/2" in diameter. On a model, the insides of the frame could be grooved out to allow for more truck swing. The caption for the photo on the lower left of page 72 could have stated "note ratchet type hand brake." Likewise, the EH stenciled on some of these cars is a full 19'.

Earlier this year, I had the pleasure (?) of riding the front of many cuts of these cars through very tight curves, on very poor industrial trackage. The way to move these cars through tight curves is very slowly: 1 mph. Because of the track layout, these were shoving movements, 5 cars at a time, \$750,000 worth of automobiles per cut! Besides the truck location far in from the ends, a factor that makes these cars more flexible is the very long coupler travel; the shank says 60", and there is at least 3 feet of slack per coupler. On tight curves, the coupler can be swung outside of the rail, which makes coupling these cars a real dog, as it takes two men to move them to the center. The ideal in unloading is to bunch the slack to insure more stability for the ramps between the cars. The end doors wrap around the sides, somewhat like a roll top desk. Once the unloading ramp is in position on the top deck first, a crew will go in and drive the autos off, circus style. Once the autos are parked, a van brings the drivers back to the cut of cars, and the process starts over again. This involves a lot of stooping, as the decks are a little over 5 feet apart on tri-levels. In theory, an unlimited number of these auto racks in one cut can be unloaded in this manner, so the entire train can be unloaded in a few days. The longest unloading site we had could handle nine auto racks in a row. Naturally, all the hand brakes have to be set, and they are not usually all on the same side, so crossing between the cars is not really easy, and never done while they are moving.

I'm sorry I didn't get some pictures of the unloading process, for, while many professional railroaders are also closet railfans, foaming on company time is definitely frowned upon, and an impediment to your professional future. On the other hand, management should realize that rational railfans are sometimes the most dedicated employees, for who else would put up with the dangerous and miserable working conditions? In spite of all the operational headaches, these cars are very impressive, especially at night.

Happy Rails,  
R. Lamar Scheuerman  
3438 S. Granada Ave.  
Spring Valley, CA 91977



## LETTERS TO THE EDITOR

Dear Sir,

It has been many years since I have read a model railroad magazine with so many interesting and informative articles. I refer to the February 1992 issue of *Mainline Modeler*.

I model the 1950's, but find several articles that are not in that time frame very interesting and helpful, also.

Northern Pacific Log Cars, Selecting A Prototype, Three Hatch Tank Car, Hartford Tunnel, EMD's SW1 Switcher, Imagination Quotient, Meat Reefers, Basic Detailing of a SP/D&RGW 1500, USRA Hopper Detailing, Modeling a Pole Load, and Scuttlebutt are the articles I enjoyed most. I look forward to the future articles on the meat reefers. I will be building a fleet of the Swift wood cars.

Thank You,  
Ray Stokes  
508 Garfield Avenue  
Valparaiso, IN 46383

Dear Mr. Hundman

Before I go into the reason for my writing this letter to you, I do want to take this opportunity to let you know how well I enjoy almost every issue of *Mainline Modeler*. Therefore, it is my desire that you keep up the quality that you have become known for.

It seems that I am continuously referring back to prior years' issues for one bit of information or another, but in researching these copies on the present project, I have come up against a problem that has me left "hanging". I am presently involved in detailing a set of APL stack cars. As I referred back to my back issues on the subject, in your February 1987 issue, page 68, and another issue (which I do not have with me at this writing), you make the comment concerning the refrigerator package for these cars, and also the 48 foot well cars will be forthcoming in a future issue. Both of these are exactly what I am needing at present, and I can not find that you have ever produced information, photos, and detailed plans for these; have I missed (or overlooked) something, and in fact you have. Would you please advise, or if possible, provide the same to me. It would certainly be appreciated.

Additionally, I cannot find where you

have ever produced the same type of coverage for the "Gunderson Stacks", or the "Husky Stacks" that have been given for the Thrall original versions. Did I miss finding them also?

Finally, may I suggest two projects for your future coverage? It would be great to have your coverage, both in plans, information, and modeling project (either using kit-bashed techniques or from scratch parts) for the Frisco 4-8-4 Northern Steam locomotives, and the entire Texas Special streamlined train; both were such beautiful sights to behold! I know of no other place either of these have been covered to any degree, and both of these are prime examples of the best of the Frisco. You would be doing a distinct service to the entire model railroading arena to grace your excellent and super publication with these. I shall look forward to them from you, and it will be appreciated!

Sincerely,  
David F. Alexander  
1601 Kyle Cove  
Jonesboro, AR 72401

Ed:

The 48' car drawings were loaned out and not returned. We'll have to re-acquire the data. The Gunderson car has not been drawn. The Frisco 4-8-4 is on my drawing list with a photo package already promised. Receipt of the photos will probably cause the drawings to be started

Dear Mr. Hundman,

I very much enjoyed the article by W. Gordon Anderson on Southern Railway's Tennessean, and Southerner in the December 1991 and January 1992 issue of *Mainline Modeler*.

On page 54 of the January 1992 issue, he leaves the impression that SR 706 (formerly SR900) "South Carolina" remains, purchased by an individual in 1979 who sold it to the Asheville Chapter in 1988, along with Southern's last intact 11-4 "Valley" series sleeper, "Roanoke Valley" and 10-6 sleeper "Coosa River".

The "South Carolina" is undergoing repairs and restoration for our developing rail transportation museum in Asheville, which is to receive SR 2-8-0 locomotive 722 this year on a long term loan basis. The 722 was an Asheville Division locomotive from 1927-1952.

It is hoped that the work on the "South Carolina" will be completed by 1993.

We do not have a photo of the "South Carolina" in its original form. Would you or Mr. Anderson be kind enough to supply us with a copy of the photos of #900 on page 53 of the January 1992 issue?

Thank You,  
Hugh Boulder, Jr.  
Asheville Chapter NRHS, Inc.  
PO Box 153  
Asheville, NC 28802

# MAINLINE COMMENTARY

There's a trend in the hobby I find disconcerting. It's a creeping escalation of prices, that unchecked, could force a good many out of this hobby.

Take a look at what is being offered in the ads. The quality of products has increased tremendously in the past decade; the spin-off of high technology into our hobby has given us finer-detailed, better-engineered products, and a wider choice. But, as with everything else, there's a price to be paid. For instance, and I'm only using them as an example, Kato's latest offering is priced around \$109.95 (suggested retail). Not too long ago, most plastic diesels were in the \$20-25 range; some still are. Freight cars were \$3.50; now they're about \$15.00. Brass is skyrocketing; many single unit locomotives are \$300 and up, while passenger and freight cars are rarely under \$100. I'm referring to HO as a benchmark, because the cost of O and N are not comparable. You'll pay a least twice as much for a N scale freight car or an O scale brass locomotive as you would in HO.

Heaven forbid you should want to build a layout of any size. Lumber, electronics, track, and scenery all command good prices. And, the cost of real estate dictates that less space than ever (did we ever have enough?) can be devoted to a "hobby"? Books are published faster than our wallets can recover, and I won't even go into the cost of our time, or the lack of time available because we're too busy trying to make ends meet.

Who can afford this? Probably fewer than before — those with fair amounts of disposable income. Please don't misunderstand, this isn't a complaint, per se. It's an observation, with a degree of concern. Now that I've brought this up, you say, do I have any recommendations? Nope. I think it's where we're headed, and there's not too much one can do.

Am I suggesting manufacturers are charging too much for their product? I don't think so. They charge based upon amortization of capital costs, overhead, a small (hopefully) profit factor, and what the market will bear. My guess is that two things will keep costs reasonable. One, this is still a cottage industry. Many

manufacturers are one to two person operations, work in their spare time, and aren't trying to get rich or retire to the Caribbean on their efforts. Two, costs are cyclical. Costs may edge ever upward, but they often plateau, or in many cases, fall when the manufacturing costs diminish. Also, manufacturers and importers are sensitive to their markets (they had better be!). Witness the brass market where the importers follow the lower labor costs, country to country. The brass market has just about peaked viz a vis the market's ability to pay. We'll either see a reduction in imports, importers, or a move to reduce costs. Things have already happened in all three areas.

Where this hobby has excelled is in the ability of the participant to get the most out of it. Everyone has a story on how he or she saved hundreds of dollars by using surplus equipment, or being in the right place at the right time when something was thrown away. That won't change. I only wish we didn't have to do so.

Recently, I had the good fortune to help organize a Railroad Prototype Modeler's meet at Troy, New York, home of the New England, Berkshire and Western. The event was a lot of fun, though lightly attended. One of the highlights was the kickoff event, a one hour open forum on the future of the hobby, and specifically, RPM. While we didn't solve the world's problems, nor even the hobby's, there was some eye-opening discussions. For my own benefit, I asked the 75 or so gathered the question, Do you model your memories (childhood or some fond association with a railroad) or do you model something you have no particular personal connection with (ie., before your time, or a distant rail line)? The results surprised me; the overwhelming majority model in the latter manner. I guess I assumed the former was the driving force, but then it was a prototype-oriented crowd. Is this true of the rest of you? I'd be interested in knowing, so drop me a line.

C. Keith Jordan  
Editor



# Notable New Product

**Manufacturers:** We at *Mainline Modeler* will be happy to highlight your new products. Please send a sample and price information to *Mainline Modeler*, 5115 Monticello Drive, Edmonds, WA 98026. Items submitted are considered as gratis and therefore cannot be returned.

## EMD GP35

HO Scale

KATO USA Inc.  
781 Dillon Dr  
Wood Dale, IL 60191



Kato's GP35 has just been received for review, and we are definitely impressed. Very few Cannon parts will be sold for replacement of details on this locomotive. The fans are especially well done, as are the screens and grills. The cab windows present the illusion of the Cannon thin wall cab, with excellent metallic framework around the side windows. The separate metal bell below the walkway, and the nicely detailed trucks add greatly to this superbly detailed

locomotive. Hood doors and latches are very nicely done. Detail modelers will probably want to change the 2 1/2" diameter handrails, but there's not much else that requires the attention of the detail oriented modeler.

We'll be looking at these models more thoroughly at a later date when we turn two of them into Southern's 2700 series high nosed Alco truck GP35's. What a beautiful starting point Kato has provided.

# New Products

## ARA-AAR 1932 Box Car HO scale



Price: \$25.00 + \$4.00 S&H up to 5 kits  
Canadian: \$4.50 per kit or up to 5 kits  
\$7.50 MA Residents add 5% sales tax

Yankee Clipper Models  
PO Box 412  
Grafton, MA 01519

The latest release from Yankee Clipper Models is the ARA-AAR 1932 box car, as shown here decorated for the Union Pacific. Decals are also provided for other roads, and a viking roof will be available at a later date. This car looks especially good when appearing in a string of 10' and 10' 6" inside height cars. The smaller 1932 car gives a freight train that stair step look that those of us who remember the steam era desire.

## The Headlight Price: \$5.00

WP Hist. Soc.  
13305 Mahogany Dr  
Reno, NV 89511



The Western Pacific Historical Society is now producing a magazine called the Headlight, which is a slick publication on good paper with excellent photo reproduction. This issue focusing on WP FT's. The lack of a slick publication has been a drawback with the

society. Now it looks like they're entering the field with a top notch publication.

## Chair Cars HO scale

The Coach Yard  
PO Box 593  
Del Mar, CA 92014



Southern Pacific chair cars are available from the Coach Yard. The painted versions are already distributed to dealers across the country. Unpainted versions are still available. Both the individual chair cars and articulated chair cars are being offered; Santa Fe 8-2-2 cars are also available.

## CRI&P Wood Caboose O scale

Midwest Trains  
1114 State St.  
Bettendorf, IA 52722

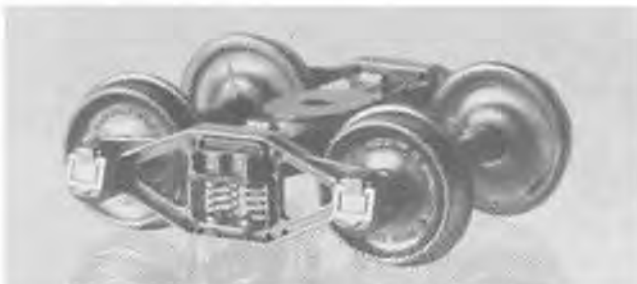


From Pohlman Shops come a Rock Island outside braced wood caboose. The prototype was rebuilt by the Rock Island from class B-2 box cars. These were built by Overland Models exclusively for Pohlman.

## Trucks HO scale

Kadee  
PO Box 1726  
Medford, OR 97501

Price: \$5.75 pair  
\$8.00 w/couplers



New from Kadee are Vulcan fully sprung metal trucks. They have authentically detailed sideframes, moving bolsters with working springs, and detailed insulated metal wheels. Check them out at your local dealer today.



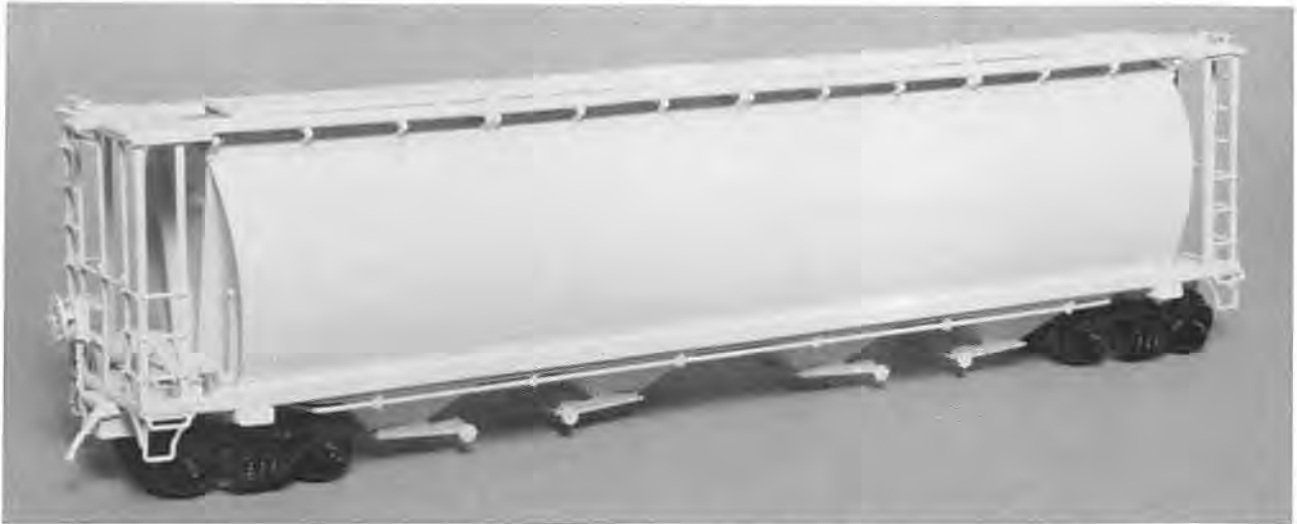
# New Products

## Cylindrical Hopper

HO scale

Intermountain Railway  
1224 Boston Ave  
Longmont, CO 80501

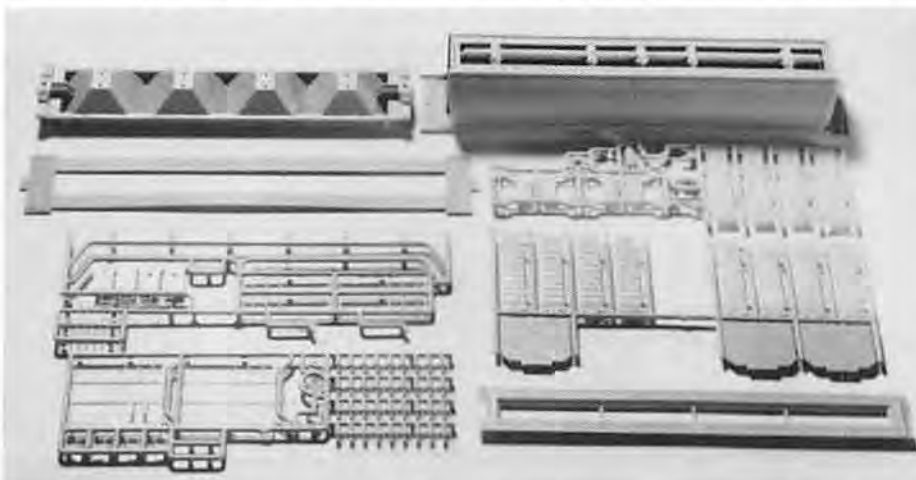
Price: \$10.50 undec.  
\$14.50 painted



Intermountain Railway continues to provide some of the finest models in model railroading. Their 1937 AAR car for IMWX in HO, and their O scale GP9 for Red Caboose are remarkable. Here is a new release under their own tradename, the Marine Industries cylindrical hopper. The car is beautifully done, and is an addition to the hobby long

needed. In a change of approach for this publication, we're including not only the covered hopper, but also these decals and dry transfers we know are related to it. Should we overlook decals or dry transfers that are appropriate to the car, call them to our attention. We will expect decal and dry transfer manufacturers to let us know about sets produced

by them for newly released cars. For this car, C-D-S has a number of sets. They provided much of the information for Intermountain's project, thus receiving special attention here. The car shown is undecorated. Herald King also has a number of decal sets available for these cars. These are also listed. Painting and lettering information is either included with these, or appears in the lettering catalog of each company. The first two painted cars from Intermountain are "red Canada, CP & CN, and blue Alberta Heritage CP & CN; 6 numbers each.



### Dry Transfers by C-D-S Lettering

Set No.	Rd. Name	Color	Let. color	Herald
211	Canadian Grain	Brown	Yellow	
61	Gov't of Canada	Brown	Yellow	Yellow
96	Gov't of Canada	Aluminum	Brown	
318	Heritage Fund	Blue	Yellow	
319	Heritage Fund	Blue	Yellow	
274	Industrial Grain	Gray		
441	Saskatchewan Grain Corp.	Brown		
41	CN	Gray		

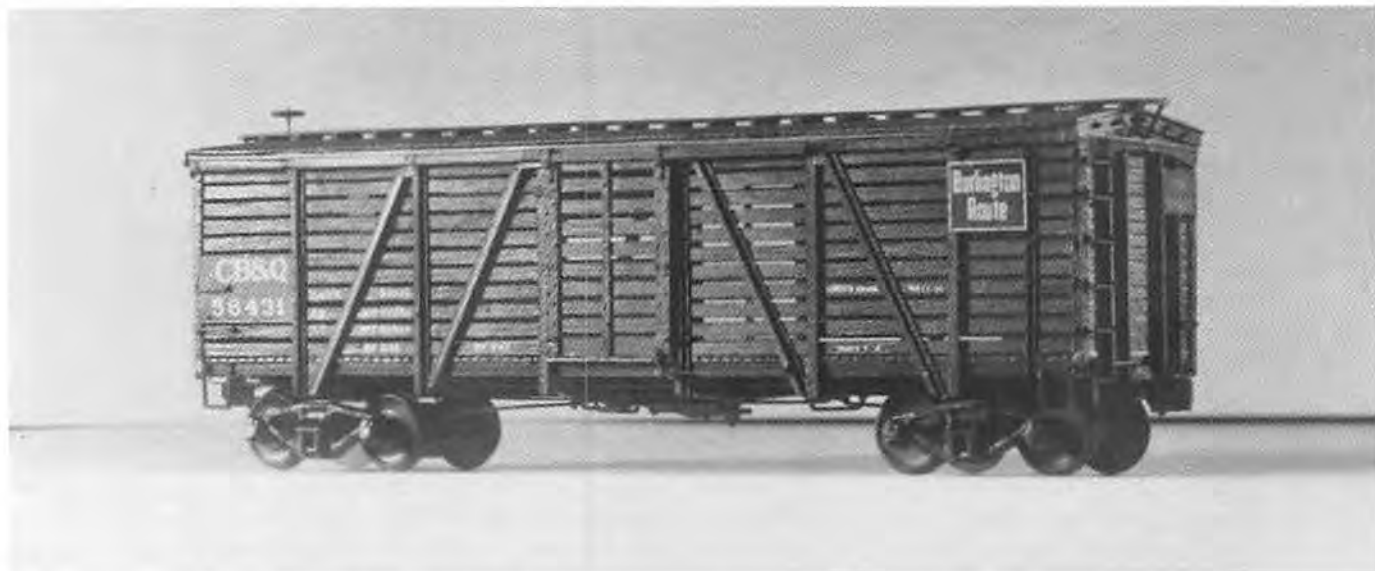
### Decals by Herald King (\$1.70 each)

Set No.	Rd. Name	Color	Let. color	Herald
PR-135	Potacan	Salmon	Black	White
PR-137	Potash Saskatchewan	Red	Black	White
PR-138	Scoular	Yellow	Green	Green
PR-139	Pillsbury	Blue	White	White
PR-140	Government of Canada	Salmon	Yellow	Yellow
PR-141	Honeymead	Gold	Dk. Brown	Same
PR-142	GTA(Grain Marketing)	Gray	Black	Red/white
PR-143	Koppel Inc.	B&O Blue	Yellow	Same
PR-159	Canada Canadian Wheat Board	CNRed Brown/ Yellow	White Yellow	Yellow Yellow

# CB&Q Stock Car

## Conclusion

by Robert L. Hundman



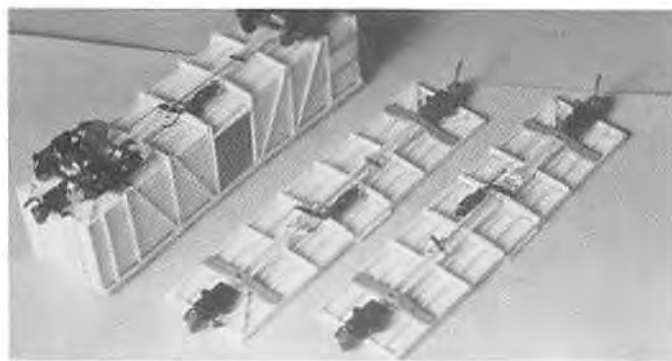
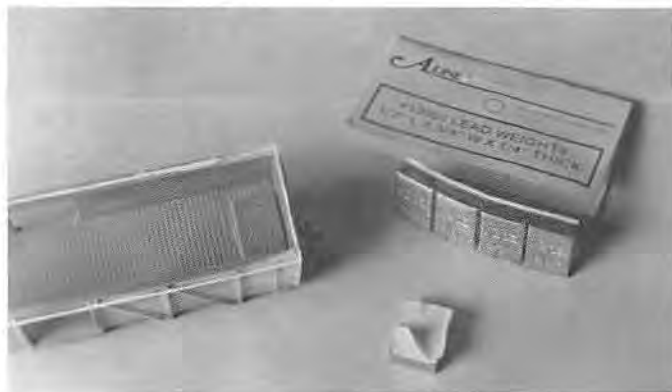
I'm concerned that the delays in completion of this three car scratchbuilding article may give you the impression that the project is far more difficult than it actually is. Please keep in mind that when this article started, *N Scale* was twelve weeks behind schedule, and now, as the article is finished, we have made up those twelve weeks.

The problem has not been the difficulty of the project; the problem has been to find the time when I could productively work on the cars. A three car project is, however, a different animal. Problems that are encountered are handled differently, with corrections made that would be ignored in a single car project. Occasionally, a technique is developed that doesn't work well, and rather than fight through it for the completion of the one unit, that technique is changed, and all three cars are brought to the easier standard.



The delays in completing the project created a few procedures that might not be developed otherwise. One of them was the addition of brake detail on the underbody. The first car was presented with simplified brake detail, developed simply in the interest of speed. The following two cars had brake detail applied according to the drawings; the

three underframes shown in the accompanying photo. The two underframes without the carbody attached are yet to have the train line applied.



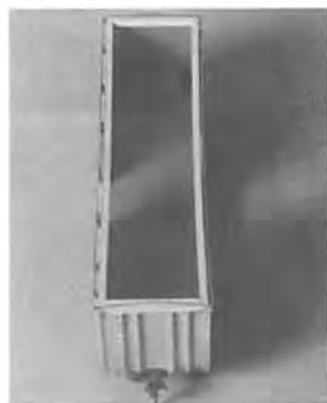
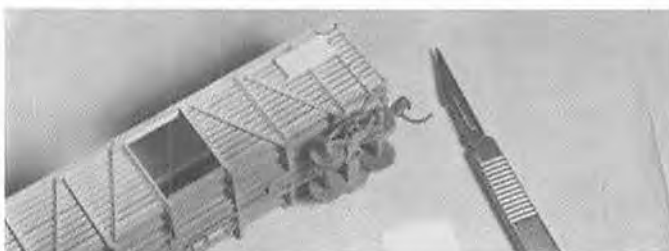
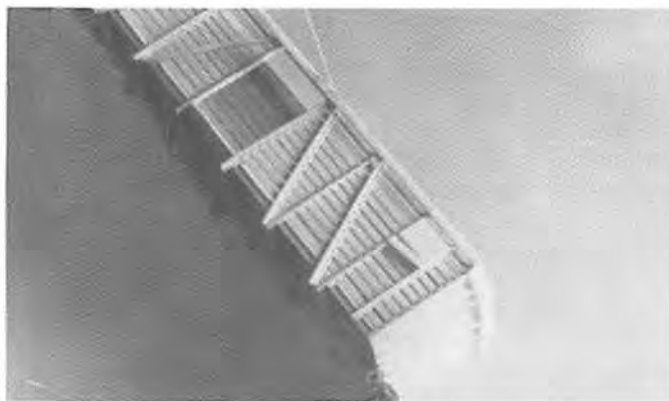
Two A-Line 1/2 oz. self adhesive weights are applied before the inside is painted. I work generally in .020 material, and assemble cars with very little internal bracing. A stock car taxes that approach, especially a stock car handled repeatedly without a roof to provide stiffness. The handling causes the car sides to bow at the top. My reliance on the



roof holding them in position is only acceptable if the roof is glued to the sides before they warp. As a result, stiffeners were added to the underside of the roof; one alongside the center break, and two 1/4" from the edge. These must be about 3/8" shorter than the carbody.

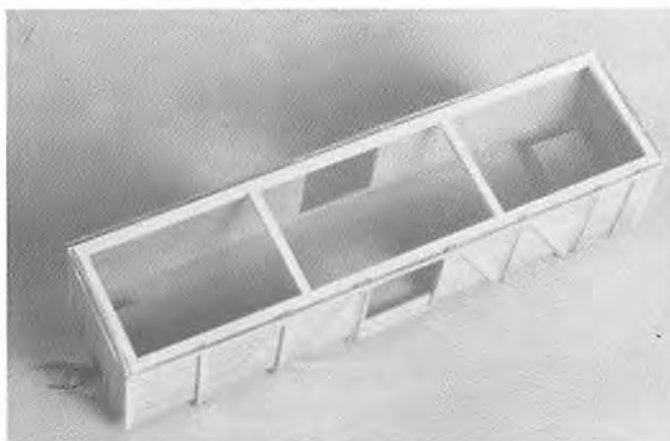


The roofwalk is then applied, but be careful; don't try to position it visually, you'll miss the proper positioning. Instead, make a very small jig that registers on the edge of the roof and butts against the side of the roofwalk. Adjust the jig so it registers against the roofwalk from either side.

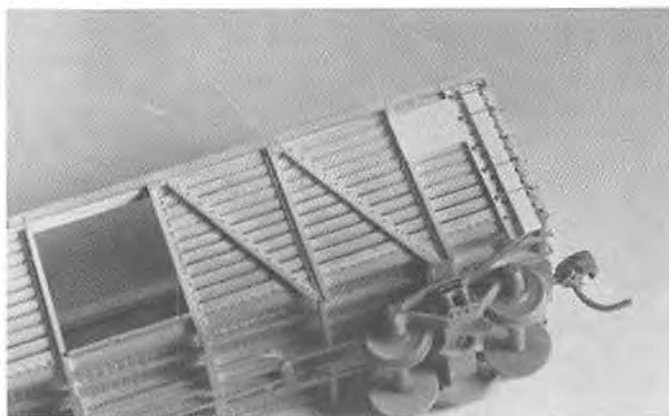


Additional .080 square framing is applied to the inside of the car at the top, stiffeners run along the side from end to end, and cross members align the sides at the corner angles. When these braces are in place, they're not visible from the outside. The top fascia hides them. The sides, however, still tend to bow in.

We have two options for letterboards; one is a metal plate simulated with .005 styrene, and the other is a wooden letterboard made from ruffled 1x6s placed tightly against one another. Applying adhesive to .005 material is a delicate procedure. I chose to moisten the surfaces the letterboard is to be attached to. Watch until the puddle evaporates, and apply .005 material to the (still tacky) surface. A fine brush was used to apply a very small amount of additional adhesive. For the end letterboards, a strip is cut the proper width, and a 1x4 attached on edge to the end. The assembly is then placed on the car, with the end trim in place. A short piece of .005 material is used for the tab that is riveted to the corner angle.



To counter the bow of the sides, place temporary .080 square cross braces in the framework. These will have to be removed when the roof is applied. We'll find out what works when we get there.



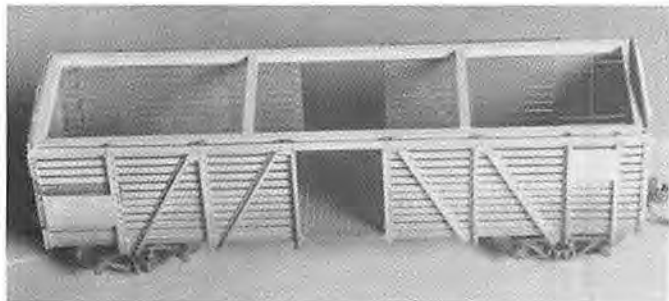
When I made the drill jig for the ladder rungs, I didn't look at the drawings carefully, nor did I remember when drawing the car, that the end and side letters are not even.



You'll find with the framing in place, the side fascia does not connect with anything at the ends. Place very short pieces of 3x3 under the end of the fascia, just inside the corner angle.



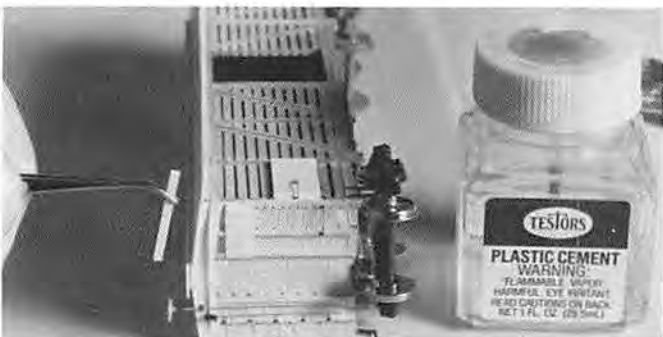
In most situations, they are. Holes are drilled for the NBW's, and after the adhesive thoroughly sets, drill #80 holes for the grabirons adjacent to the NBW's. Watch the grabiron that's third down from the top; the NBW's are below the grabiron, not above it. You can see on the photo of the letterboard that I didn't catch this, and had to remove the grabiron and replace it. The grabirons were all bent with the jig previously made. I bent all ninety of them while watching one TV program. Insert the grabirons in the holes, and slide a 4x10 under to position them properly while ACC is applied inside the car. Make sure the 4x10 extends below the edge so you don't have trouble removing it.



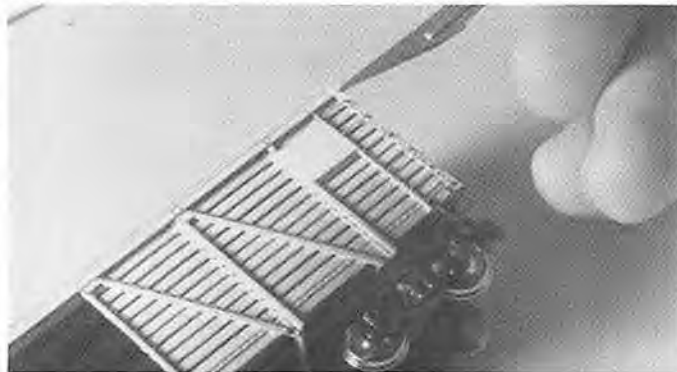
The inside of the roof should be painted before it's applied. You may wish to do this with a brush rather than setting up your airbrush. Now we get to the application of the roof to the car. I thought a bit about removing the two cross braces that were applied temporarily, and have decided instead to notch the stringers on the underside of the roof. I like the idea of the additional rigidity. The roof is just .020 thick material holding the sides in register. I'm concerned there might be a tendency for the roof to bow a little, giving an arch from end to end. It may or may not happen, and might not be noticeable if it does, but I prefer to cover myself on this one. I used a heavy flat scale to be sure the edge of the roof was straight.



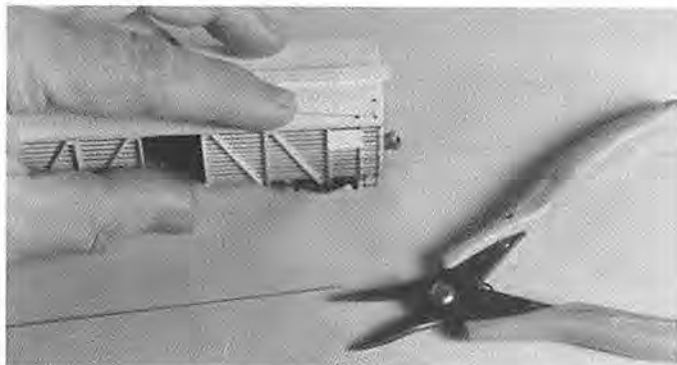
With the roof in place, add the trim strips around the edge. If your rivets give room for 1x3 trim strips, they may be used, however, I'm using 1x2's. The end .015x.060 trim strips are now applied. These cover much of the metal end cap, and bolts must be applied. These trim pieces extend out to cover the ends of the side fascia.



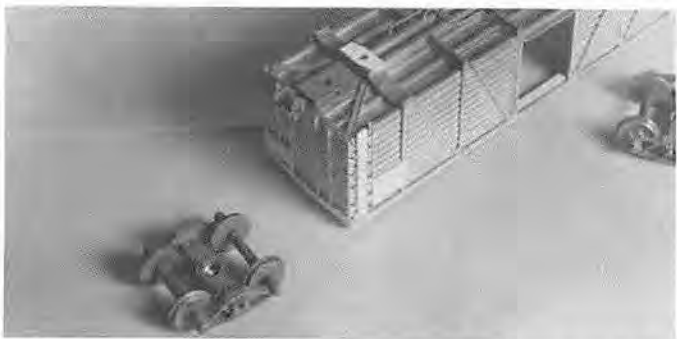
The metal end caps fold over and attach to the side of the side fascia. Six inch wide strips of .005 material are cut to simulate the fold over. Rivets are applied after the strips are attached to the side fascia.



Roof grabs are now applied. Though it might have been easier to apply them before the roof was added to the car so ACC could be used on the inside of the car assembly. Here, I've chosen to apply the roof, and add the corner grabs afterward. This is .008 wire (5/8" dia), with the corner support made by looping a piece of wire around .012 wire for forming.



Trucks are now added to the car, but to position the car properly, a .060 styrene spacer is required between truck and bolster.

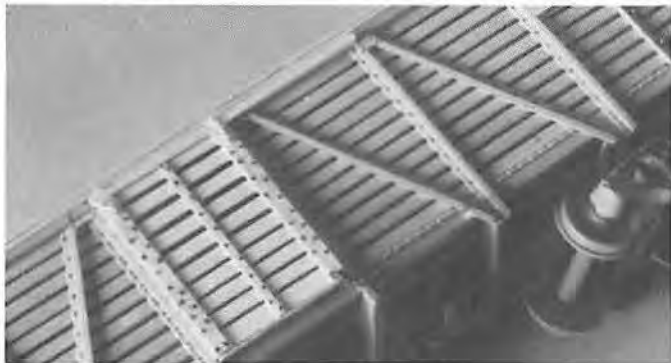


The door guides are next. Cut a strip .005 to lay against the fascia with a .030 square strip applied above the door.

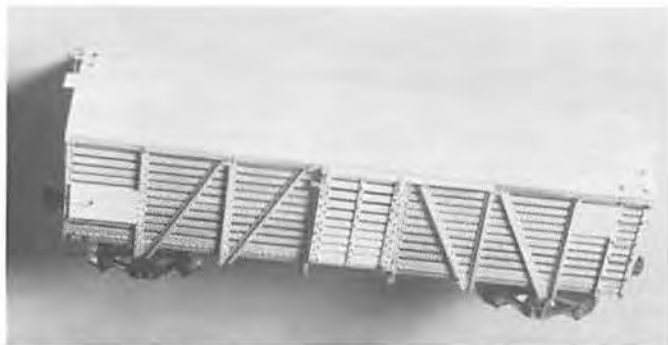




The upper door fittings are made by cutting .030 piece of .025 diameter styrene, and gluing it on top of the door guide. pieces of .010x.020 are cut to give the T section on the face of the door frame, corners beveled to make them look round. A top strip is then placed from the roller to the mid-point of the lower bracket. Only one is applied in this photograph. Rivets are then added.



The bottom bar of .010 wire is applied along with the NBW's, and a chain is run from the corner of the door to that wire. The chain is threaded on the wire, then held in place with tape to keep it away from the ACC.

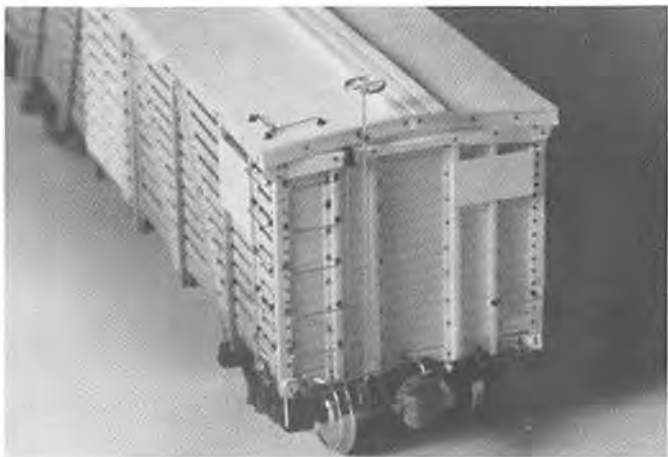


A door stop near the top of the door is made from 1x2 bottom and end, and .005 sides tapered. The door latches are two pieces of .005 styrene, one bent at an angle, and mounted on the car side vertical member, the other, over the door frame and bent in an S to cover the vertical side frame member. Rivets are applied and a short strip of black styrene for the latch U-bolt. That strip is cut from a piece of black plastic by simply trimming the edge and cutting out a piece of the resulting curl.



With the trucks in place, there should be little concern about adding stirrup steps. I've used the long straight stirrup in the new Tichy line. Holes are drilled, and the stirrups applied with ACC. The brake wheel is added using .010 brass wire for the brake staff; the actual brake staff is 15/16" diameter. Now add the retainer. The pipe is already in place from the application of brake gear. That pipe should be .006 diameter. The photo shows the .006 retainer pipe, .010 brake staff, and .008 grabirons. All are accurately sized.

The final item to add before painting is the cut lever. This is the old fashion top mounted hand lever. I used .012 wire and lift rings to hold it in place.



We've already painted the underbody and inside of the car using what might be called a dirty gray. The paint is a mixture of Accu-Paint's CN Lettering Gray, and NYC Dark Gray. The result is a warm gray with earth tones included; exactly what I was looking for. It's light, and when you compare it to the black normally used for underbodies, it may look wrong. When you see the car on the layout, you'll find the lighter paint serves a purpose. The grossly inadequate lighting we use on layouts requires the underbody to be lighter than natural. The underbody is masked off, and the car sprayed Boxcar Red. I used a paint no longer available, but the choice of paint is unimportant. At this point, you're left with the weathering options, reduced somewhat because I'm not sure of the compatibility of the flattening agent required by the dry transfers. C-D-S has made a special set for the CB&Q stock car, but Dullcote must not be used with them. The dry transfers and Dullcote are not compatible. I purchased a can of Grumbachers Myston. You should be able to get it at an art supply store in your area. If it's not available, I'm sure Seattle Art in Seattle, Washington would mail order it. Their address is: 1816 8th Ave., Seattle WA, 98101. The car has been weathered before the application of dry transfers. You'll find the project rewarding, and your satisfaction with



the end product to be high. When finished, you'll never go back to the oversize wire used for grabirons, retainer pipe, or brake staff; however, more modern cars would be likely to use grabs just a little thicker than this cars 5/8".

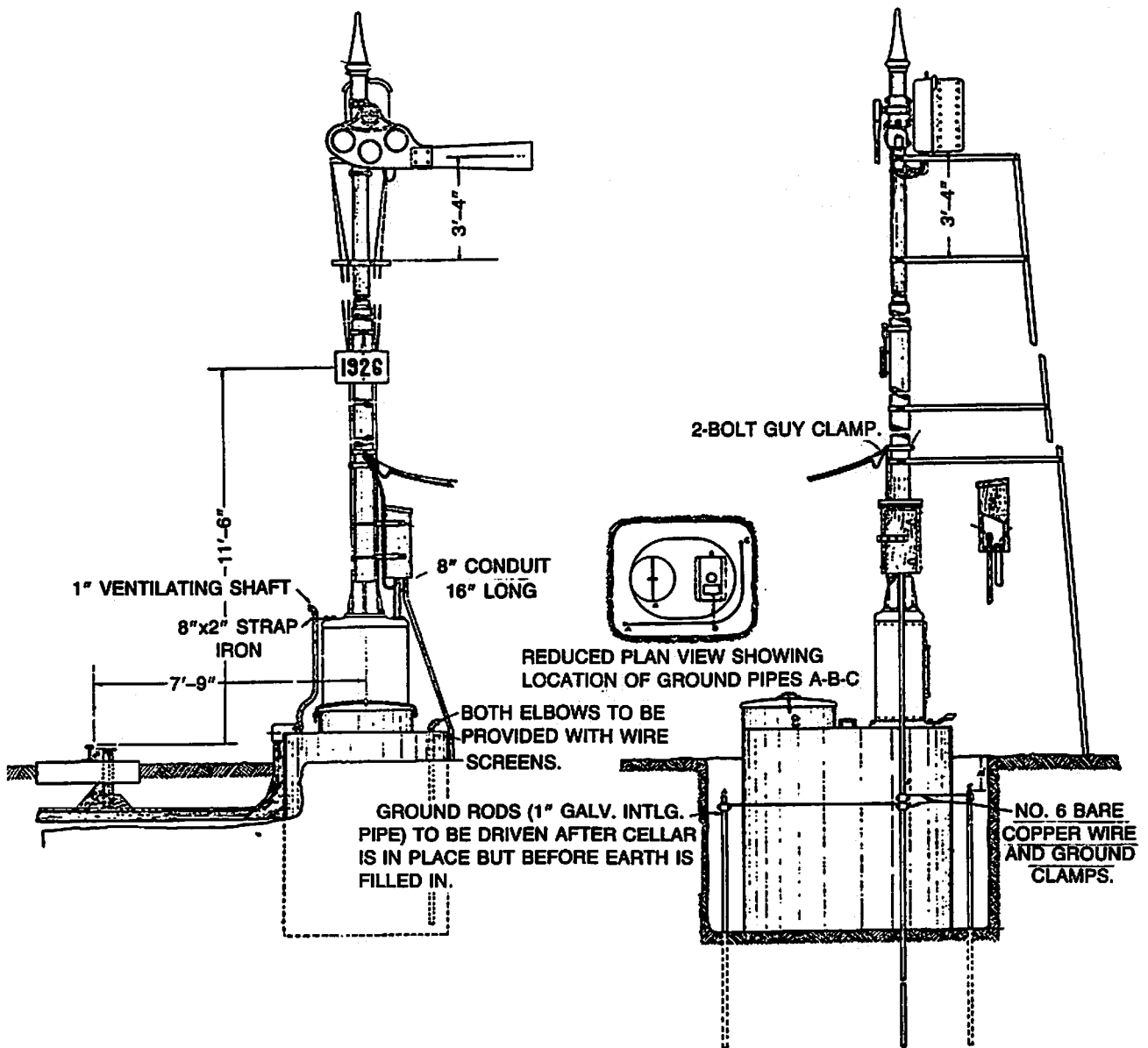




# Standard Plans

## A.T. & S.F.

# SINGLE GROUND SIGNAL LOCATION ON BATTERY CELLAR



Prepared from official Santa Fe drawings from Kachina Press Santa Fe Standards, Vol. 1, 2 & 3. Copies of these drawings may be made for noncommercial use only.

NO SCALE







# FMC COVERED HOPPER

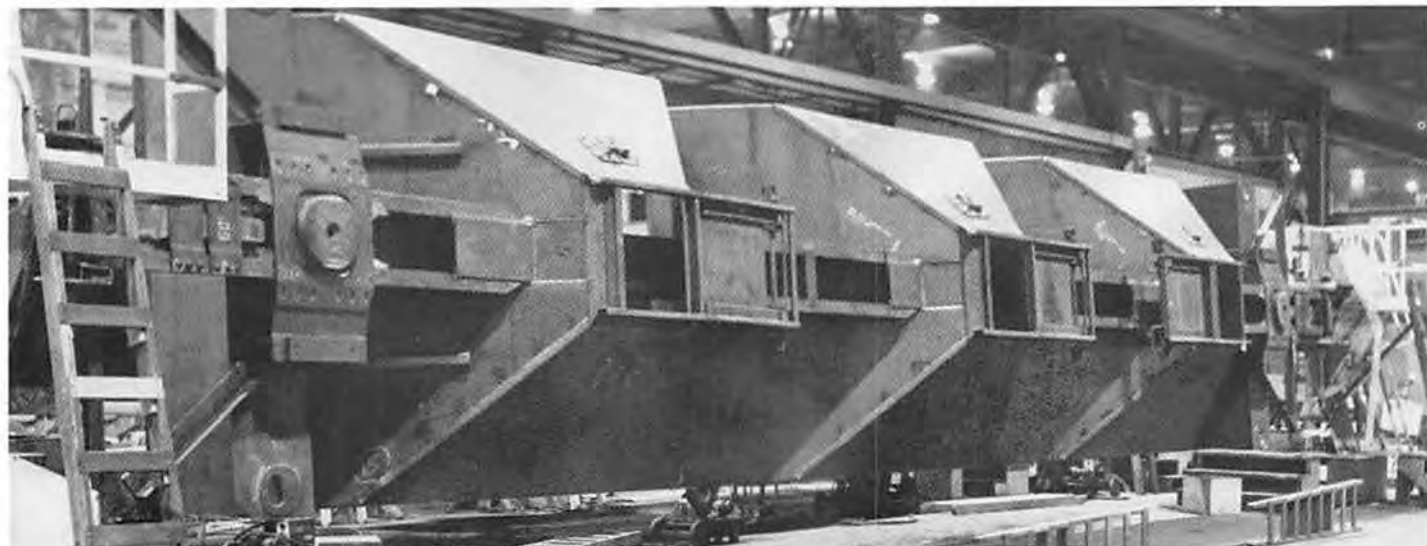
## Model Die Casting's Car

by Jeffrey M.  
Koeller



Between 1971 and 1981, FMC produced almost 7,000 of these all welded 4,700 cubic foot, three-bay covered hoppers. The largest owner is Burlington Northern with more than 4,500 cars. The BN car shown, is the version produced by MDC with different hatches. A wider roofwalk is used in conjunction with a steeper sloping roof on their cars built later in the production run. Burlington Northern #446574 (above), is from a different group of 500 cars built in 1976, series 446550-447049. This car of the earlier version has the narrow roofwalk with a flatter sloping roof. The evolution of the FMC design should make kit modifiers happy.

Plain looking roof hatches without the reinforcing ribs are used on some cars, and the vertical end bracing can differ. Various types of hopper gates are utilized, and other subtle differences can be found, so be sure to check the photos when modeling a specific prototype.



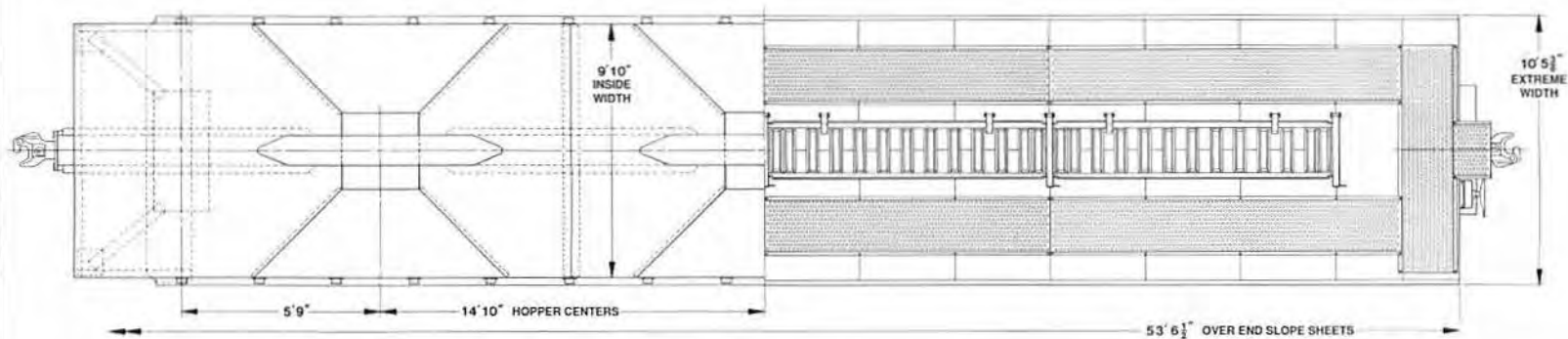




All Photos are FMC Builders Photos Provided by Model Die Casting

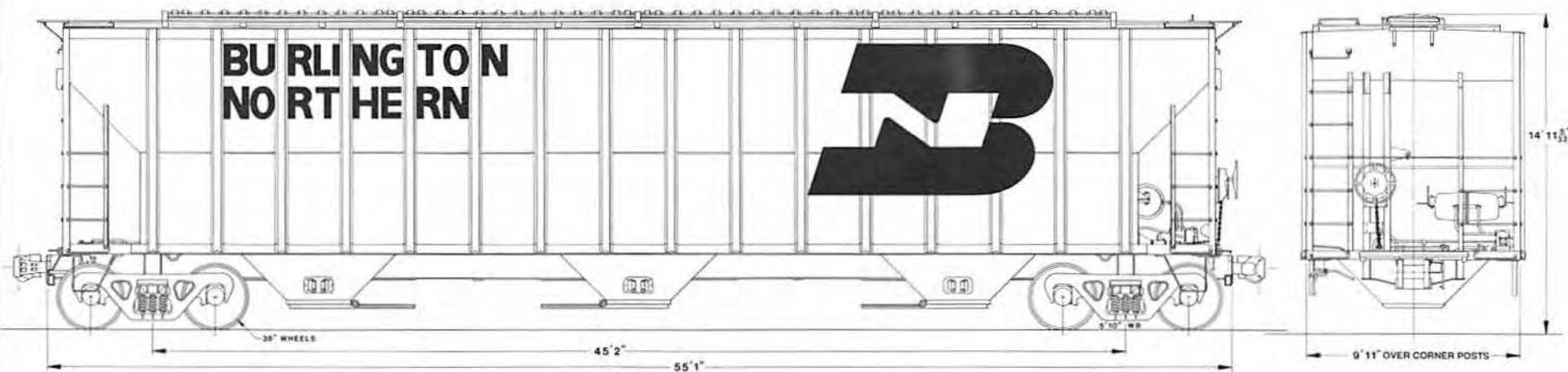


**4700 Cu.Ft.  
Covered  
Hopper**

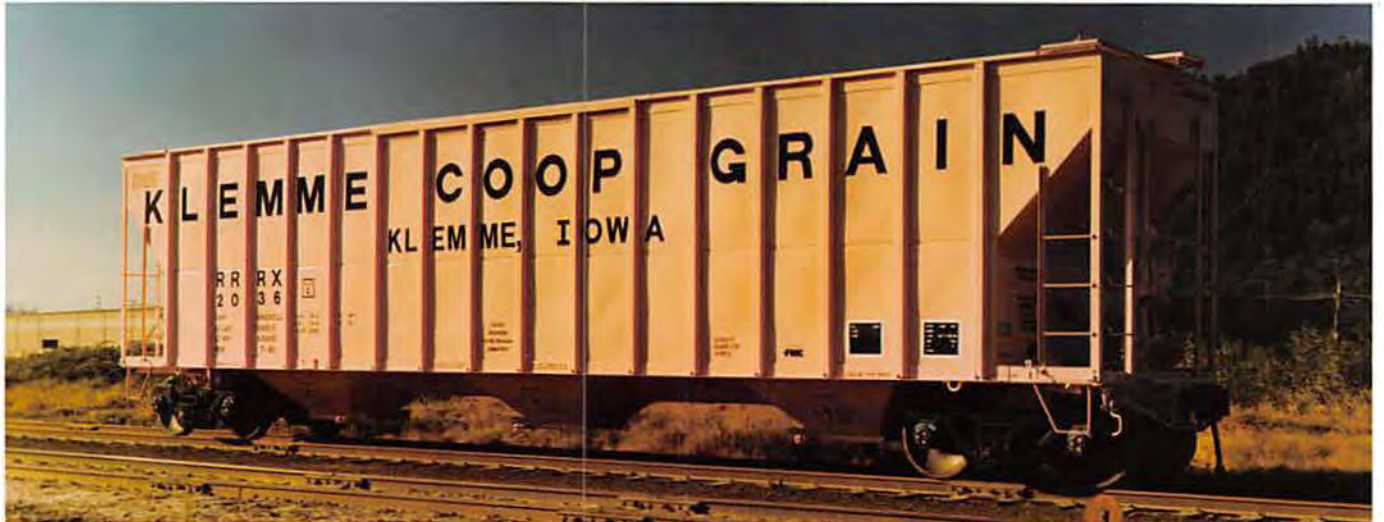


Drawn Expressly for  
MAINLINE MODELER  
by Jeffrey M. Koeller  
Copies of these drawings  
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Scale 3.5 mm = 1 ft.

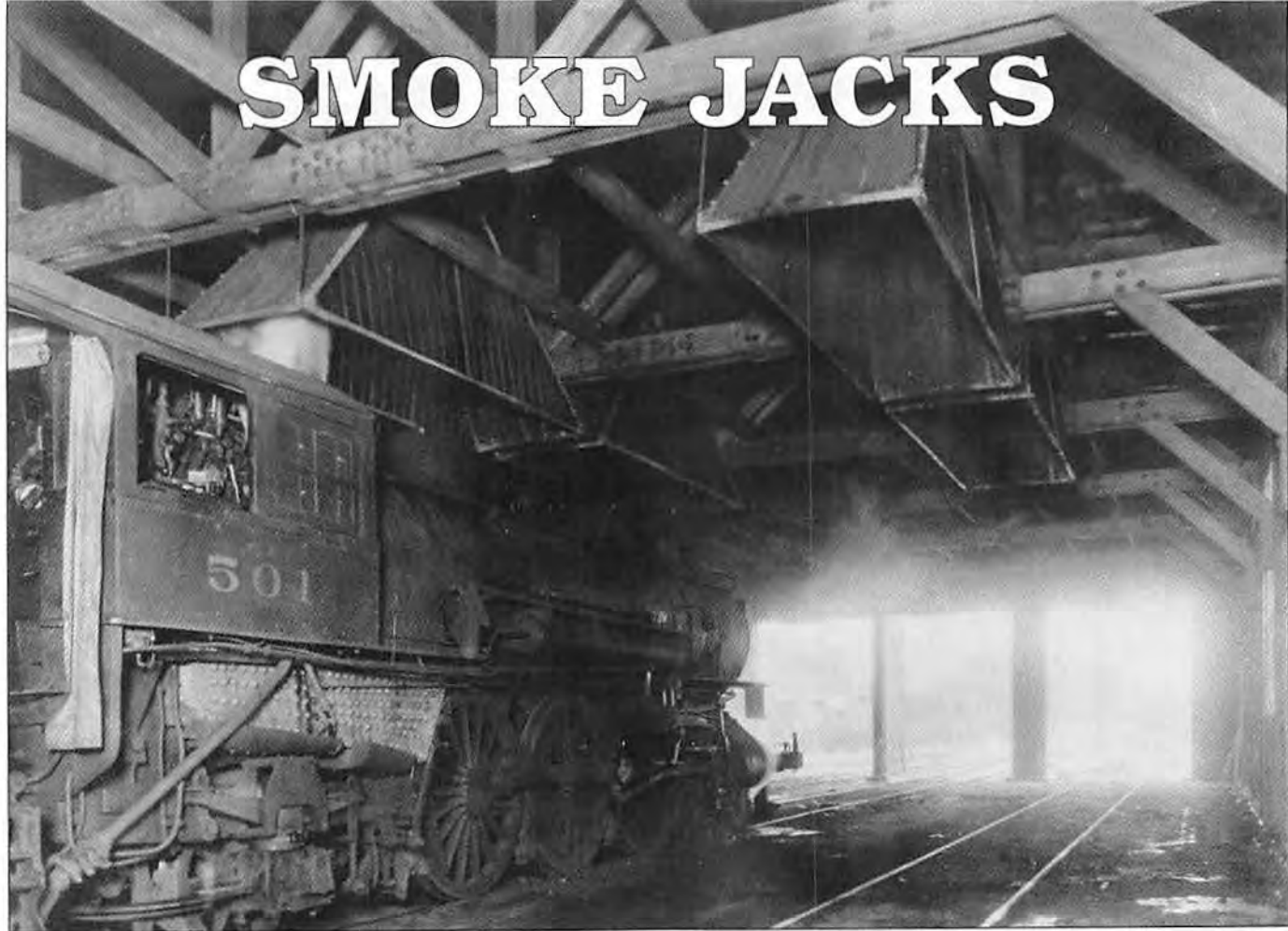








# SMOKE JACKS



## Data Provided by John Nehrich

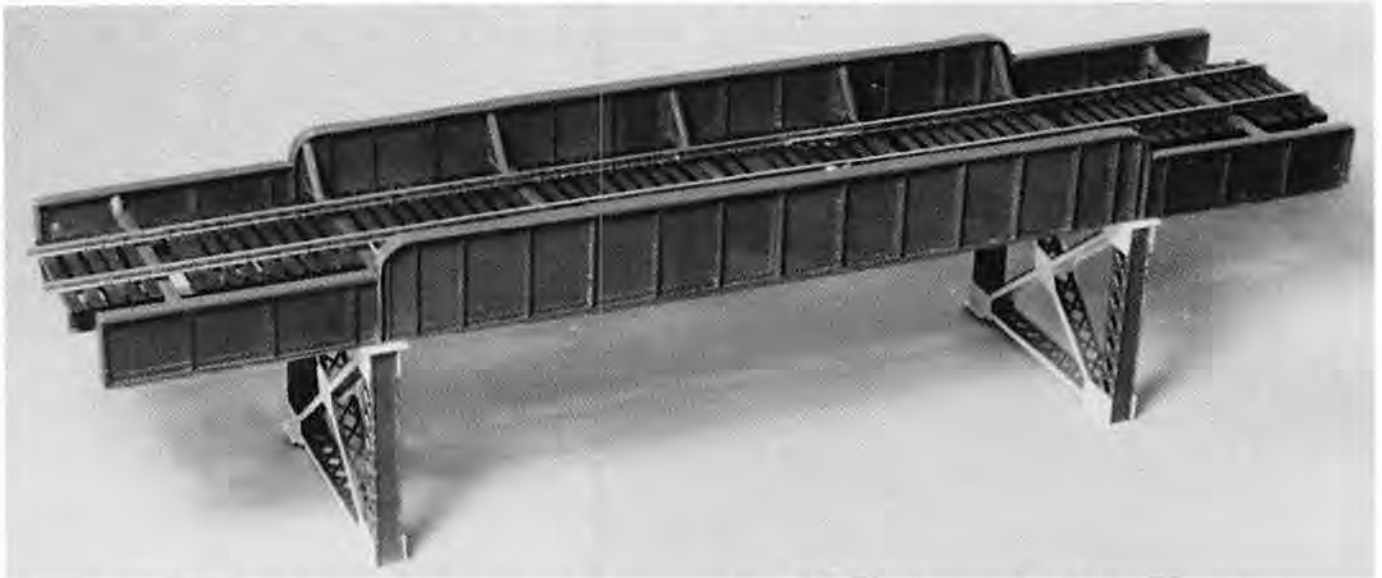
We received these three photographs and a letter dated February 25, 1927 concerning the application of Northeastern Company smoke jacks on the Maine Central, at Portland, Maine. The photographs were sent to the Maine Central to show a similar installation. The photographs are of the engine house at Framingham, Massachusetts on the Boston & Albany. Competing units sold by the Smoke Jack company and Johns-Manville Company required assembly on-site, while those from Northeastern Metal required only installation; the units being delivered completely assembled.

The pictures of the engine house however, are just as interesting as those of the smoke jacks. We'll leave it to you to glean the maximum from them.



# GIRDER BRIDGES

## Modeling a Typical Bridge

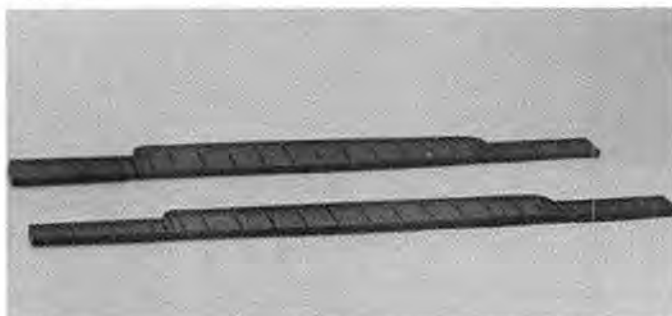


by **Thomas Lane**

We're going to take a look here at modeling a three span plate girder bridge, a main span with flanking smaller spans. The main girder crosses the roadway or multiple track railroad, and the flanking girder crosses a pedestrian walkway, a single track, or a smaller roadway. These bridges have a characteristic appearance, though variations exist combining different girder designs, floor systems, or column support systems. So, as you review and study the designs in these articles, remember, other designs may be constructed using the information here. These bridges are constructed using Micro-Engineering and Evergreen styrene.

Start by cutting the 4 flanking girders to length (refer to figure 1). These girders are from the Micro-Engineering 30' plate girders, available in a package of 4 with their cover plates. Before cutting, make sure the stiffener angle arrangements are the same with respect to each other. Add cover plates as shown, then fabricate the two main girders per Micro-Engineering instructions.

Connect a flanking girder to each end of a main girder, making sure the correct end of the flanking girder is connected. Align the bottom flanges with a straight edge. The width of the main girder is greater than the flanking girder. Once the solvent has set a bit, center the girders. Reinforce the joints with Faller Expert liquid glue, which is gap filling, and provides extra 'fillet' strength.



Install the lateral bracing from the kit between the two main girders as instructed by Micro-Engineering. Then, take the second lateral assembly either from the double track bridge, or another single track bridge kit, and cut two separate lateral cross braces (refer to figure 2). Connect them to the bridge. The angle ends without the gusset plates go toward the main span, and connect to the gusset plate of the lateral bracing presently at that location.

While the styrene is still soft at the lateral connections, connect the floorbeams, or at least two to three floorbeams to the main girders for the purpose of keeping the system square until full strength is achieved at the laterals.

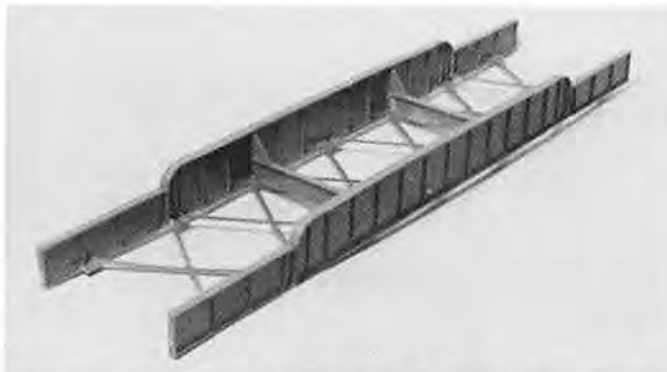
Finish installing the floorbeams. Those connecting the flanking girders will need to have their knee brackets removed flush with the top of the floorbeams. If you wish, add small knee braces. Cut them from the ones you cut off previously. Some bridges have them and some don't. Due to the shorter distance, some engineers felt the web was stiff enough here. Reinforce the connections with liquid glue.

Install the intermediate stringers as instructed by Micro-Engineering. When you get to the ends, two 5' 6" long stringers are cut and cemented to the floorbeams at each end.

The final construction step is the addition of stringer end diaphragms. These are built up from angle iron and lacing bars. They stabilize the free end of the stringers. I cut these from the single lace members in Micro-Engineering's tall steel viaduct tower kit, and installed them. The photo shows the girder span complete.

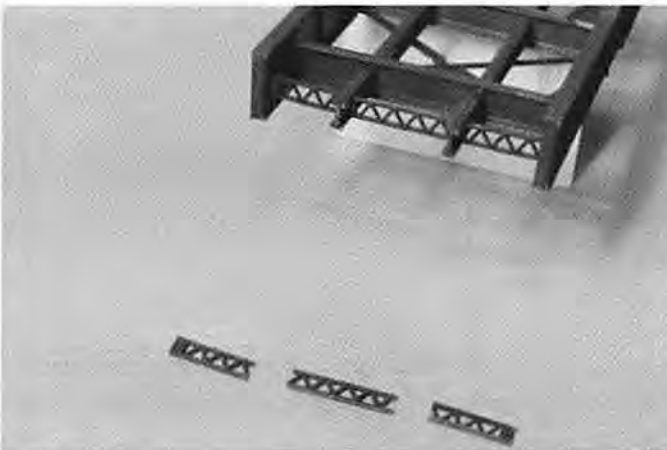
Next, the two column assemblies. Since this is not a continuous girder, support is required under the connection of the flanking and main girders. There are many different columns which would be suitable. It's up to your engineering, department. Again, I'm following a particular prototype, so lets begin.

Select the bent halves and cross lacing members from the tall steel viaduct tower. These halves form the webs of the columns. Upon inspection of the various members, and for now, getting out of your mind the dozens of structures which could be made with them, you'll notice the cross lacing (or



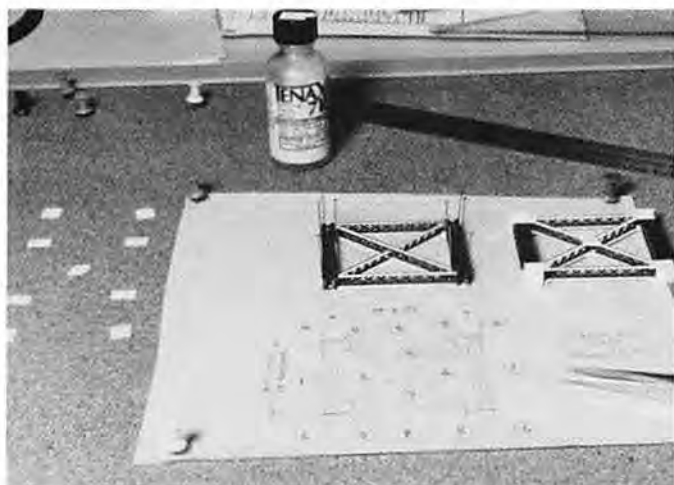
double laced) sections that come in an assortment of lengths. The column for this bridge is 14' 0" long. If you choose a different bridge height, that's OK, but you'll have a different layout for the columns. With your scale, measure the cross lacings to obtain the most from each piece.

Cut 4 cross lacings 14' 0" long. Save end pieces for the short bracing discussed later. Now, cut 4 column webs 14' long from the bent halves; choose the clean material between the gussets, or use a strip of Evergreen styrene. A close match would be .030x.188.



Fabricate the columns by forming a box member utilizing two cross lacings and two web plates. The final cross section should be similar to the column cross section in the tall steel viaduct. I used a piece of timber, fashioned to fit inside the box of the column. This helped me hold the column square as I applied the solvent. The other method would be using styrene spacers, the height and width the same as the box cross section.

The top and bottom struts will be 15' 0" long. Cut two cross laces at this length. At times, you may wind up with some of the



batten plate on one or both ends. That's alright. It's prototypical to place batten plates at the ends of any built up member making a connection. Add one strip of .010x.060x15 feet under each side, forming an angle (refer to figure 3).

Next are the long and short diagonals. Cut one cross lacing 18' 0" long for the long diagonal, and cut two cross lacings 8' 3" long for the short diagonals. Add .010x.060 styrene to cross lacings (refer to figure 3); the same as the top and bottom struts.

All plates are styrene. Make 8 corner gussets .010x.020 by scale 3' 0". Make two center gussets using figure 3 as a guide. Make 4 bearing plates .010 by scale 30" by 2' 6".

Now comes the assembly of the column supports. Refer to figure 3 as a template, or redraw the diagram to meet your needs. Place the drawing on a flat board, and begin to lay the gusset plates down. Cut away rivet heads that wind up under the gusset plates. Line up the columns using pins to hold them in line. Tack weld the corner gusset plates to the columns using solvent sparingly. Double check, then connect the top and bottom struts. For all struts and bracing, be sure the cross lacing faces the top of the column, with the flanges you added facing down. Next, connect the long diagonal brace and tack weld. Slip a center gusset plate under the diagonal, and tack weld it in place. Now, add the two short diagonals. Finish by connecting the other gusset plates. Go back and add solvent to all the joints if everything looks good. There may be a difference in the width of the members with respect to one another, due to bracing flanges being too far out, or too much material filed from the column where the gusset plates connect, but that can be remedied by filling with some shims where the gap is very large. Where the gap is not large, add solvent, and apply the "squeeze and ooze" method. Finally, add the top and bottom bearing plates to the columns. Connect the column assemblies to the plate girders, and check for squareness. Again, make sure the cross lacing on the struts and bracing are facing up, and their flanges down.





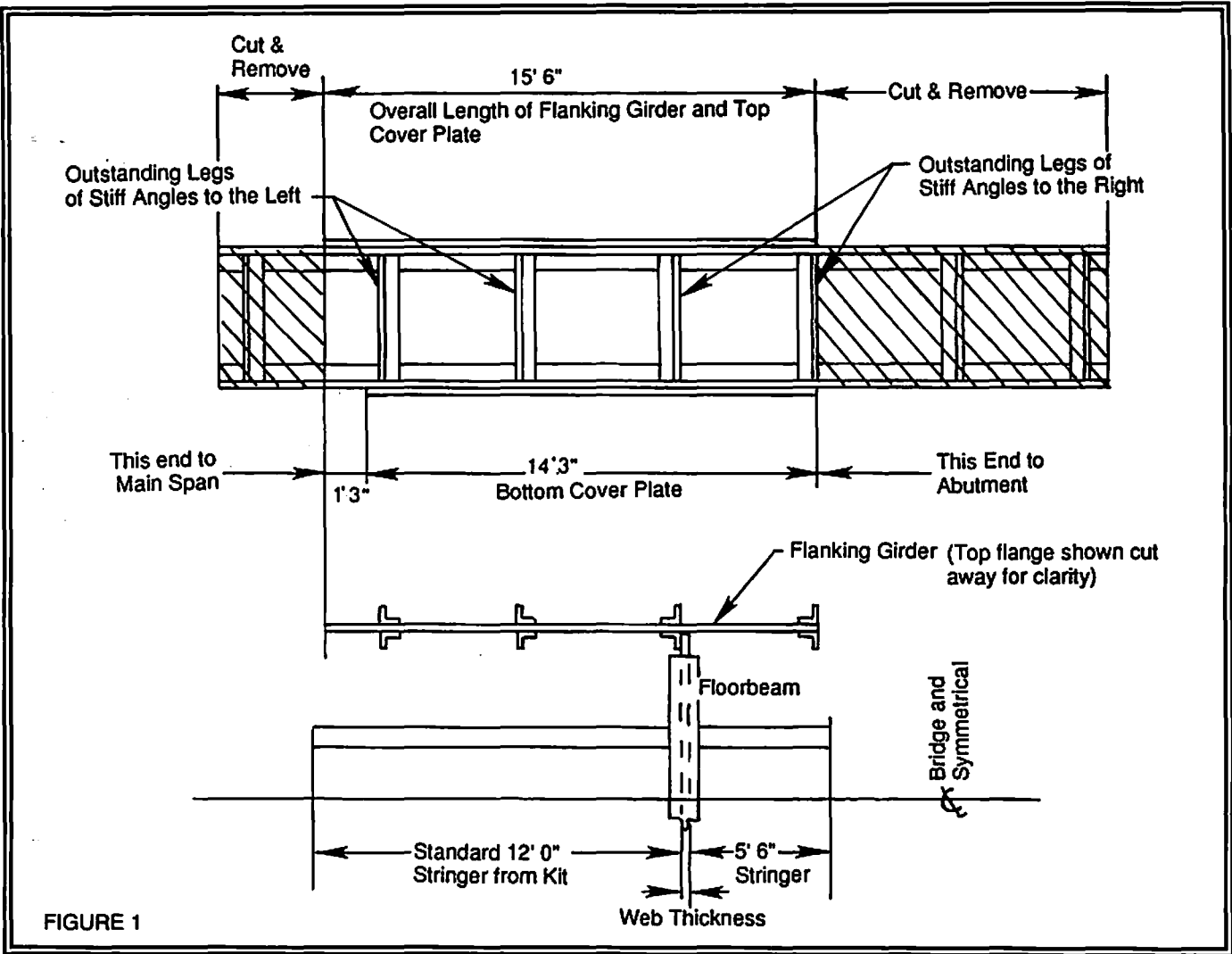


FIGURE 1

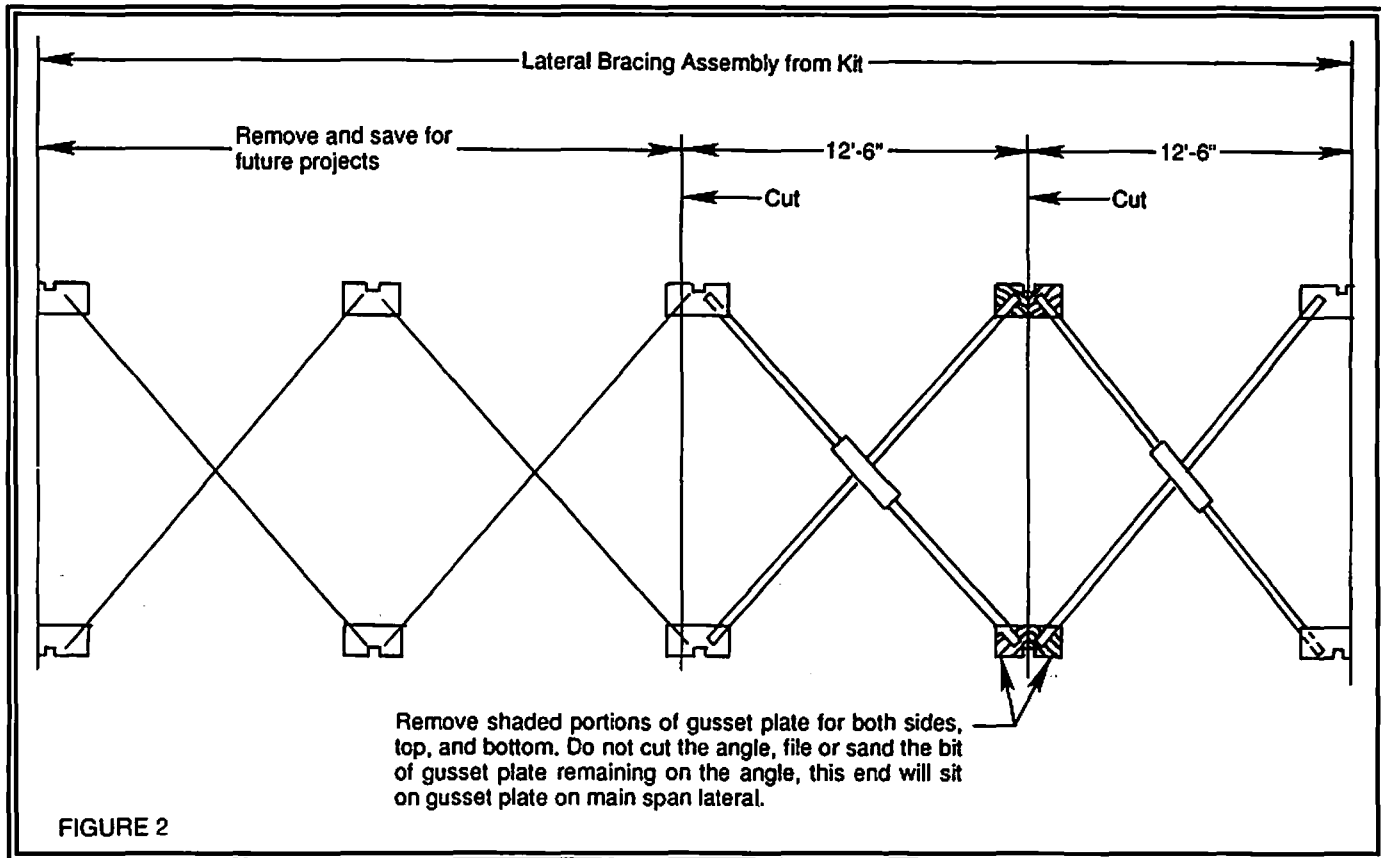
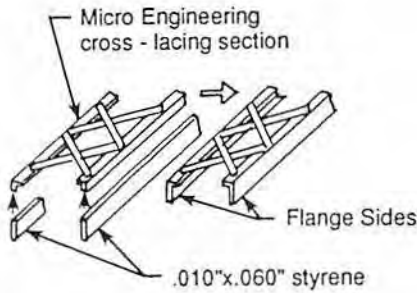


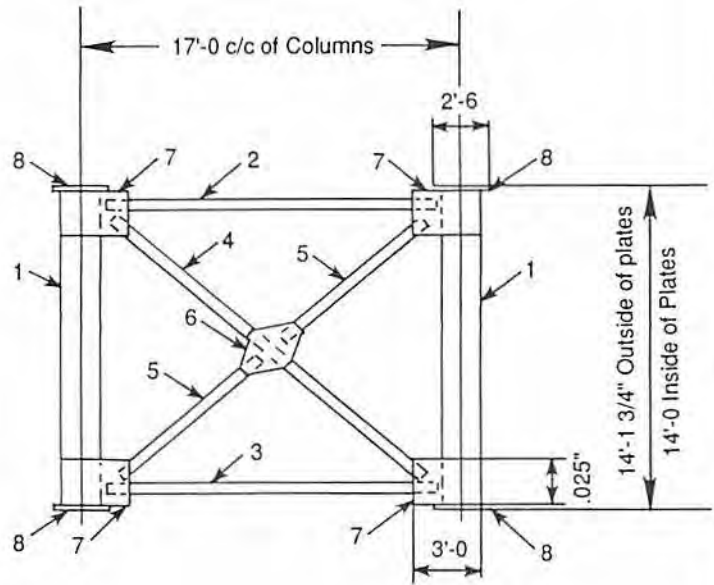
FIGURE 2

FIGURE 3



Method for Fabrication of Diagonals and Struts

- 1 Column 14'-0 Long
- 2 Top Strut 15'-0 Long
- 3 Bottom Strut 15'-0 Long
- 4 Long Diagonal 18'-0 Long
- 5 Short Diagonal 8'-3 long
- 6 Center Gusset Plate .010 Styrene (both sides)
- 7 Corner Gusset Plates .010x.025x3'-0 (both sides)
- 8 Bearing Plates .010x30"x2'-6"



Note: Decimals are full scale, feet and inch are HO scale (3.5mm = 1')

Column Assembly Plan - BR.#1

Connect two lengths of track from the kits, and solder them together. Place them on the bridge, and mark the locations of the floor beams. Remove the ties a little if required. Add ties under the joint of the two track sections. Use ACC or GOO to fasten these ties and apply the guard timbers and guard rails (optional).

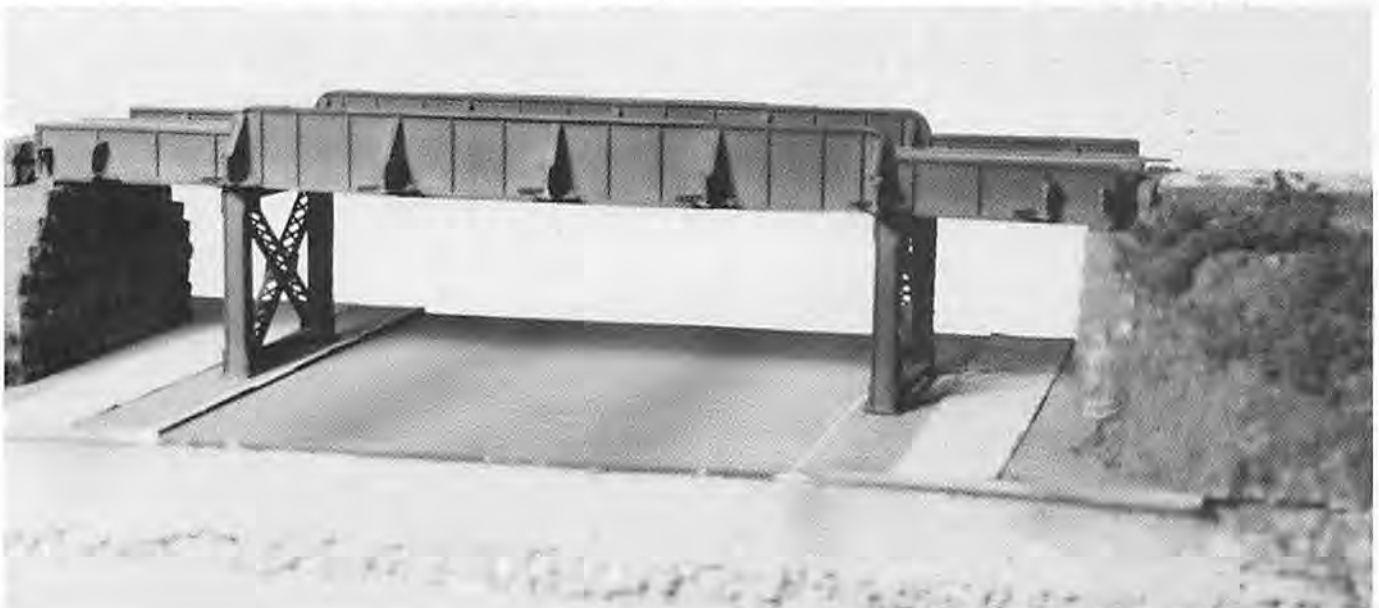
Paint the bridge and track separately. For the steel work, I chose Floquil Grimy Black, with an overspray of Floquil Rail Brown mixed with Roof Brown, and a touch of Floquil Dust. Concentrate the rust at the tops of the girders bottom flanges, and along the bottom webs of the girders. Touch any other areas where water and dirt accumulate to form rusting areas. For the track, I used Rail Brown, and a mix of Dust, Grimy

Black, and Roof Brown for the ties.

Fasten the track to the floor system with ACC or GOO, placing some weights on top of the track to settle it down. Now your bridge is ready. Use abutments of your choice, and shim under the girders and stringers for a tight fit. The prototype I followed used steel plates under the flanking girders, and granite stone blocks under the stringers.

The prototype for my span was a multiple track bridge reduced to a single track span. The addition of markings for overhead and horizontal clearances, stripes, wires, and pipes are more details found on the prototype.

All Photos by the Author



# Standard Plans

## Chesapeake & Ohio

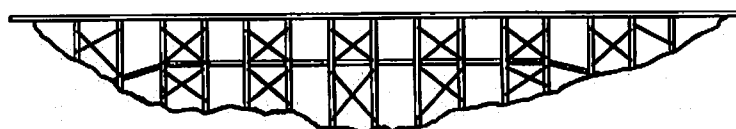
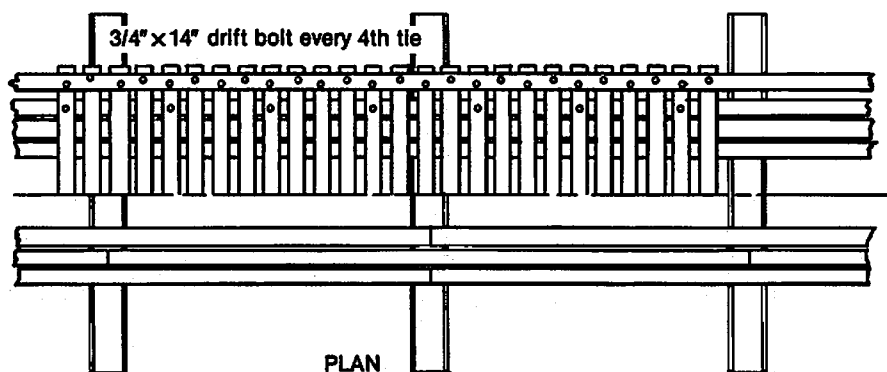
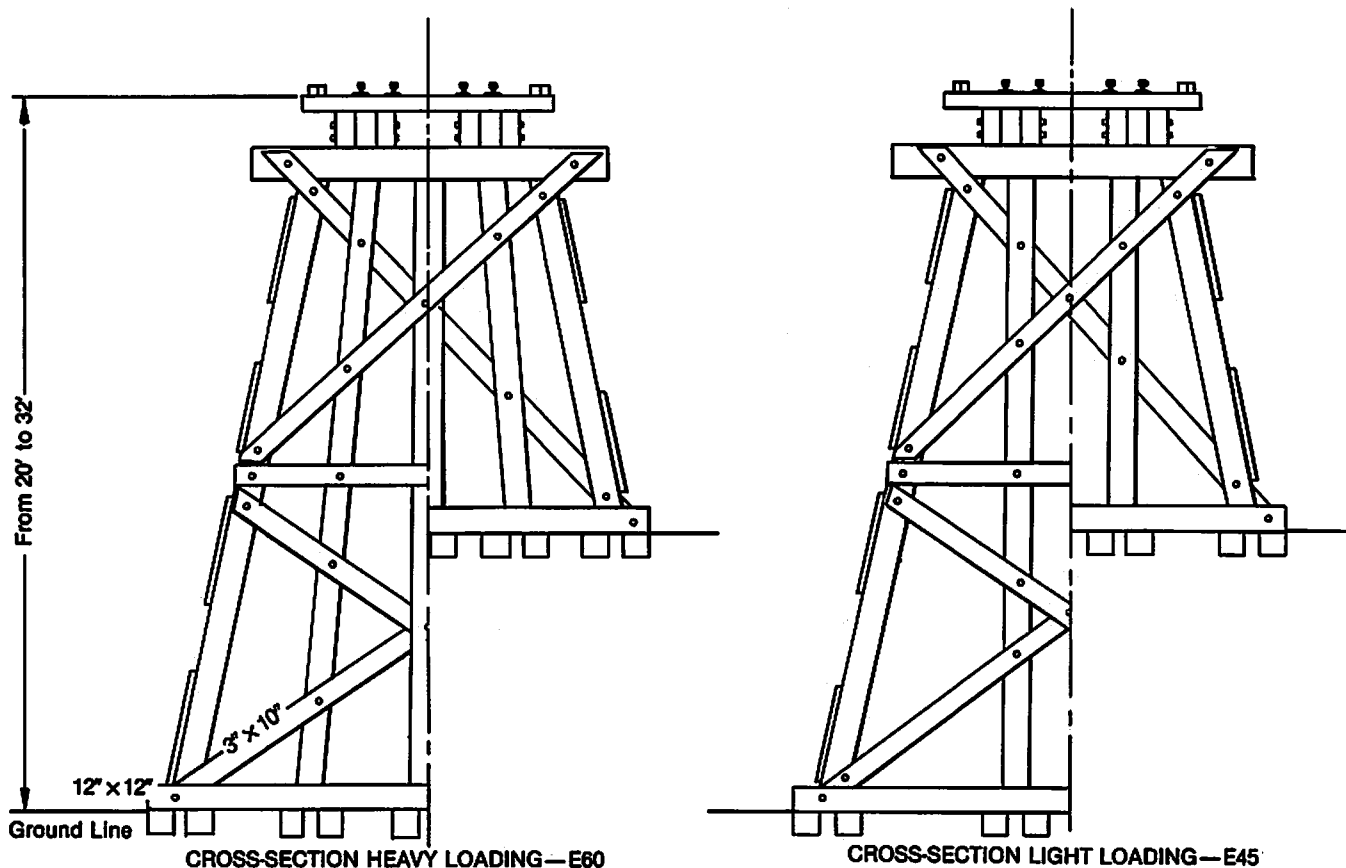
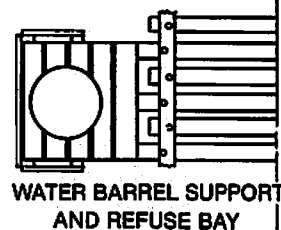
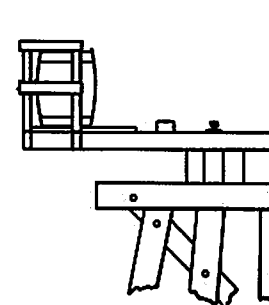


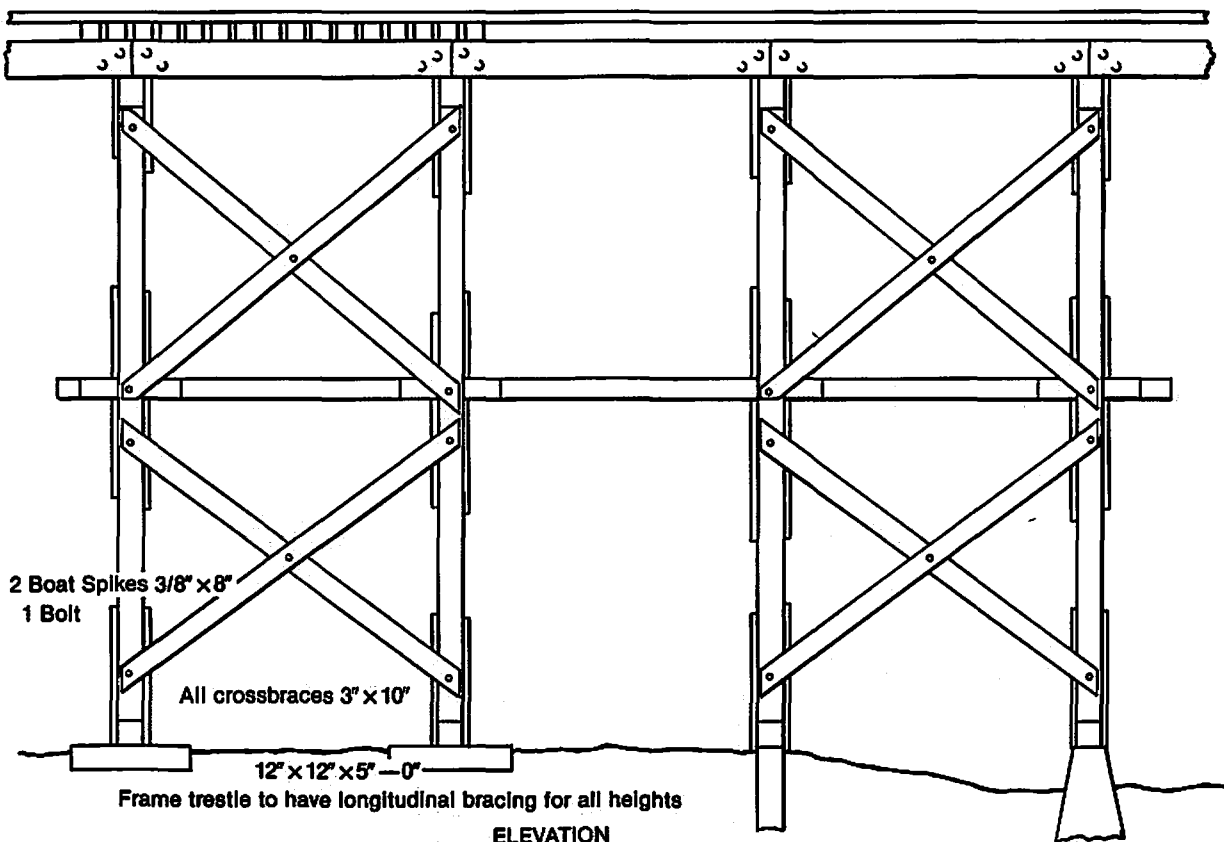
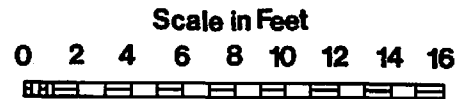
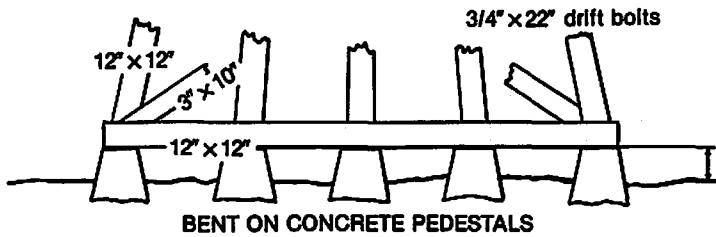
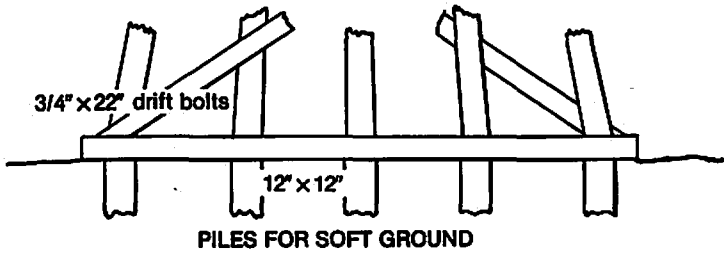
DIAGRAM SHOWING LONGITUDINAL BRACING





# Standard Plans

# STANDARD FRAME TRESTLE



# EMD 'F' Units . . . the



Prototype photo from the collection of Louis A. Murre  
**BOSTON & MAINE "F2A" Numbers 4224A-4226A and 4250-4264, circa 1946 OMI #6400**



**SPOKANE, PORTLAND & SEATTLE "F7A"**



**ATCHISON, TOPEKA & SANTA FE "F3A" Phase I Numbers 16L, 16C, 21L and 21C (plated) — OMI #6403**

**"F3B" Phase I (plated) — OMI #6404**

Prototype photo by Stan Kistler



**SOUTHERN "F3A" Phase III Passenger Numbers 4136, 4140, 4142, 4143 and 4144, circa 1960-70 — OMI #6416**

Prototype photo from the collection of J. M. Gruber



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# The tradition continues



Prototype photo by J. H. Lemke

Numbers 803-806, circa 1968 OMI #6483



Prototype photo by J. R. Quinn

PENNSYLVANIA "F7A" Numbers 9640A-9651A, 9656A-9676A and 9764A-9831A with large roof antenna — OMI #6472



DENVER & RIO GRANDE WESTERN "F7A" Numbers 5701, 5704-5762 and 5764, circa mid 1960s — OMI #6448

Prototype photo by J. R. Quinn

ger Units  
id 6702,

UNION PACIFIC "F(Am)" Numbers 503-540  
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Prototype photo by A. J. Wolff



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# SP YARD OFFICE

## Adair in El Paso

by Bill Morrissey

El Paso's Adair Yard is an auxiliary yard located about five miles east of Southern Pacific's large downtown facility. It has been a receiving and departure yard, a storage yard, a classification yard, and an interchange yard with the Missouri Pacific (now the UP), which has trackage rights over the SP from the east. Presently, it serves a varying combination of all those functions ("flexible management", one sour employee says), with intermodal area off to one side.

The yard office is a generic sort of design, appropriate for any era after the high-windowed victorian period. For various reasons, I'm pretty confident this structure was in place by 1926.

Adair yard is the official name, but none of the SP employees call the place anything other than Alfalfa Yard (a car clerk suggests that "high officers" might call it Adair). The name Alfalfa is said to come from the days when there was a cattle rest in the yard, and alfalfa hay was stacked and scattered everywhere. The history may be apocryphal, but the usage "Alfalfa Yard" is a fact.

This building was the center of all the yard operations until it was demolished in 1976. I photographed and measured it in early 1974. As one studies the photographs, it becomes evident that many changes were made to the original structure. Additional space had been tacked on, doors boarded up, windows cut in, air-conditioning added, and the operators bay removed. With all these changes, and the forest of chimneys on the roof, a simple utilitarian building takes on considerable modeling interest. The proportions are good for model yards: the 20x100' fits nicely between yard tracks.

**Backdating:** No one I talked to seemed to remember the building in any configuration, other than the one shown here (a couple of employees had worked in this yard since the 40's), so backdating would only seem appropriate if one was modeling the pre-WWII era or earlier. I couldn't locate any old photographs, so we're left to speculate that backdating would involve omitting the small addition at the east end, and the entry shelter on the north side, and adding an operators bay on the south side (the mainline passes close by) where the roof line has an otherwise inexplicable jog and a variant siding applied. There is also a boarded-up door opening on the south that could be reopened.

### **The Model**

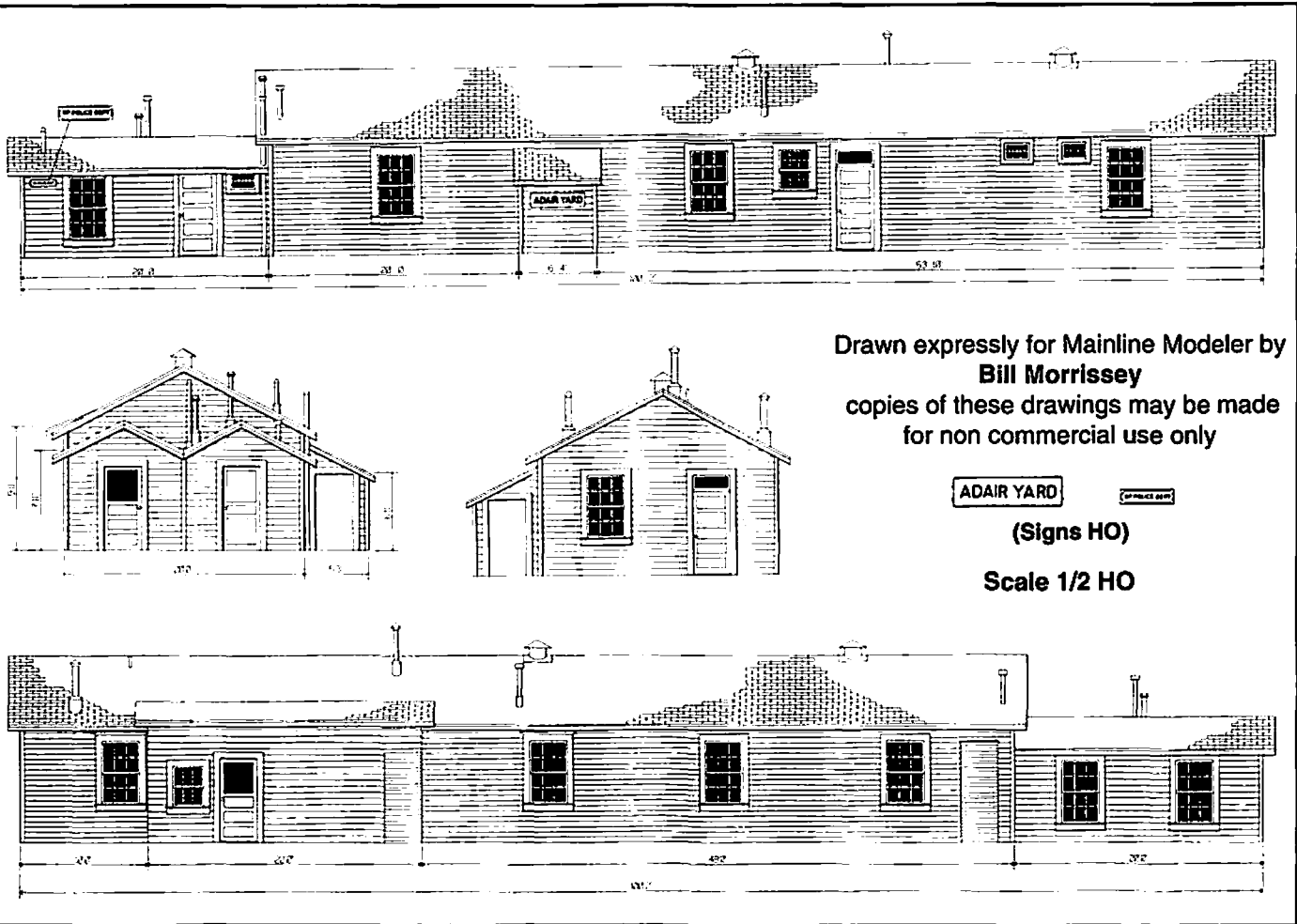
The HO scale model is of conventional construction. Some of the commercial window castings are cut down, the roofing material is home-made, and a few of the chimneys are scratch-built, but everything else is off the hobby shop shelf. For sure, use the roofing technique described in the article.

### **General Notes**

No above-grade foundation is used in the relatively rainless desert. A freelanced 12 or 18 inch foundation would be right if the building is to be used on a layout set in another part of the country. The prototype photos show a number of evaporative air conditioning units on the building. These are only appropriate in a southwestern desert setting - I didn't model them.

### **South Side**

Notice this wall is built from both .060 and .080 novelty siding, with a small area of V-groove siding. Don't slip up and



Drawn expressly for Mainline Modeler by  
**Bill Morrissey**  
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ADAIR YARD UP PRINCE SHIP

(Signs HO)

Scale 1/2 HO

orient the novelty siding upside down! Some siding sections are butt joined together, and others are separated by 1x4 trim. I cut window openings in each wall before I glued them together. Don't be concerned if the window openings are a little sloppy; the window frames will cover. Cut the opening for the boarded-over doorway accurately; the joints are evident, and it looks a lot better if it's square and straight.

Assemble the sections. Since we won't be detailing the interior, use splice plates on the back of the various joints to provide extra strength. Leave space at the bottom of each plate to provide clearance for the .040 floor.

The three vertical 4x4s should be flush with the inside of the wall. They'll project slightly on the outside, and serve as corner posts and trim strips.

I couldn't find door castings I felt were right, so I built my own. Start by gluing a piece of .020 styrene to the inside of the door opening. Build the door frame as shown. Overlay 1x6 strips to represent the raised door molding. Note that there is no transom over the door on the south wall.

A pinhead makes a good doorknob.

#### North Side

Again, note there are two sizes of siding used. Cut the window and door openings, two of the doors have transoms over them. One of those doors will end up inside the entry shelter, but since the sides of the shelter are open, the door will be visible.

#### Ends

These are much like the two long sides, except here, we have two gables. The roof slope is 6 in 12, meaning 6" of rise for every 12" of run. Make two identical sections, with a 4x4 at the joint between them. One door has a window, the other does not.

Make two extra pieces, matching the width and slope of the end walls. They don't need to be full height. You'll use them later to support the addition roof where it joins the main building.

After you've made the west end, make a second for the gable at the east end of the main building where the small additions are attached. Part of it will show.

Make three extra parts, duplicating the width and roof slope, to be used later in the roof assembly. They shouldn't be full height.

#### Entry Shelter

Cut out the shelter parts. Be careful when cutting the door openings - it's easy to break the material at the side of the door.

#### Floor

The floor is a .020 styrene rectangle, 99' 2"x19' 4". Adjust the size to match the walls and ends you've already made.

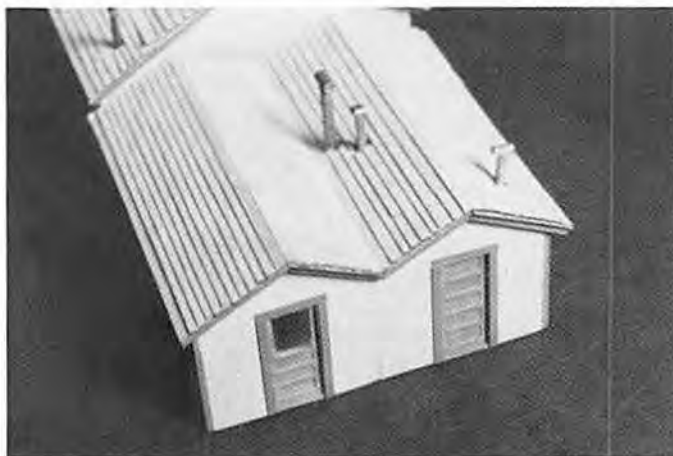
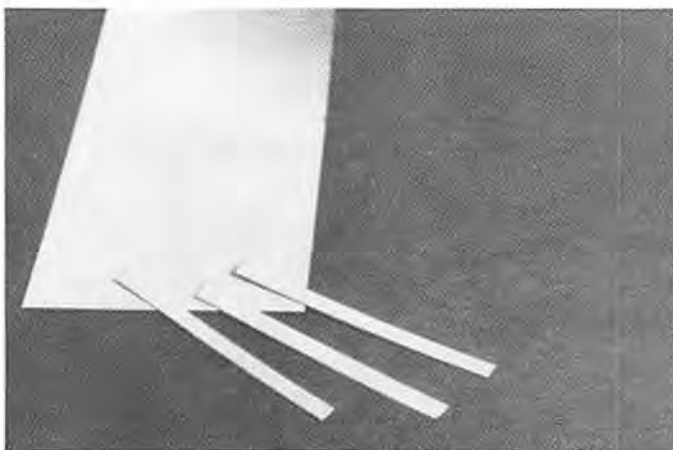
#### Roof

The roof panels are made from .020 V-groove siding, used with the scribed side up (the scribing will serve as a guide for shingles). Cut two main panels sized according to the drawing; sizes include overhang allowances. Each panel will need holes drilled to accept the chimneys. Locate the holes, and size them according to the chimneys you chose. The roof sections that extend over the old operators bay has a slightly different slope; add that section last, and adjust the slope to fit the side wall.

Cut four panels for the addition roof sized according to the drawing. Two panels will be used as is; the other two will have holes drilled for chimneys.

#### Windows

The windows require a little time. The eleven 36"x60" windows are no problem; just trim the decorative tabs off the upper corners; the other five have to be modified. The



principle is the same for all five: cut the sills off the castings, remove the mullions to leave the proper number of panes, and cement the sills back on. We want only one row of panes left on the three small Campbell windows, and three rows on the two Grandt Line Windows.

#### Assembly

Test fit the side walls and floor before cementing. The walls should fit the edges of the floor section, with the 4x4 corner posts projecting beyond the end of the floor. Cement them in place, and when the cement has set, add the end sections, fitting the ends inside the corner posts.

Assemble the two sections of the main roof and extra gable sections. One section should be near the center, and the other two about five feet from the ends (so they clear the end walls when we set the roof in place). Use scrap pieces of 4x4 to support the joint along the peak.

Add 1x6 fascia trim along all eaves. It's probably a good idea to use scrap 4x4s to support the fascia since most model structures seem to get handled by the roof edges.

Cement the three entry shelter walls together. When the

cement has set, attach it to the main structure centered on the door. Don't install this roof section yet.

#### Painting

When I photographed the prototype, peeled paint revealed use of several different colors over the years. In 1974, the building was white, with medium-green trim. The shingles on the roof were off-white. (I used Testors Model Master Gull Gray in a spray can.) For earlier eras, use whichever colors are suitable, including shingle colors appropriate for the period. Spray structure walls white (I used Gull Gray for the walls, too, to simplify the weathering, and to tone down the white for the photographs), and brush paint the trim and window castings green. I used Testors Model Master Steel to get the galvanized effect on the metal chimneys.

Xerox the "Adair Yard" and "SP Police Dept" signs, on the drawings page, and cutting the signs. Paint the inside of the structure black.

Weather the walls of the structure before installing the roof and windows. In an industrial area, and during the steam era, the building would be covered with soot a short time after each new paint job. If your climate is rainy, don't forget the dirt splashed up on the lower part of the walls. Don't overdo the





dilapidation - peeling paint and deferred maintenance wasn't typical of railroad structures until modern times, especially on the more prosperous roads.

### Window Glazing

Install window glazing after weathering the structure (we don't need dirty windows), and before installing the roof. We have two choices for the glazing: either clear plastic glued to the inside walls, or use Microscale's Krystal Kleer material. I always seem to get glue and fingerprints all over the clear plastic windows while installing them, so I used Krystal Kleer. Krystal Kleer takes a little practice, but it's easy to redo any botches.

### Roof

This is probably the most interesting part of the model. The prototype roof is shingled with "triple tab, mineral-coated, composition" shingles. They're made of asphalt - impregnated felt, covered with colored fireproof mineral granules of almost any color. I wanted to get the effect of the black edge evident on this type of shingle.

place before going on to the next one. The rubber cement should be just thick enough to stay tacky until the shingle is in place. If it seems too thick, add rubber cement thinner. Each strip should half overlap the previous row.

Use a long unnotched piece of roofing material for the roof ridges and valley between the two roofs of the east end addition.

Not all the chimneys are ready made. Trim away the shingles where they cover the holes drilled for the chimneys, etc., and cement the smokejacks in place. The various styles are shown in the diagram. The final step is to install the roof.

This is a nice little structure, with a character somewhat different than the station buildings we so often see. Since it's a yard office, position it right in the middle of the railroad action, and not necessarily in a location convenient for the public.

A couple of years after the yard office was torn down, it was replaced by a modern four story tower. I hope to describe a model of that structure in a future article.

Bill of Material	
Evergreen Novelty siding, .060 spacing, .040 thick	
Novelty siding, .080 spacing, .040 thick	
V-groove siding, .030 spacing, .040 thick	
V-groove siding, .020 thick (for the roof and floor)	
4x4 Styrene	
1x6 Styrene	
1x4 Styrene	
2x2 Styrene	
2x4 Styrene	
2x6 Styrene	
1/8" Styrene tube	
3/32 Styrene tube	
11 Campbell #900 36x60 windows	
3 Campbell #905 24x60 windows	
2 Grandt Line #5030 30x48 windows	
2 Campbell #934 smokestacks	
6 Campbell #924 smokejacks (optional)	
2 sheets of black construction paper	
Clear plastic sheet, or Microscale Krystal Kleer window compound	
White, Green, Metallic steel paint	
Testor's Model Master Gull Gray spray can paint	
Liquid plastic cement	
Rubber Cement	

Spray a coat of flat enamel paint on a sheet of black construction paper, and after the paint has dried, cut it into 12" strips; make 6" cuts every 12 inches. The photo shows several shingle strips ready to install. Using the grooves in the roof sheets as guides, and starting at the lower edge of the roof, attach the shingles in rows using rubber cement. Brush cement one strip at a time, and put it in

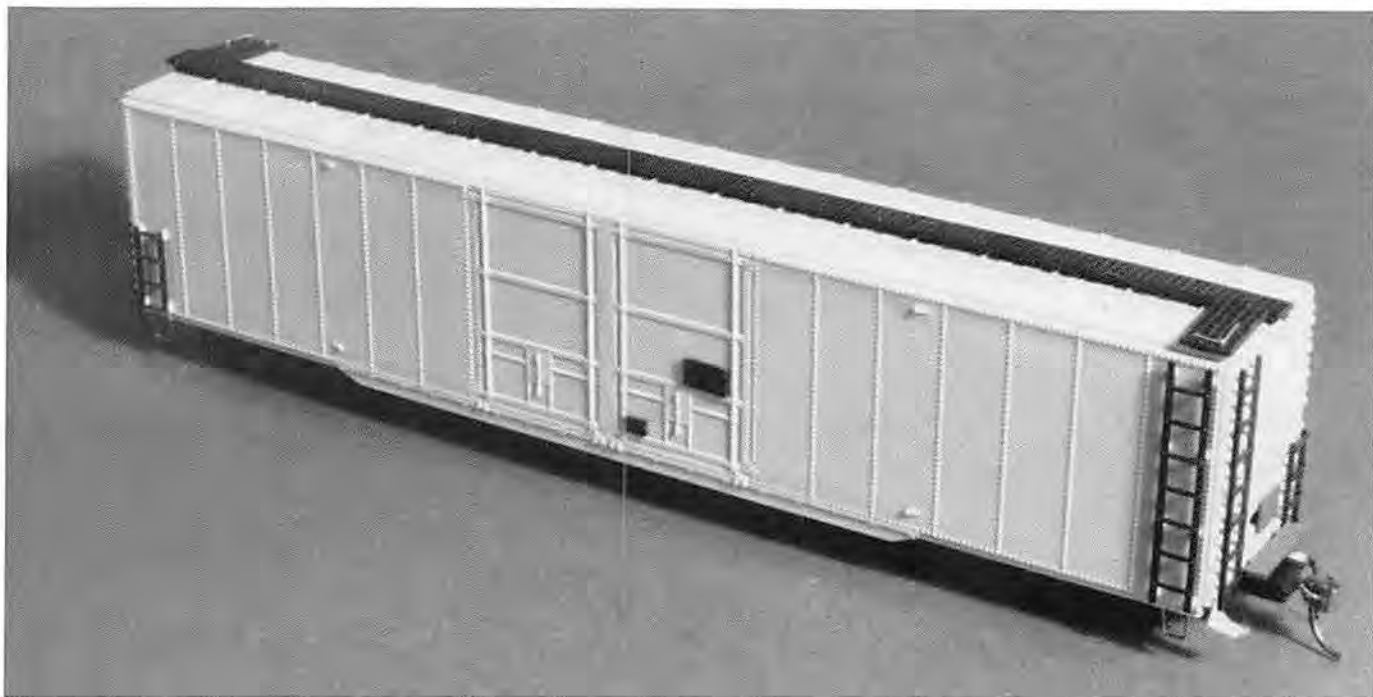


All Photos by the Author



# 60' AUTO BOX CAR

## L&N Greenville



### by Stuart Thayer

From the early 1960's, the Louisville & Nashville Railroad and Ford Motor Company had a very close working relationship. This is not surprising since Ford has two assembly plants in the L&N's namesake Louisville, Kentucky. Both of these were served by the L&N, and continue to be served by CSX today.

An article in the August 19, 1963 issue of *Railway Age* on the development of the 60' auto parts box car, states this design came about through a joint effort by Ford Motor Company, Greenville Steel Car Company, Thrall Car Mfg. Company, the Detroit, Toledo & Ironton Railroad, and the Wabash Railroad. So, it's not surprising that the L&N joined the ranks of several other railroads in acquiring 60' auto parts box cars for Ford

Service.

In November 1965, Greenville built twenty of these cars for the L&N. They were of 100 ton capacity with a 46'-3" wheelbase, and an end of car cushioning system. They were part of number series 105600-105619.

The construction of a model of one of L&N's Greenville cars is a relatively simple task. It merely involves the addition of specific details, painting, and decaling. So, if you're ready let's begin.

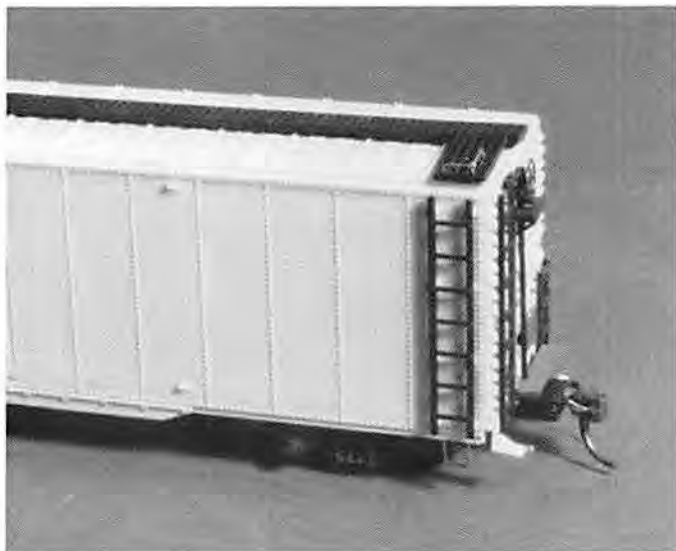
#### The Body

Start with an A-Line or Con-Cor 60' Greenville box car kit. First, carve off the stirrup steps, and replace them with A-Line type "C". Next, using the ladders provided with the kit, add tall and short ladders in the appropriate locations. It is a good idea to follow the plans for the Greenville 60' auto parts cars that appeared in the July, 1984 issue of *Mainline Modeler* while building this car. Before adding the side ladders, cut small pieces of .020"x.030" strip styrene, and attach them to the backs of the ladders to simulate mounting brackets. The short ladders require four each, and the tall ladders require four pairs evenly spaced.

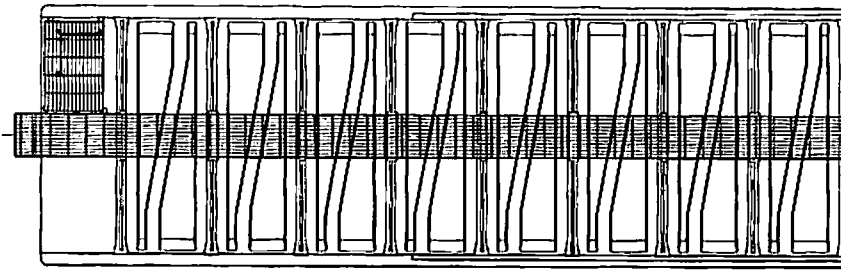
Next, apply a large and small tack board to the right-hand plug-door of each side as illustrated in the plans. With this accomplished, we can move to the ends.

You should have already added the necessary ladders to the ends, but if not, do so now. You will not, however, need the mounting brackets as on the side ladders. On the "B" end, attach the supplied hand brake equipment. However, substitute the brake wheel and platform from a Detail Associates #6402 "Miner" brake wheel set for the ones supplied with the kit. Add the retainer valve to the left of the hand brake. Then using .019" brass wire, I installed the air line from the retainer down and under the end of the car.

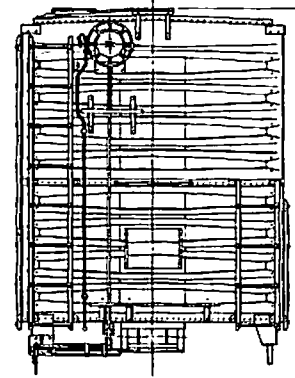
I used eyebolts I had left over from a Tiger Valley locomotive kit to secure the wire near the bottom. However, I



# L&N GREENVILLE 60' BOX CAR

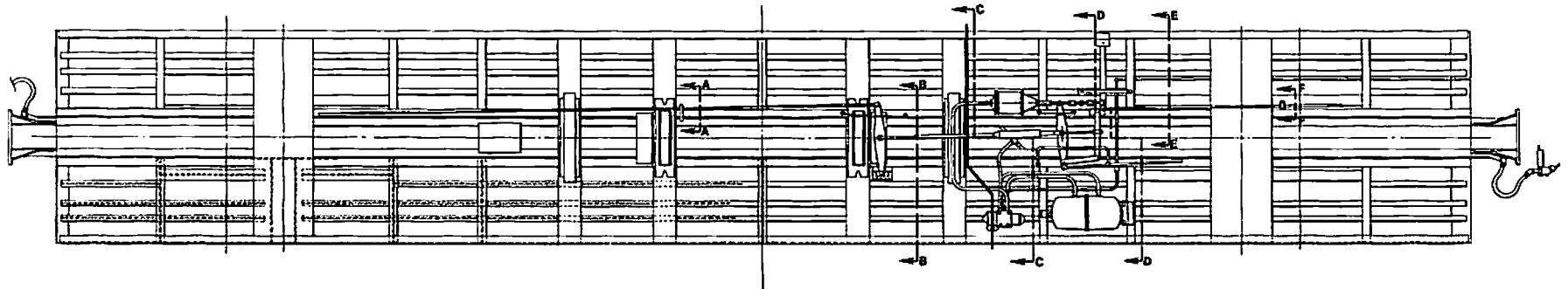
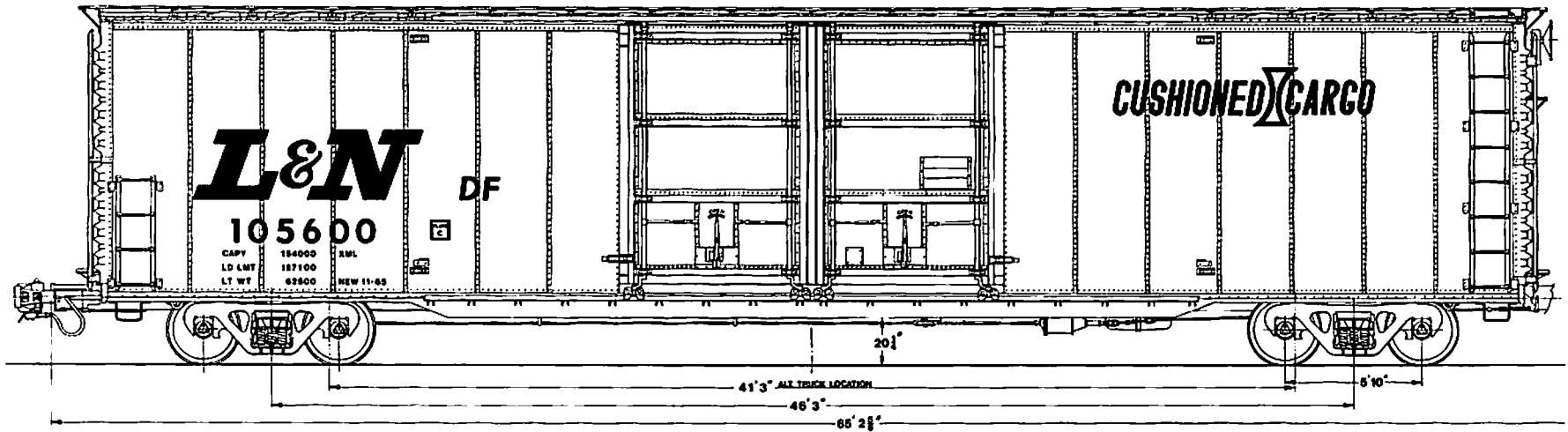


Drawn expressly for Mainline Modeler by  
**Mark Montague**  
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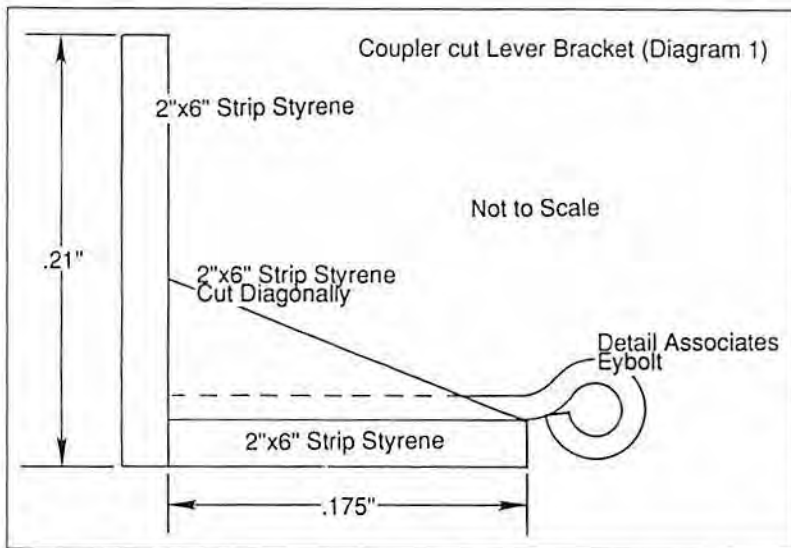


Scale 3.5 mm = 1'

For sections, see July 1984.







### Underframe

As mentioned before, the L&N's Greenville cars had a 46' 3" wheelbase, so the underframe will have to be modified. Refer to Bobb Losse's article on kitbashing 60' auto parts cars in the April, 1986 *Railroad Model Craftsman* for a detailed description of this procedure. The only comment I have is to add strip styrene splices on the inside of the joints to reinforce them. You will also need to trim the end-most cross-members from the underbody to eliminate interference with the wheel flanges.

Next, add new brake gear following the plans. I used left overs from Cal-Scale cushioned underframe kits. At this point, you can either add the appropriate piping and linkage as I did, or by-pass it.

Now we move to the air hose brackets. Most of the photos and plans I have show a triangular-shaped bracket attached directly to the coupler, with a flexible air hose extending from there back to the

suggest using smaller wire and Detail Associates' eyebolts; they'll look better.

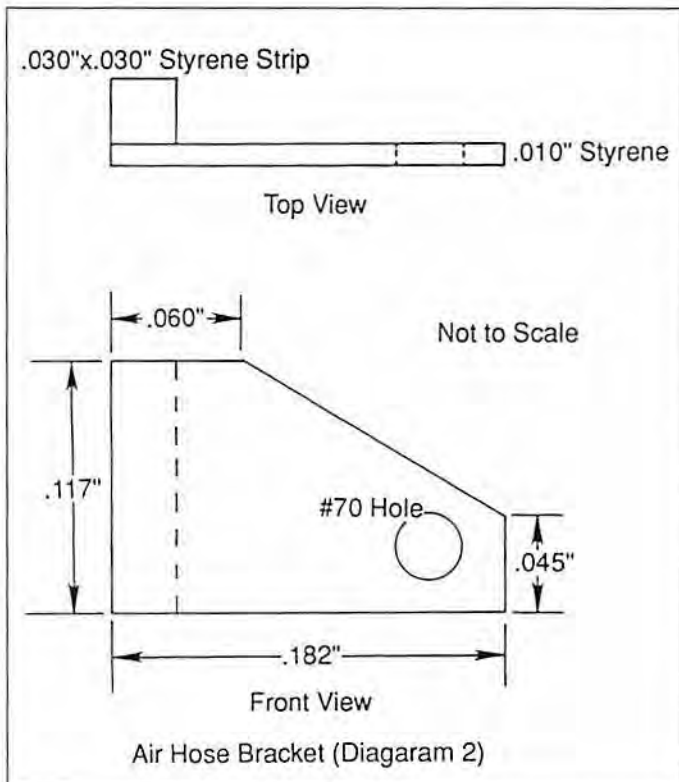
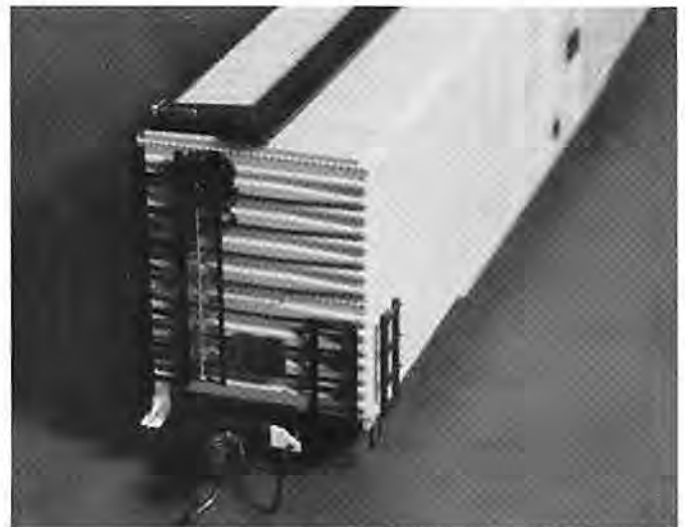
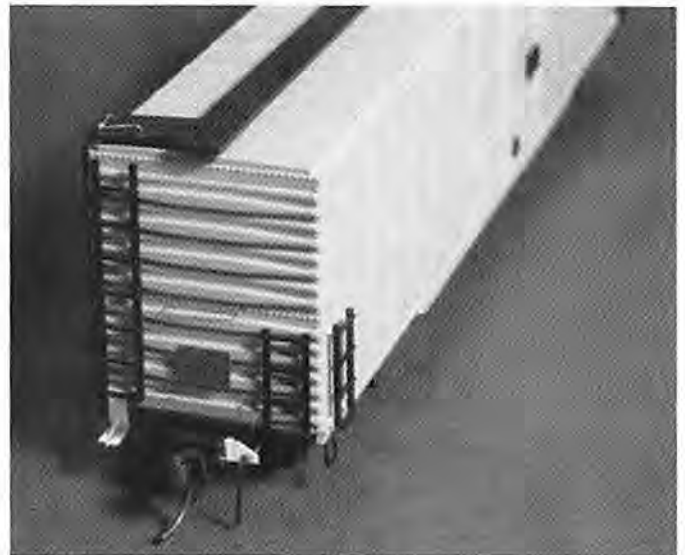
Now, following the plans for dimensions, fabricate the end grabs located on each end centered on the mid seam. Use .012" brass wire, and drill mounting holes with a #80 drill.

Next, add large tack boards and end walkways to each end. I used leftovers from Front Range box car kits.

The last details to add to each end are coupler cut lever brackets. Measuring off the plans with a caliper, cut HO scale 2"x 6" strip styrene .21" long for the vertical members, and .175" long for the horizontal members. Then cut one piece .175" long, and split it diagonally. These will be the angled horizontal members. Assemble two brackets, (see diagram) then attach one on the left-hand side of each end.

The last step on the body is to add the roofwalk. I chose to use the one supplied with the kit, as it looks nice when viewed from above, and I didn't want to go to the expense of splicing two Detail Associates roofwalks together. Fabricate corner grabs from .012" brass wire and Detail Associates' eyebolts, and mount them at each end.

underframe where it attaches to the train line. However, this model is meant to be operational, and I was concerned about attaching anything directly to the coupler. If it didn't interfere with the operation of the coupler, I surely would knock it off repeatedly. So, to avoid any possible problems, I constructed two brackets (see diagram), and attached them to the end of each coupler pocket, and extended the trainline back from there using .019" brass wire. It's not exactly right, but it has the right look.





Also, prior to installation of the underframe, you will need to add extra weight per the *RMC* article to stabilize the car.

### Paint, Decals & Finishing

I approached the painting and decaling in much the same manner as I did for my 40' PS-1 in the September 91' *Mainline Modeler*. A review of that article may be helpful.

I painted the roof first, and wanted to give it the effect of peeling paint, exposing the galvanized steel roof. With this in mind, I needed to consider a good color for a galvanized steel roof. In the past, I have used straight Floquil Old Silver for simulating galvanized steel. However, for this project, I decided to try a different approach I had read about in the past. I mixed equal parts of Old Silver and Reefer Grey. This gets rid of the "shiny" look of Old Silver, and gives a better rendition of the color of galvanized steel.

For the body, I again used Floquil's D&H Blue (which has recently been discontinued) after having applied rubber cement in a random manner on the roof area. Once the blue had dried, I peeled off the rubber cement from the roof, thereby giving the peeling paint effect I wanted. You may remember this is the same process I used on the 40' PS-1. I then gave the sides and ends a light coat of Crystal Cote to give a good decaling surface. Finally, the underframe and coupler pockets were painted Grimy Black.

Once everything dried sufficiently, I decaled the car using a combination of Herald King #B-281 and Champ #HB-375 for all logos, reporting marks, and data. I followed prototype photos of the car for accurate decaling.

Before applying any weathering, I usually apply an overall light coat of Flat Finish, unless I am using dry pigments or chinks. If chinks are used, they should be applied first, and then sealed with Flat Finish. I used airbrushed washes of Floquil weathering colors; Rail Brown for rust accumulation, and combinations of Grimy Black, Grime, Dust and Mud on the ends for the dirt and mud that gets kicked up while the car is in transit. I find weathering to be a critical step in success of any project. So, care should be taken to not overdo. Remember, when weathering with paint, not enough can be corrected, too much cannot.

After all work on the car is finished, your version of an L&N 60' Greenville auto parts car will be ready for auto parts service to Ford Motor Company assembly plants.



All Photos by the Author





# NYC CLASS H-10a 2-8-2 Lima's First Superpower?



## by Al Armitage

The H-10 #8000, was the first notice that, under William E. Woodard, V.P. and Chief Engineer of the Lima Locomotive Works, the development of more powerful and efficient locomotives would be their purpose. Through an agreement with Alfred H. Smith, President of the New York Central, to test, and later, if successful, purchase a locomotive incorporating Woodard's designs. Lima built, at its own expense, the Michigan Central #8000 Class H-10 in May 1922. The H-10 was an improved version of the NYC H-7e design. Because of weight limitations dictated by track and bridges in use at the time, special effort was made to keep the weight within the same axle loads as the H-7e. Hollow axles and crank pins were used, and special high-quality steel developed by Lima was used for the side and main rods. The resulting greater strength allowed a reduction in cross section, and thus, weight. Even the weight of the foundation brake rigging was reduced by 1800 lbs. The Elvin stoker was chosen because of its lighter weight, but this turned out to be a mistake, as the Elvin performed very poorly.

The H-10 was the first locomotive to use the outside dry pipe. Having the pipe outside the boiler prevented pressure drops in the boiler when the throttle was opened or closed, and since it was not in the boiler, provided a greater steam capacity than conventional designs. To keep it as short as possible, and reduce temperature drops between steam dome and superheater header, the dome was moved forward, ahead of the sand dome. This feature, however, was not used much in future locomotives.

During test runs, the H-10 far exceeded the builder's expectations in both maximum drawbar pull, and economy of operation. This performance, along with an 8% decrease in fuel consumption, led the NYC to order 200 locomotives of the H-10 design. Classified as H-10a, the order went as follows:

### Lima Order L-1039

Nos. 1 - 65 NYC	65 engines
Nos. 123 - 132 MC	10 engines

### Alco Order S-1393

Nos. 66 - 82 NYC	17 engines
Nos. 133 - 182 Big Four	50 engines
Nos. 183 - 190 B&A	8 engines

### Alco Order S-1403







Charles T. Felstead collection

Nos. 83 - 122 NYC	40 engines
Alco Order S-1431	
Nos. 191 - 200 P&LE	10 engines
H-10a Specifications were:	
Wt. on drivers	240,000 lbs.
Total weight	335,000 lbs.
Cylinders	28 x 30
Tractive Effort w/o booster	66,640 lbs.
Tractive Effort of booster	10,700 lbs.
Gate area	66.4 sq. ft.
Steam pressure	210 lbs.
Driver diameter	63 inches

The H-10a was an immediate success through the entire system, it would seem. The last of the H-10a's were built in 1923, and less than a year later, the NYC ordered 101 2-8-2s to be Classed as H-10b's.

The H-10a's were, undoubtedly, the most modified engines on the NYC system. Starting shortly after delivery, a second air compressor was added eventually to all but 5 engines. At about the same time, the process of replacing the inefficient Elvin stokers with Duplex D-2 stokers began. Three engines got Hanna H9-1a or HT types between the late 1920's and late 1940's. All but 39 engines were thus modified.

Starting in February 1924, new 6-wheel tenders carrying 15,000 gallons and 18 tons were ordered for the H-10a's. Number 16 was one of the first to receive the new tender. Later, a modified version, carrying 24 tons, was used. The 10 P&LE engines used another design with a 16,000 gallon capacity. The original 4-wheel truck tenders went to H-7a, K-3, and H-5 engines that had smaller tanks.

Other changes began in the late 1920's. One was the

removal of the outside dry pipe and Chambers front-end throttle. A further change was the replacing of the original 72 inch cab with a 78 inch or 82 inch cab on some engines, and finally, the shifting of the air compressors to the front deck on some engines, with or without pump shields.

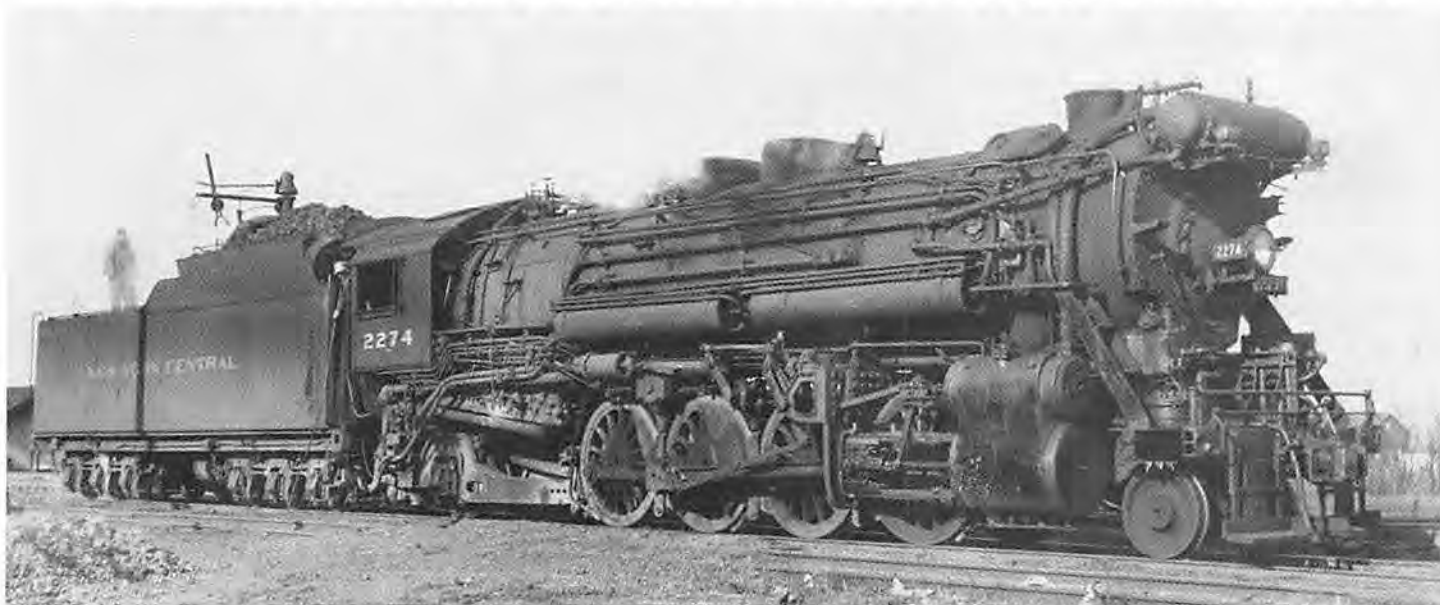
The Elesco feedwater pump applied to the H10s originally was the W-6 1/2 model shown on the drawing. This was replaced with the CF-1 type on many engines. Some of the H-10a's, with the air pumps on the front deck, had the feed water pump moved back over the rear driver for better suction of water from the tender.

As built, all of the H-10a's were equipped with steam powered grate shakers, but they apparently had problems, as they were removed after a few years. Sand piping was placed under the boiler jacket, originally, but many of the engines had exposed piping later on. The original headlights were the big 18 inch Dressel type, which were later replaced with Pyle-National versions.

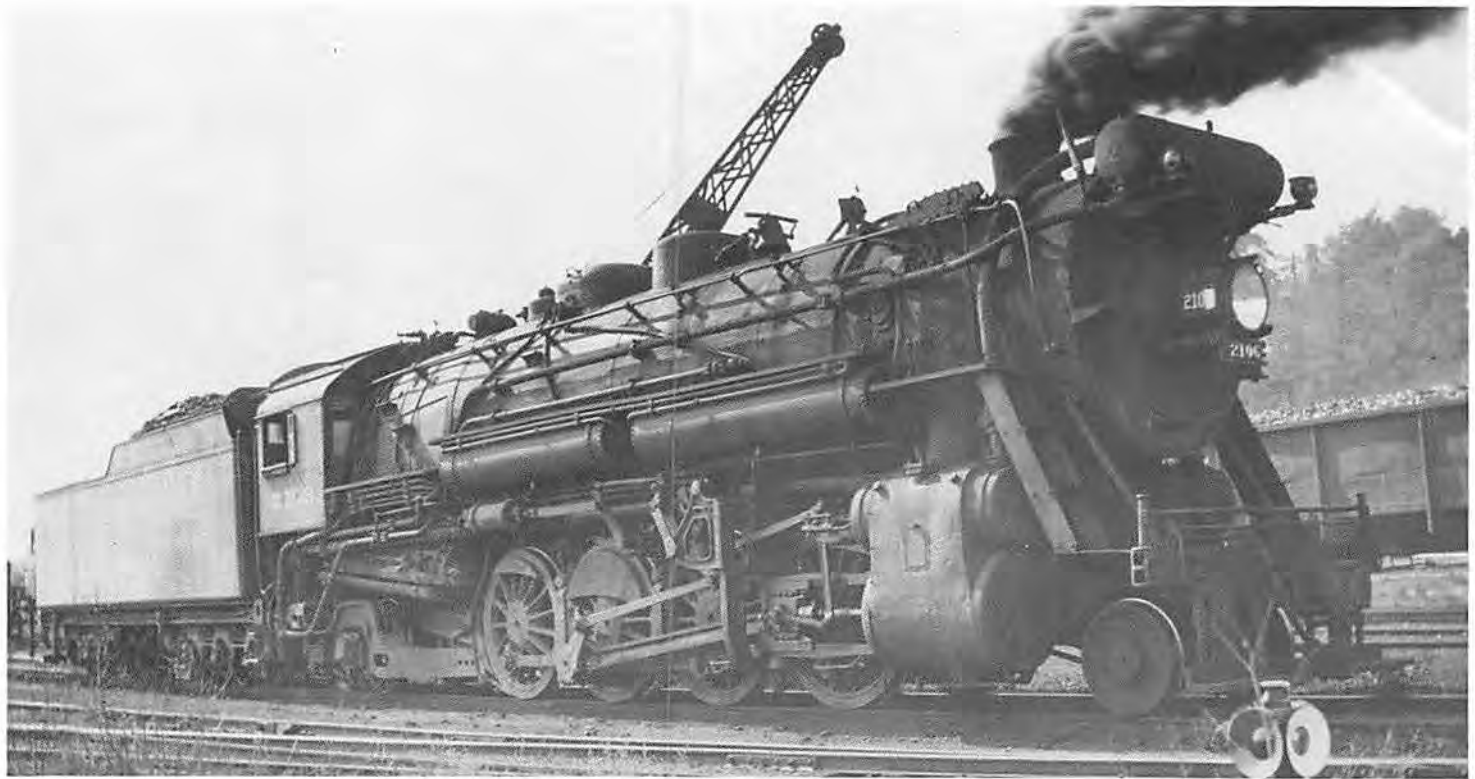
Although most of the locomotives were built with the usual NYC footboards, a few Michigan Central engines had the more common boiler tube pilots installed to allow operation in Canada where regulations required them.

All of the H-10a's were equipped with Locomotive Valve Pilots in the mid-1940's. Boosters were removed in 1948 to eliminate their high maintenance costs, and to effect savings in crew payrolls by reducing the agreement weight to the main driver weight. Also, during the 1940's, a Barco Low Water Alarm was added, and a top-mounted boiler blow-down system by Okadee installed.

These H-10a and succeeding H-10b classes were the forerunners of Lima's highly successful "Super Power"



Charles T. Felstead collection



M.D. McCarter collection

locomotives which followed in their wake such as the B&A Class A-1a "Berkshire" which incorporated most of the innovations developed on the H-10 engines.

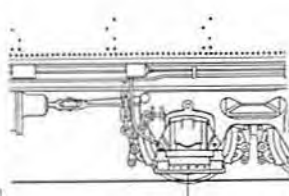
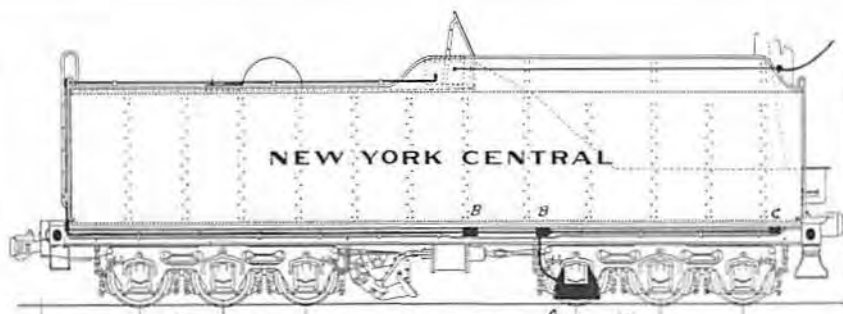
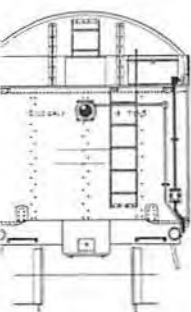
The drawings show the Lima version as originally built with the Elvin stoker and small tender, as well as the larger tender which replaced them. I picked the number 16 for the drawing, as it seemed to be closest to the original builder's photos. The engines were renumbered in 1936, so number 16 became number 2116. Lettering styles were changed to the more modern Gothic style, so I've shown this as well as the earlier Roman type. Number 16 was built by Lima in December 1922, retired in March 1953, and sold for scrap April 25, 1953.

Much of the data and information contained herein was taken from a much more comprehensive article by R.S. Curl in the New York Historical Society's 1985 edition of the *Central Headlight* loaned by a long time NYC fan and old friend, Ron Morse. I am also greatly indebted to Paul T. Carver of the Society for his considerable cooperation in supplying further information which helped in the preparation of the drawings.



M.D. McCarter collection

M.D. McCarter collection



Detail of Receiver

General Arrangement of A.T.C.

NYC Automatic Train Control System

After my drawings of the B&A's A-1c "Berkshire" appeared in a recent issue of *Mainline Modeler*, it was brought to my attention that I had neglected to include details of the ATC equipment required on all NYC locomotives in mainline service after 1925. This directive affected all Class 1 railroads, of course, not just New York Central.

To correct the oversight, on my part, I offer this diagram which applies to all applications of the ATC system to NYC and B&A locomotives.

The receiver A is always mounted on the rear journal on the engineers side of the forward tender truck, either 4-wheel or 6-wheel. A flexible 3/4" hose goes from the receiver up to a plug coupler B from which a 1" conduit runs back to the rear of the tender and up to a junction box. From there, the conduit continues forward to the

mechanism case D. If the tender has a handrail, the conduit usually runs through that. A 1" conduit also runs forward from the case inside the bunker to a junction box at the front of the tender. From there, a cable runs up to a plug coupler in the cab.

From the plug coupler above the receiver, a conduit goes forward to the reset contactor C. NYC uses the General Railway Signal Company system.

An HO scale mechanism case #B101 is available from Custom Finishing, 379 Tully Road, Orange, MA 01364.

Precision Scale Company 3961 Highway North, Stevensville, MT 59870 offers the receiver, mechanism case, plug couplers, and junction boxes in O scale. Catalog Nos. are as follows: Psh 4731 Reset w/junction box, Psh 4745 Mech. Case, Psh 4612 receiver and plug coupler.







# NYC CLASS H-10a 2-8-2



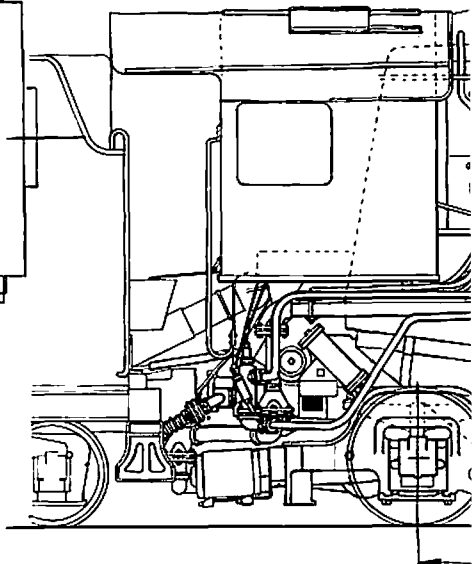
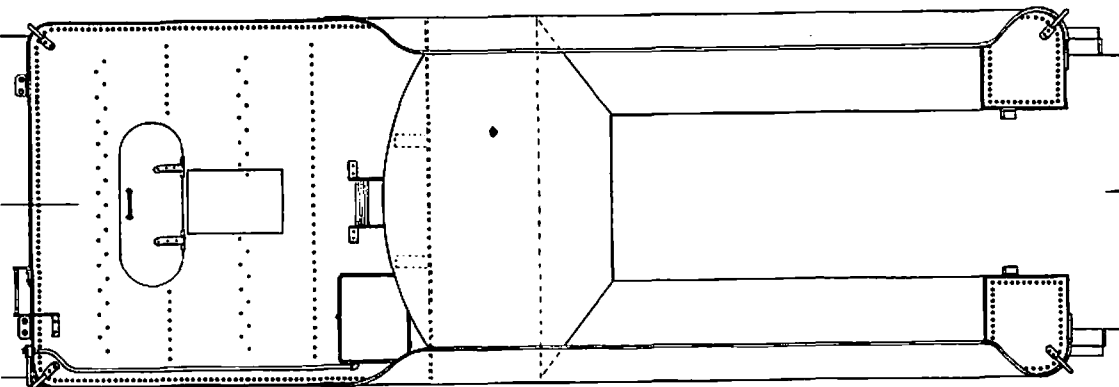
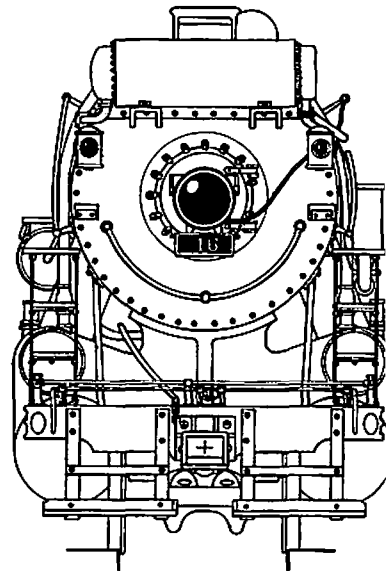
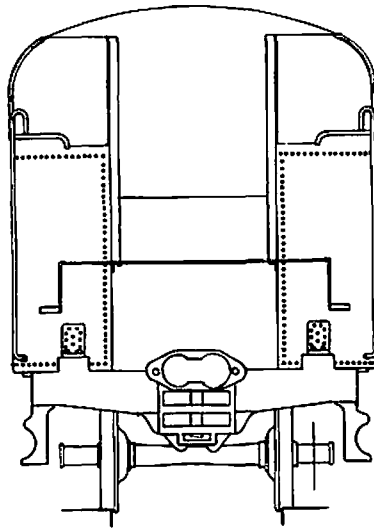
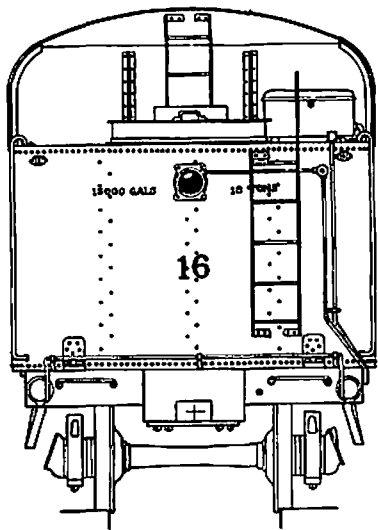
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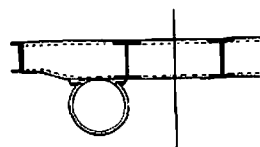




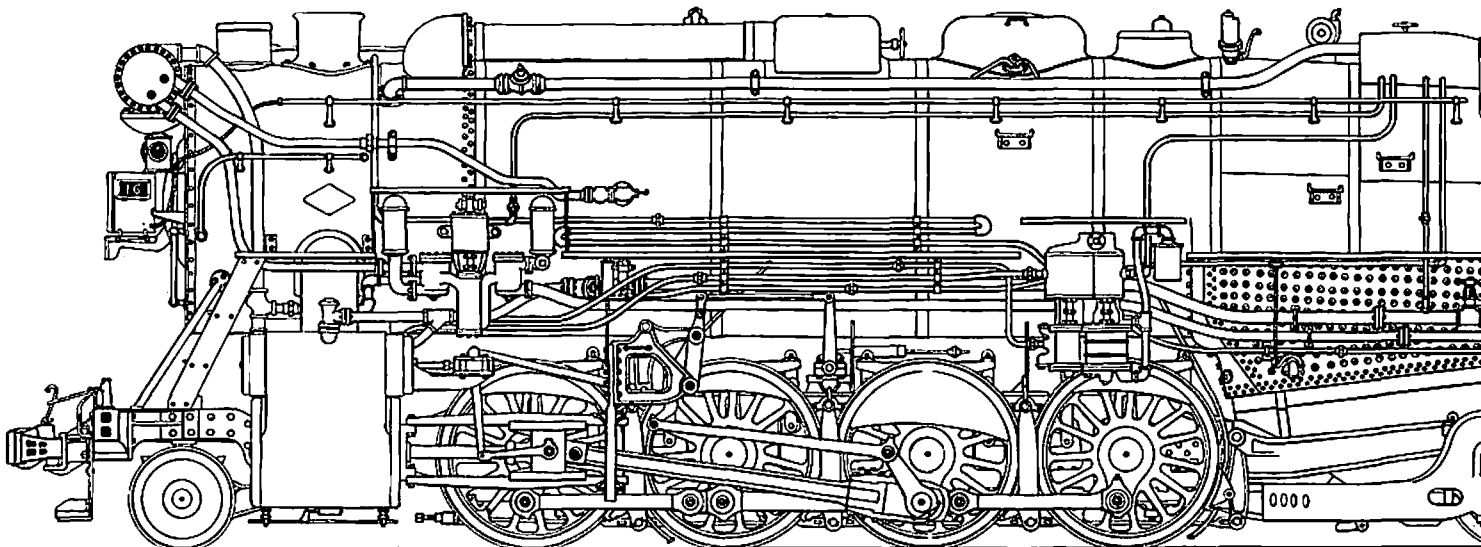
M.D. McCantor collection



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by Al Armitage  
copies of these drawings may be made for  
noncommercial use only

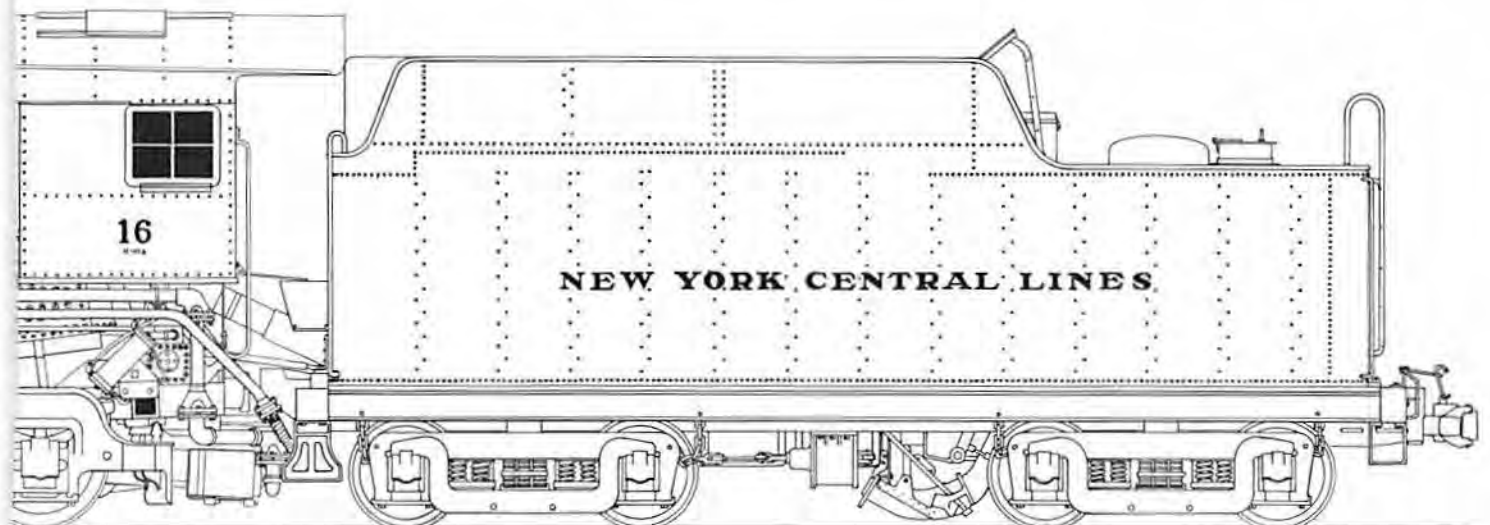
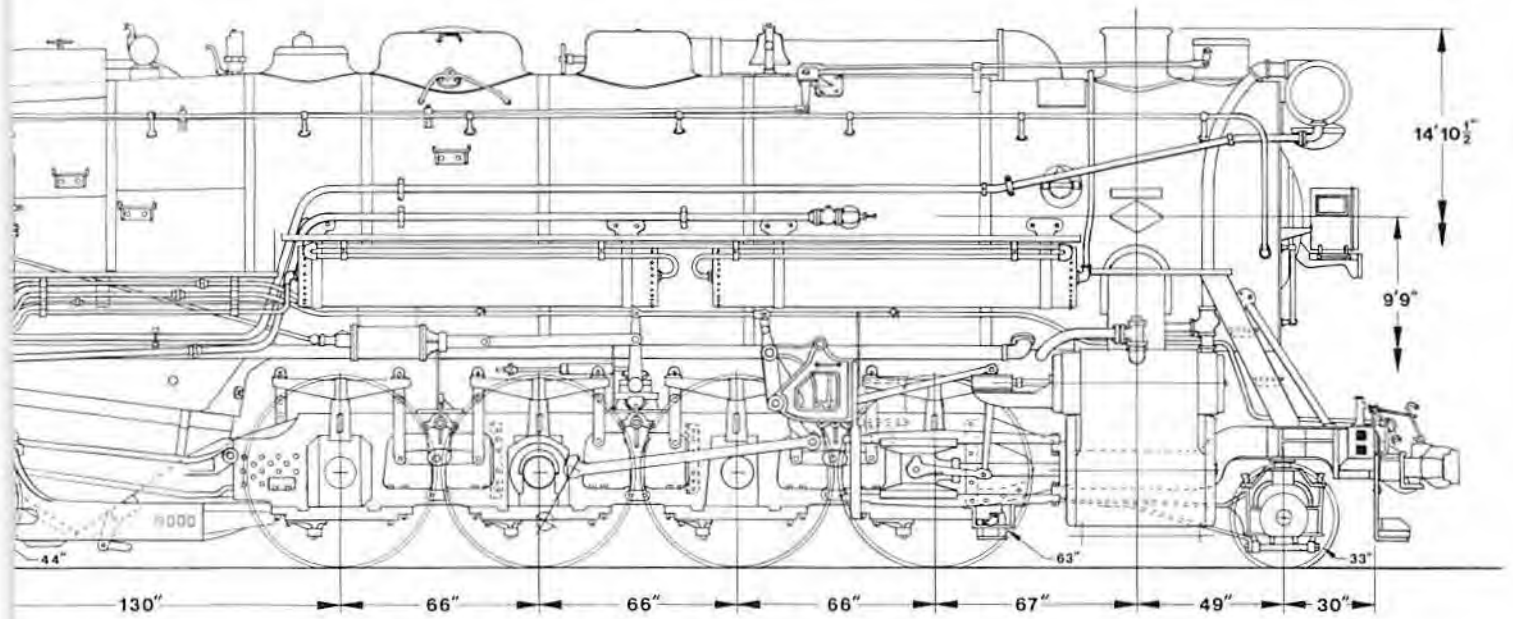
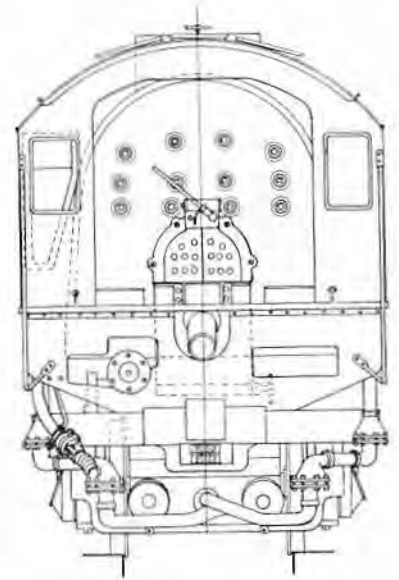
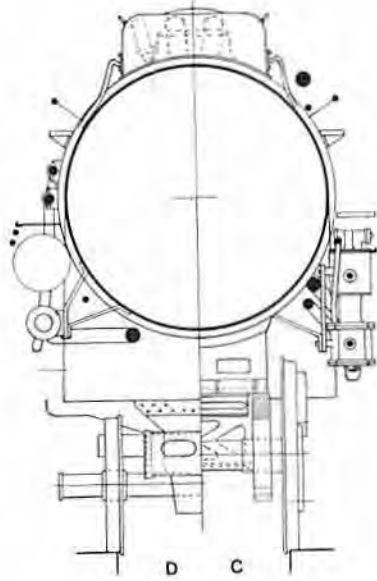
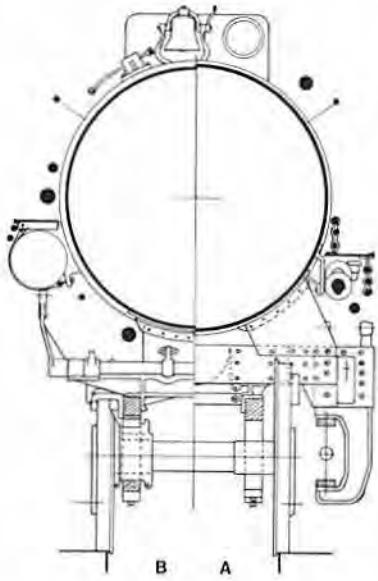


Scale 3/16 = 1'



A.B.A.

← A      ← B      ← C      ← D





# NKP'S WOOD CABOOSE



## Radio Equipped

### by Mont Switzer

Those of us who grew up in the 1950's and 60's, have witnessed the demise of the wood caboose, the maturation of the steel cabooses, and now, the demise of all cabooses; at least for class one mainlines. Many of the wood cabooses were still in service when the railroads began using radio communications in train service.

Although the Nickel Plate Road roster had a number of radio equipped steel cabooses, NKP veteran conductor John Keller once told me that five of the roads wood four window cabooses were also equipped with radios.

NKP 1155; both the permanent marker lights and cupola braces have been removed. (*NKP Society Magazine* F/W 1973).

NKP 1168; the permanent markers were removed, but the cupola braces were retained. (*NKP Years* by Eric Hirsimaki.)

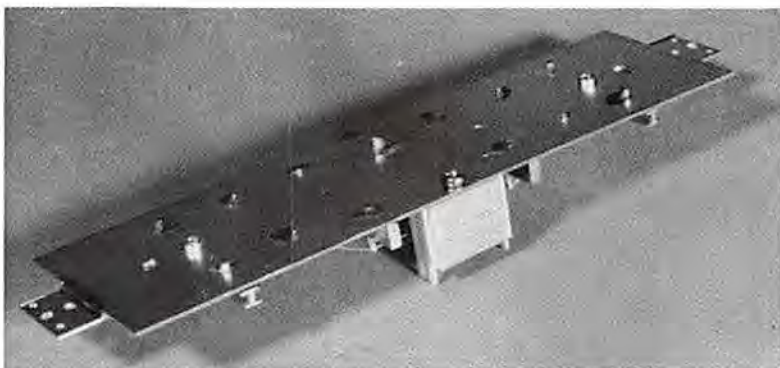
NKP 1205, this photo shows the permanent markers removed, but the cupola braces retained. (From photo).

NKP 1206; a radio was added in 1952 or 1953, according to official equipment diagrams.

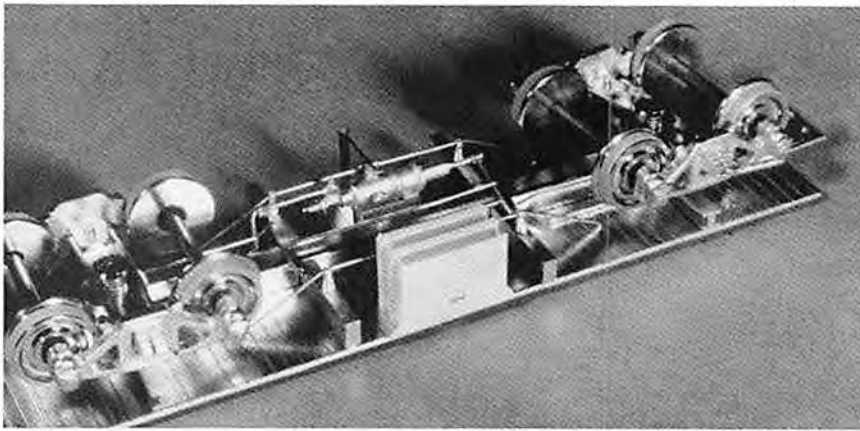
The Nickel Plate's four window wood cabooses have been well documented in the pages of *Mainline Modeler*. The March 1986 issue featured a history of these cars by noted NKP historian and author Eric Hirsimaki, as well as scale drawings by editor Bob Hundman. The June 1986 issue followed with a model construction article by Jim Six, a well known model builder and author. This article is intended to cover the radio equipment detail variations not seen in these previous works.

The radio equipped NKP wood cabooses are easily identified

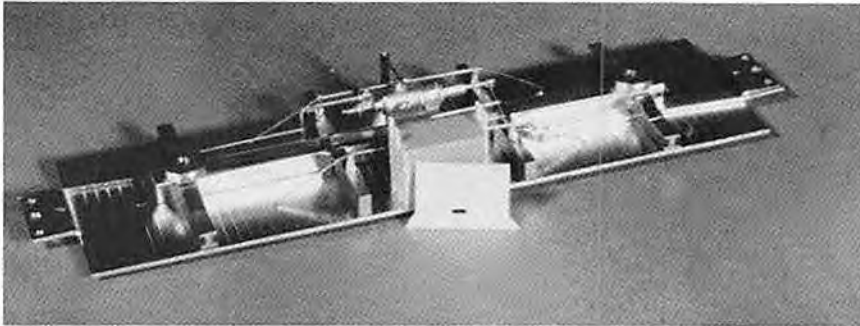
*The basic battery box is made of two pieces of Plastruct 1/4 inch square tube cut to a length of 3 1/4 scale feet. The box is completed by cementing one of the tube pieces on top of the other. The open ends were covered with .010 sheet styrene. The newly formed plastic "hulk" was attached to the brass car floor with a 2-56 screw that passes through a hole drilled in the floor, and the top of the "hulk."*



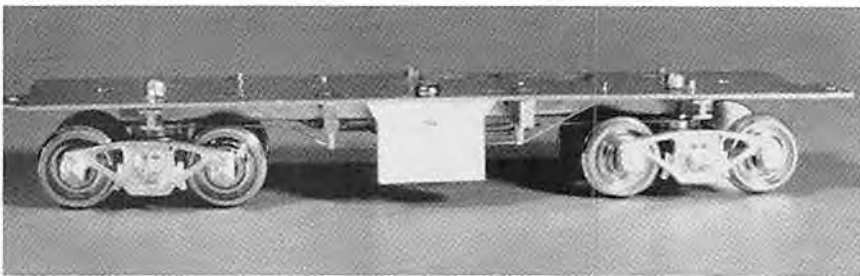




The two mounting straps were made from Evergreen 2x4 on the sides, and 1x4 on the bottom. This was cut to fit, and cemented in place.



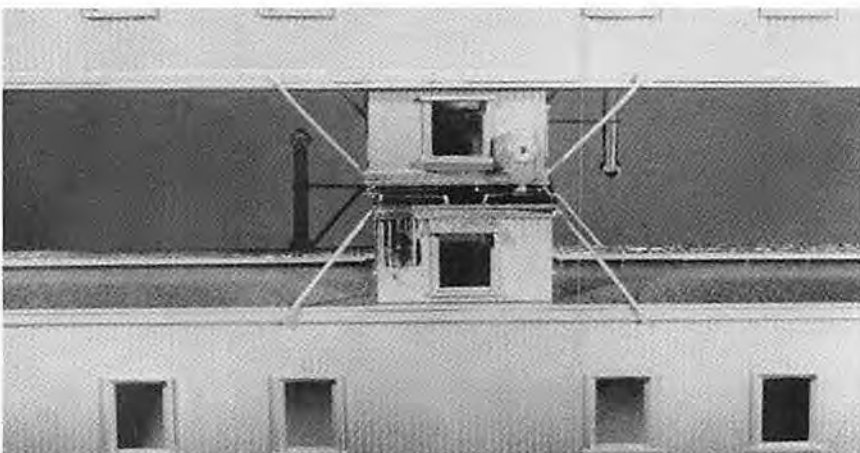
A .010 plastic cover, for the mounted box, was cut as shown in the drawing, and cemented in place. See the drawing for scale dimensions.



A small ventilation hole was cut in the cover as shown. This was done by drilling two #70 holes, and then opening up the area in between with a sharp model knife.

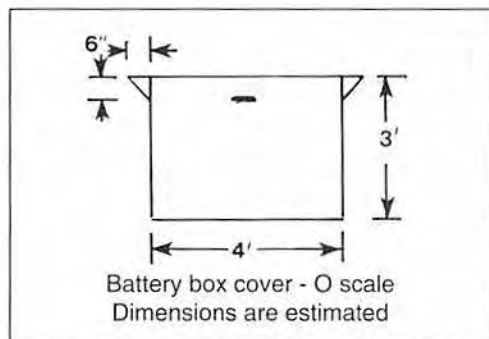


The permanently mounted marker lights were heated and removed. The hole was filled with Tix solder, and then worked down smooth with a sharp chisel knife blade.



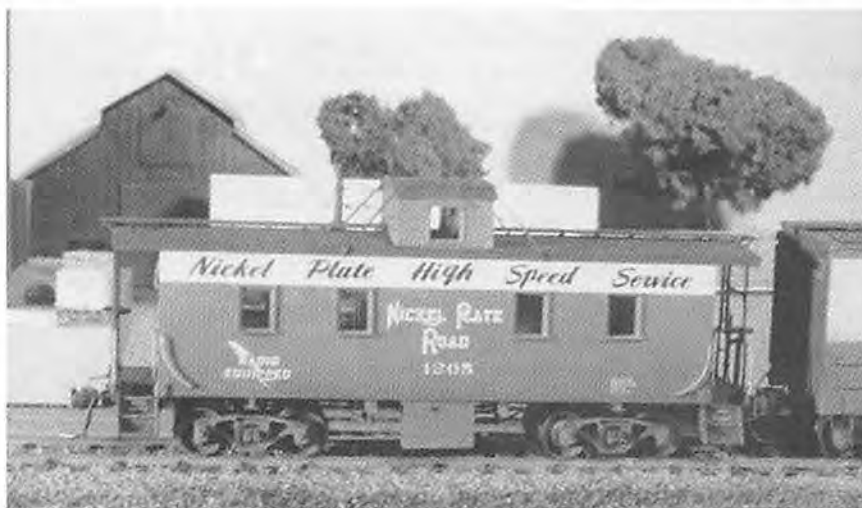
The newly filled area was then scribed to match the remainder of the cupola sides.

I found a small piece of brass in my scrap box that looked like the antenna. I installed it in a hole drilled in the center of a cupola. Lacking such a stroke of luck, you can simulate the antenna by turning down a small brass brad. The antenna looks a lot like a small finishing nail, and appears to stand about 18 inches high.



Jim Six describes how to paint the cars in his article. Be careful; I found that the lettering varies from car to car. If you have Champ decal sets HC-234 and HC-628, and Herald King decal set C-400 on hand, you can duplicate almost any Nickel Plate caboose paint scheme.

All Photos by the Author



#### Bill of Materials

Champion Decal Co.	HC-234 caboose decals
	HC-628 caboose decals
Evergreen	1 x 4 strip
	2 x 4 strip
	.010 sheet styrene
Herald King	C-400 caboose decal
Plastruct	1/4 square tube

by a battery box under one side of the car, and a small antenna located on top of the cupola. The model I selected to add the radio equipment details to is the Overland Models #1275, Nickel Plate Wood Caboose. All of the detail dimensions are estimated from the few photographs that exist, and by looking at similar boxes produced by Overland on their bay window cabooses.

*The radio equipped Nickel Plate 1000 series cabooses were an interesting variation among what was an otherwise standardized fleet. I now have the same interesting variation among my own Nickel Plate cabooses.*





# THE SANBORN MAPS

## An Excellent Reference

by Reuben Feuge

A map can become an important tool whether modeling the prototype, or researching the past. It can show the route the railroad took, or the industries it served. Maybe we're fascinated by that piece of track in the middle of the street. Typically questions arise like where did it go, who owned it, and what industries did it serve. Well, if you're looking for the answer, there are maps available to resolve these questions. The Sanborn Insurance Maps are an excellent source when researching the railroads past.

The Sanborn maps were started by D.A. Sanborn, a civil engineer, when asked to conduct a survey for the Aetna Insurance Company. Mr. Sanborn was so impressed that, in 1876, he founded the Sanborn Map and Publishing Co., LTD. In 1902, it was incorporated into its present form, the Sanborn Map Co., Inc.

These maps have become important reference material for various government agencies, private companies, and the public utilities. Since they were originally prepared for the insurance rating services, they contain information such as water lines, hydrant locations, and other information needed for the insurance rating. In addition, structures, streets, and rail lines are shown on the maps. Most of the mapping was started in the early 1890's. The company claims that any town with over 1,000 inhabitants has been mapped. Hence, these maps should have the town or city you would be interested in.

The maps were usually updated every ten years, or in some cases, sooner. You can follow the progress of a city through them. When an area experienced rapid growth, and could not be mapped soon enough, company personnel would go to the various subscribers applying "pasteovers". These would represent changes in the city due to new construction. This new construction could be a highway, waterway, or building.

Locating the Sanborn maps is not difficult, as many major libraries carry them. I found the Sanborn's covering the New Orleans area at the main branch. In addition, the university libraries had copies on file. Sets showing most other cities in Louisiana were also on file. Both libraries had bound volumes from various times, as well as complete sets on microfilm. With the microfilm sets, I could also reproduce copies of the maps I had an interest in.

The Library of Congress carries a complete set of all the Sanborn maps covering all cities in the United States. The maps are arranged by city and state, and located in the map reading room. If you can't get to the library, there is a book available to assist you in your research. It is entitled *Fire Insurance Maps in the Library of Congress: Plans of North American Cities and Towns* produced by the Sanborn Map Company, 1980, pg 773 (S/N 030-004-00018-1) \$29.00. This would be especially useful if you are studying various cities across the United States. The Sanborn Map Company can provide you with any of their maps. Their address is 629 Fifth Street, Pelham, New York, 10803. These maps are black and white prints on 17"x22"

paper. The first map sheet cost \$35.00, with additional sheets of the same city or town costing \$17.00.

The early Sanborn maps were usually presented on large sheets (18"x24"), and bound into book form. The company broke down a city into areas called volumes; the number of volumes depended on the size of the city. New York City is covered by 76 volumes, while New Orleans is covered in ten. In the front of each volume is a city map showing the area of coverage, and a map of the area covered by that particular volume. An added section is the important building section and streets by block numbers. This is a good way to determine if there are any structures of interest to you. You will note a page number to the right, indicating where it can be found in that particular volume.

If you are using a bound volume, you will have the advantage of having the structures color-coded. Unfortunately, the newer maps and microfilm are not color-coded. The different colors represented the material used in the construction of the building. I have provided a chart to assist you if you are using the older bound volumes.

Yellow = Wood

Pink = Brick or Tile

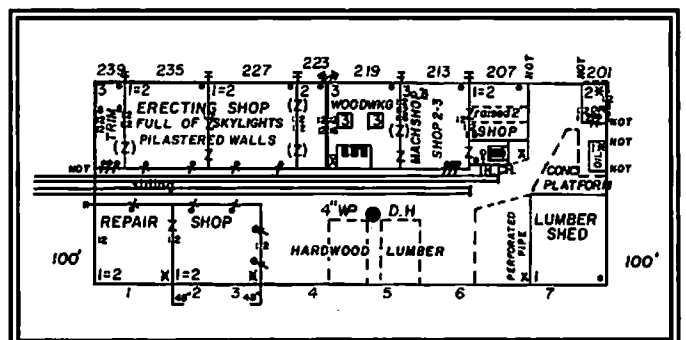
Blue = Stone, Concrete, or Concrete Block

Green = Iron

Brown = Adobe

Note: On some maps, Adobe is shown as gray. Sometimes, the material used is also listed in parentheses inside the structure.

The maps are drawn using a scale of 1"=100' for residential areas, and 1"=50' for commercial areas. Their accuracy is very good. Because of this, it's possible to determine the size of various structures, as well as window and door placement. With the map and a photograph, an accurate determination of a building size could be made. This could be especially useful if you are modeling a building that is no longer in existence, but you do have old photograph to work with. Sometimes, the details vary on the maps. On the 1890's map showing the L&N Station in New Orleans, all of the first floor rooms are shown. Yet, on a later map, I found little detail on the Texas & Pacific Station in New Orleans. Major structures usually contained



information on the type of construction; flooring, supports, roofing material, and any other useful information needed for the evaluation. Remember, these maps were developed for the rating services, so useful information for us may be lacking.

I know you'll have very little trouble reading the maps, as they're presented in a simple form. I have provided a key to

assist you in reading the maps. Small stores were listed with an "S"; this usually pertained to smaller business establishments.

The Sanborn maps are a great source for anyone searching the past to determine where the rail lines went, what type of industries they served, and the type of industries in operation during a certain period.

## KEY

**(VEND)** BRICK VENEERED BUILDING

INFORMATION IN ( ) WILL DENOTE TYPE OF CONSTRUCTION

(BR. 1st.) BRICK & FRAME BLDG.

(STONE) STONE "

(BR. LINED) BRICK LINED "

(TILE) TILE "

(IRON) IRON "

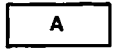
(ADOBE) ADOBE "

(CONC.) CONCRETE "

(C.B.) CONCRETE BLOCK "



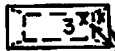
STABLE



PRIVATE GARAGE



BLDG. with FRENCH ROOF FRONT



BLDG. with MANSARD or FRENCH ROOF ALL SIDES (use roof sign for covering)

STORY HEIGHT includes the MANSARD



HOUSE ON ROOF

X SHINGLE ROOF  
\* SLATE, TILE, ASBESTOS SHINGLE. or METAL ROOF

● COMPOSITION ROOF  
● UPRIGHT STEAM BOILER

UPBL HORIZONTAL BOILER

■ HORIZONTAL BOILER

■ ENCASED IN BRICK

■ BRICK CHIMNEY

○ IRON CHIMNEY

IRCH IRON CHIMNEY on

□ BRICK BASE

○ FIRE CISTERN

○ FOUNDRY CUPOLA

○ CUPOLA

○ FOUNDRY CUPOLA

○ FOUNDRY CUPOLA

○ FOUNDRY CUPOLA

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**(H)** HOIST

**(E)** ELEVATOR

**(BE)** BRICK ELEVATOR

□ SKYLIGHT LIGHTING TOP FL.

**(2)** SKYLIGHT LIGHTING 2 FL.

**(3)** WILL INDICATE LIGHTING 3 FL.

**(WG)** SKYLIGHT OF WIRED GLASS

□ LARGE RAISED SKYLIGHT ON ROOF

**(W.T.)** WATER TANK

**(G.T.)** GASOLINE TANK

D.H. = DOUBLE  
T.H. = TRIPLE  
HYD. = SINGLE

● HYDRANT

□ DRIVE or PASSAGE WAY

DENOTE FRAME CORNICICES ALONG WALLS OF BRICK, STONE, CONC., C.B., & VENEERED BUILDINGS BY DOTTED LINES

FRAME PARTITIONS IN BRICK, ETC BUILDINGS BY DOTTED LINES

SHOW THICKNESS OF WALLS OF BUILDINGS IN INCHES PLACING FIGURES AS INDICATED, STARTING WITH TOP STORY.

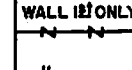
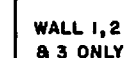
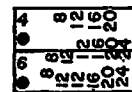
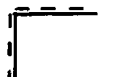
DESIGNATION FOR WALL WHICH RISES TO FLOOR OF 2nd STORY ONLY

WALL WHICH IS SEVERAL STORIES, BUT WHICH DOES NOT RISE TO ROOF

WALL 1st ONLY WITH OPENINGS (SYMBOL USED FOR OPENINGS = N)

PIPE, BELT, OR SHAFT HOLE OPENINGS

WALL WITH NO OPENINGS



— FIREWALL 6" ABOVE ROOF

— FIREWALL 18" ABOVE ROOF

— FIREWALL 30" ABOVE ROOF (EACH MARK = 6" ON FIREWALL)

— FIREWALL 48" ABOVE ROOF

WINDOW 2nd

WINDOW 1st

WINDOWS 1st & 3rd

WINDOWS 1st & 3rd

LOOKING TOWARD THE WALL FROM THE OUTSIDE AND COUNTING FROM LEFT TO RIGHT, THE STEMS REPRESENT THE STORIES AND THE DOTS THE OPENINGS.

IRON OR TIN CLAD SHUTTER 1st

IRON OR TIN CLAD SHUTTER 2nd

WINDOWS 1st, 2nd, 3rd IRON OR TIN CLAD SHUTTERS 1st & 2nd

WINDOW 3rd

WINDOWS 1st & 2nd

WINDOWS 2nd & 4th

WINDOWS 1st thru 5th

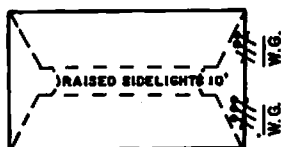
WINDOWS 1st & 3rd

IR. OR TIN SHUTTER 3rd

IR. OR TIN CLAD SHUTTERS 1st thru 5th

WINDOWS 2nd & 4th

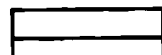
IR. OR TIN CLAD SHUTTER 2nd



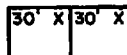
WINDOWS 2nd & 3rd WITH WIRED GLASS

WINDOWS 1st, 2nd & 3rd WITH WIRED GLASS

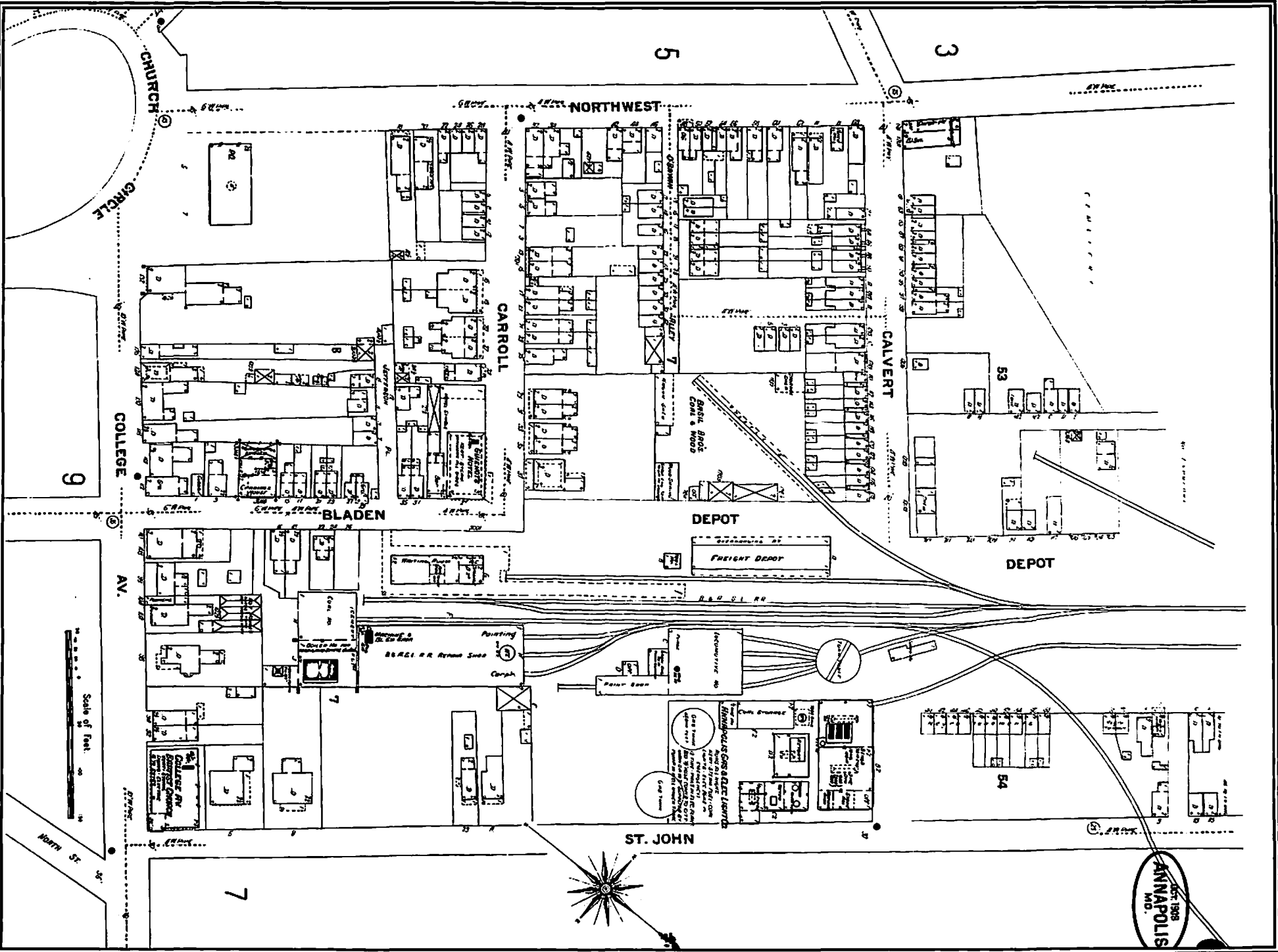
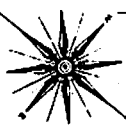
FOUNDRY OR LANTERN ROOF



GREEN HOUSES



ICE HOUSES  
HEIGHT TO EAVES IN FEET



3

5

9

7

CHURCH  
CIRCLE

COLLEGE  
AV.

NORTHWEST

CARROLL

BLADEN

DEPOT

ST. JOHN

CALVERT

DEPOT

53

54

Scale of feet.



# UTLX TANK CAR



## Tichy Model Modifications

by C. Keith Jordan

The majority of tank cars were built by two builders: American Car and Foundry, and General American Transportation. Each builder settled on a particular underframe design that became a signature for them, and makes it easier (to a degree) for historians and modelers to identify them.

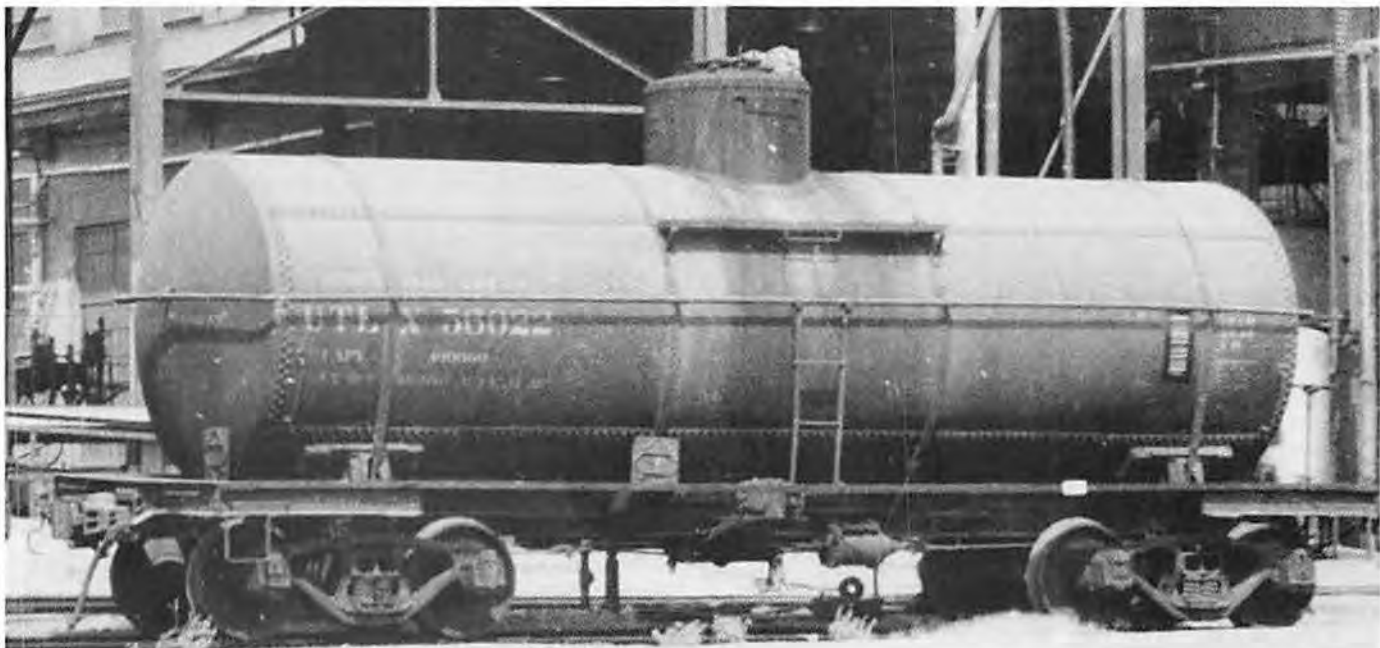
The AC&F design is the one the Tichy tank car resembles, and thus, is a prototype to use for any modifications. The Tichy car, based on a USRA design, nonetheless, has some of the hallmarks of the ACF type 21 underframe, and can be kitbashed with relative ease. While my choice of prototype is a Union Tank car, other photographs show different oil companies tank cars, and all are ACF type 21 underframe cars.

The type 21 underframe was used under tank cars built in

the 1920's, and can be distinguished by channel end and side sills (connecting the bolsters and end sills) which face outward; that is the "C" to the outside. The crossbearers, which supported the runningboards, were usually C section steel plate rather than bolted angle steel bracing.

Dimensionally, the ACF type 21 underframe differs from the model. The model underframe is about three feet longer, with two feet more between trucks, and about six additional inches in the truck to end sill length. The tank also differs. The prototype is three feet nine inches shorter, and seven inches larger in diameter. These variations in dimensions make the model out of proportion to the ACF prototype, but not objectionably so. If I were to make any major changes (I didn't), it would be to make the tank shorter, giving it an overall "chunkier" look.

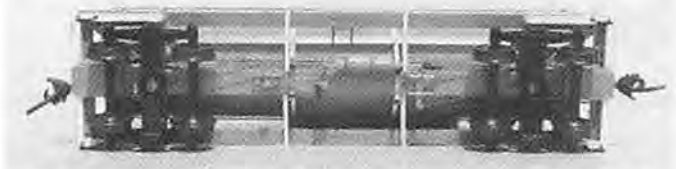
The Tichy underframe was assembled without change; the



*UTLX 56022 was built by AC&F in 1923, and was still in service in Los Angeles in the 1960s. Richard Hendrickson photo.*



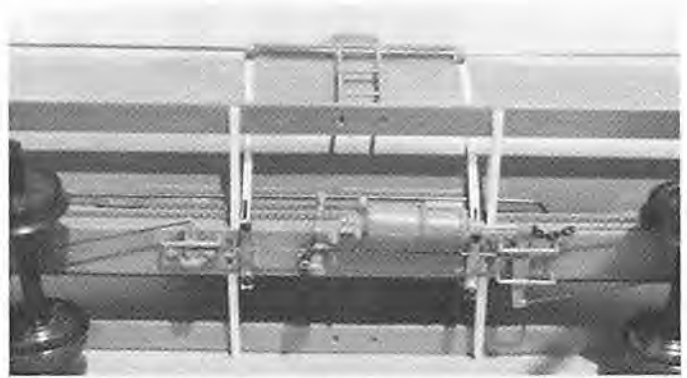
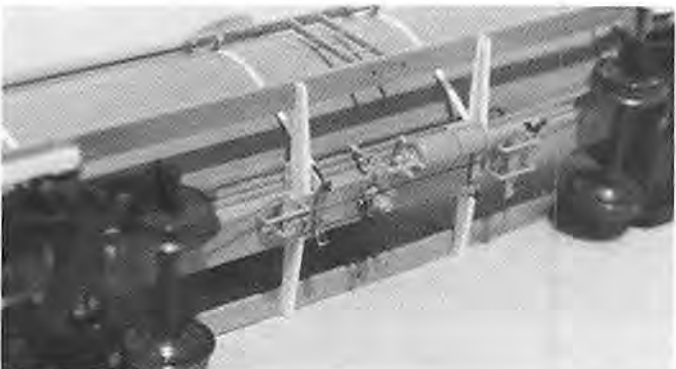
center sill, bolsters, and tank saddles left intact. The kit's end and sides are not used. Carve away the raised ridge on the underside of the outboard wood walks (used to position the side sills), then trim the bolsters back flush. Cement the side sills opposite and upside down from their original position. The holes for the grabirons should be nearest the end and *below* the nbw castings. The side sill should also be inset, and not flush with the wood walk.



Two styrene four by eight pieces were cemented on either side of the coupler pocket to create the end sill. They should be flush with the outside face of the side sill. A one by eight is cemented to the sub-piece, however it is longer, and is flush with the outer edges of the side wood walks, i.e. the entire width of the car. A one by two is added to the top of the end sill to represent the top flange, and one by sixes used to create bottom flanges. These should meet at the corners. Small pieces of one by six were cemented on the bottom flanges at the bolsters for jacking pads. You will need to build up the coupler striking face with styrene, various sizes, and add sill steps (Detail Associates' no. 6414) and poling pockets (Westerfield no. 2139 sliced in half). Finish the sills with cut levers and grabirons. I used the kit supplied ones because they're as fine as brass.

The crossbearers were made from .010x.100, sliced lengthwise from nine inches (scale) at the inboard edge to about three inches at the outboard edge. Flanges were added with .010x.040, and the assemblies were then notched to fit the center sill, and cemented in place at the same location as the kit's crossbearers.

The KC brake system was installed following the instructions, with a slack chain added between the cylinder clevis and the brake rod leading to the brake staff. Since the car



underframe is open, I wound brake chain around the brake staff, but it interfered with the truck movement, so it was removed. My freight cars are made to travel. I added a chain to the cap of the bottom outlet with eyebolts.

The tank and dome fittings were assembled, and the holes for the side handrails filled with .025 styrene rod shaved flush. The tank was then cemented to the tank saddles.

The ACF type 21 drawings show a different tank body strap anchoring method than that supplied with the kit. To replicate this, use .015x.042 flat brass stock. Cut a piece about three scale feet long, then bend the outer edges up about 30 degrees. The center portion should be about the same width as the bottom flange of the center sill. Drill holes to accommodate large Grandt Line nut-bolt-washer castings. I'm sorry, but I can't remember which ones I used! Leave about a scale foot of the rod, then insert them from the bottom, and cement to the brass stock. The assembly should then be cemented to the underside of the center sill in the indicated locations. The nbw rods should point up and out.



The four tank straps were cut from .005 styrene sheet, the length as required in the kit, and a scale three inches wide. ACC one end of a strap to the anchor rod, then work your way over the top of the tank, securing with liquid cement applied with a tiny brush. Too much cement will melt the strap. When you reach the other side, trim the strap to a length that will attach to the anchor rod. Attach with ACC. The two straps at the bolster can be attached with liquid cement only.

I eschewed the kit's bolster strap anchors, favoring some trimmed strips of styrene that looked more like the prototype. The handrails were then assembled, with the side holders threaded on to attach from the top down. The end rails were cemented in place, and the side ladders also attached. I then marked drilling holes, *on the straps*, approximately 16 scale inches from the bottom of the top tank course. The holes were aligned with a ruler, drilled, and the handrail supports cemented to the straps. Photos show the handrails attached in this manner most often.

The final details, such as the side dome walks, tank



The two Magnolia Petroleum tank cars in front of the Santa Fe helpers are ACF type 21 underframes, with nominal 10,000 gallon tanks. These would make excellent prototypes to kitbash. They differ between themselves, the rear car having AB brakes, but an older style bar-type cut lever and shorter dome. The second car from the rear has KD brakes, a taller dome, and no side ladder or dome platforms. Taken at Alray, California on September 3, 1947. Donald Duke photo.

grabirons, and the brake wheel were added. The car was then prepped for painting.

For the past ten years, I've used Accu-Colors almost exclusively for body colors. The paint is easy to work with (though I've heard others complain), is extremely thin, and dries to a hard, glossy finish. I like their colors, and I don't get too hung up on using a color labeled for a particular road on something else, like Maine Central Harvest Yellow for Santa Fe Refrigerator Yellow-Orange! Their Weathered Black is a really

### Model Photos by the Author



nice color. It is somewhat warm, but doesn't have as much red as Floquil's. The entire tank car was airbrushed with this color, and allowed to dry 24 hours. This was followed by application of Champ's UTLX decals, and a clear flat overspray. I never got to the weathering.

Herein lies a tale of woe. This car has been completed for about 10 months, unpainted. I never intended for it to be the subject of an article, but decided later that it should. So recently, I began to think about finishing and using it for *Mainline Modeler*. After the car had been sprayed black, I removed it from the paint stand for decaling and weathering. Guess what. It took a four foot trip to a concrete floor and crash! One entire side of the underframe was demolished and the handrails destroyed. Sigh. I looked it over, and decided I could decal one side, and photograph it as a finished car. That's why you only see the one side in the final photographs, and the hasty decal job (read: not so good).

Provided yours doesn't take a dive, the car is a not too difficult kitbash of a very good kit. I have several underframes such as this one ready for tanks, and I'm thinking about attaching bungee cords to them, for safety's sake.



# NEW HAVEN, MISSOURI



## by Joe Collias

It is difficult to equal Thurmond, West Virginia on the Chesapeake & Ohio (CSX) Railroad for the amount of railroad facilities and public buildings crammed into a small space between a river's edge and its adjacent towering bluffs. New Haven, Missouri, 63 miles west of St. Louis on Missouri Pacific's, now Union Pacific's Eastern division, may not approach Thurmond's compactness, but it does have many of the same ingredients necessary for modeling consideration.

The railroad's double track mainline adheres close to the edge of the river. In this case, the wide Missouri, while vertical limestone bluffs tower above both. New Haven is indeed a wide spot on the railroad due to a slight bend in the river, allowing just enough room for the commercial part of town and its main

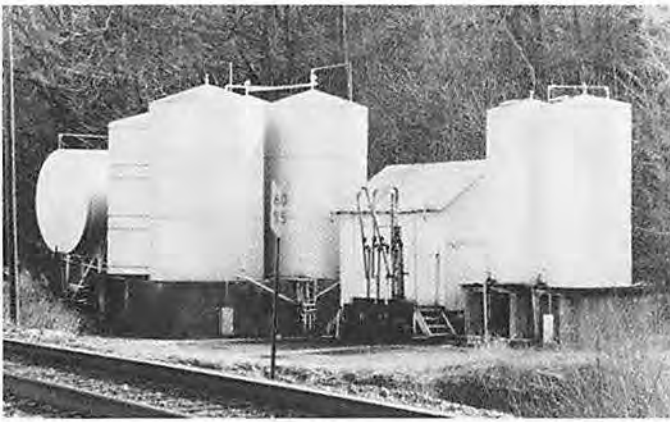


*Prior to the wholesale destruction of railroad depots, the Missouri Pacific was represented in New Haven by its standard design frame station building. Originally painted buff yellow with brown trim, it suffered the fate of all such buildings when covered with white asbestos shingles in the 1950's. New Haven was a stop for passengers to or from St. Louis for all but the Missouri River Eagle.*

*With the muddy Missouri River practically at their back door, the commercial buildings facing the railroad range from turn-of-the-century to art deco. Commercial kits exist, in HO at least, to virtually duplicate the scene.*



*An overall view from atop the bluff behind the station in 1968 shows the heavy duty mainline trackage, the grain elevator, and the wide Missouri in the background.*



*The bulk oil facility is largely unchanged over the years, except for the unfortunate removal of its rail siding.*

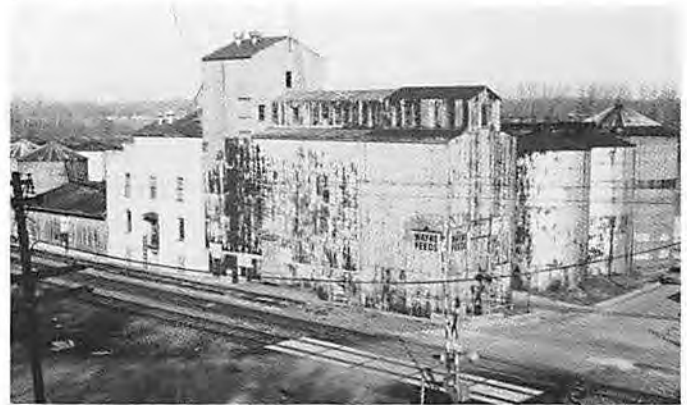
street to be sandwiched between the river and the railroad. Besides a variety of buildings facing the rails, room exists for a large grain elevator, its storage bins, and a milling operation. A lumber yard and bulk oil facility were also on-line railroad customers at one time. Barely enough room remained on the opposite side of the tracks to sandwich in the railroad station and a team track.

To anyone modeling a river hugging rail line, a wide spot somewhat similar to New Haven would be an interesting aspect both in appearance and operation. Additional small industries could be included that would involve lengthy local switching moves.

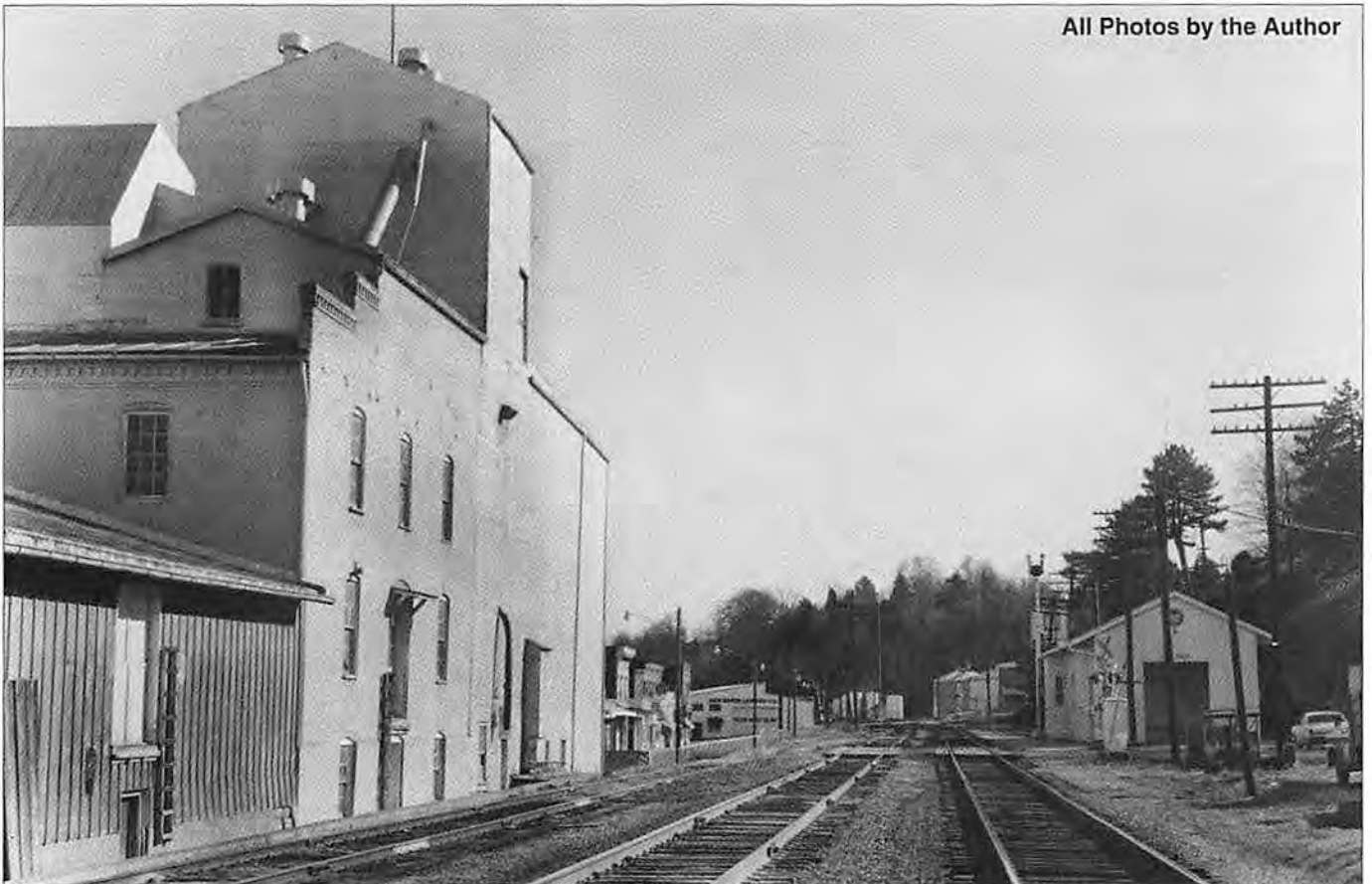
Two time elements are represented by the accompanying photographs; 1968 when the rails were still that of the Missouri Pacific, and the grain elevator was a thriving business, and 1992 with the Union Pacific in control, and the grain elevator long abandoned. The later photographs are easily identified by the now rusty panels of the structure.



*Every conceivable style of small town architecture is evident in the one block of New Haven's commercial district facing MoPac rails in 1968.*



*A high level view of the combined feed mill, flour mill, and grain elevator complex reveals numerous methods of construction used in the main buildings and the circular grain bins. The main structures would be an eye catcher on either the river (shelf) or the bluff (wall) side of a shelf type layout.*



**All Photos by the Author**



The house track ran behind the depot at the base of the adjacent bluff. The covered area, with large door openings at the near end, was added to accommodate the once frequent shipments of boxed felt hats awaiting shipment on St. Louis bound passenger schedules. Manufactured by a local firm, still in business, they required protection from the elements on something other than an open baggage cart.



No passengers from the big city today. Pacific No. 6606, with the Scenic Limited in tow, speeds without pause through New Haven on a cold February day in 1939. In better weather, the balcony on the white fronted building to the left would have been a great place from which to watch this action. The date on its vertical cornice reads 1894. It is unchanged as of this writing.



The railroad station is long gone, and the grain elevator streaked with rust, but the town is essentially the same in 1992 as in 1968. The welded rails make a sweeping reverse curve through town, and back under a tree covered bluff to continue following the river west.



# TANK CARS - PART 2



## by John Ryczkowski

In my first tank car article, I presented a brief overview of prototype tank cars. In this article, we'll take a closer look at the prototype non-pressure group of tank cars, and available HO models. The non-pressure corrosive/acid type or safety vent equipped cars will be covered in another article.

The non-pressure group of tank cars comprise 75% of the 210,000 plus cars in use today. In the industry, these cars are referred to as "General Service" due to the wide range of commodities transported in them. Capacities can range from 4,000 to 45,000 gallons, with 20,000 gallons the most common. The larger capacity cars (23,000 and 29,000 gal.) generally transport lighter density products. Corrosive/acids are high density materials, and usually carried in tank cars at or below 20,000 gallons. The largest 45,000 gallon cars have four trucks, and a total weight capacity of 394,500 lbs. on the rails. DOT has limited current tank car construction to 34,500 gallons or 263,000 lbs. on the rail. Cars over this weight must have a filed exception, and are special movements on the railroads.

*CELX 10419 in Celtrans, Inc., series #10400-10438, is one of the largest capacity cars in service, a 34,650 gallon aluminum tank/steel underframe car built in 1968 by GATX. Equipped with two 150 ton 3 axle trucks, the rail load limit is 394,500 lbs. In spec. DOT 111 A 60 AL, the cars are placarded in Class 8, Corrosives, UN ID No. 1715, Acetic Anhydride.*

*ACFX 12824, series #12767-12893 (59 cars), is the prototype 20,000 gallon version of the Athearn 26,000 gallon model. This car, built in 1960, has steel underframe, full walkaround walkway, and converted roller bearing trucks. This photo taken on the WP/UP at Wendover, Nevada in 1990, was still lettered with spec. ICC 111 A 100 W-1.*

Identification features on non-pressure cars include the exposed fittings on top of the cars, the unloading valves, and the heating pipes on the bottom. This group of tank cars has a shell test pressure up to 100 psi, and is built to tank specifications as defined by the DOT or AAR class.

All tank cars are built to shippers needs following specifications set in the Manual of Standards and Recommended Practices, Specifications for Tank Cars, Section C-Part III by the Association of America Railroads (AAR), and Department of Transportation regulations (DOT). Tank car builders must seek approval from the AAR tank car committee before constructing a new tank car or making any alterations and/or conversions. Here is an example of a DOT specification:

DOT 111 A 60 W1

Steel fusion welded tank without dome.





*UTLX 70388 is the prototype for Walthers' new 54' 23,000 gallon insulated tank car. Union Tank Car Co. has 410 cars in series #70000-70999, DOT spec. DOT 111 A 100 W1. 23,000 gallon cars are designed for 8.2 lbs. per gallon commodities, and is the third most numerous car in the total tank car fleet of over 210,000 cars.*

Non-insulated or insulated.

2% minimum outage.

Gauging device.

Top and bottom shelf couplers.

Safety valve (35psi) or safety vent (60psi).

Typical commodities transported in this particular DOT specification cars are gasoline, alcohol, caustic soda, and fuel oil. The specifications are a guide line. Some call for specific fittings or prohibit fittings, and exemptions are given. Exemptions must be identified by a stencil placed above the commodity name or tank specification number. The specifications for the general arrangement of fittings on non-pressure cars are mandated by the product transported, and loading/unloading requirements. Several types of fittings are seen on non-pressure cars. Their configuration can vary greatly from car to car. Each tank car builder has designed different fittings, manways, safety valves, and top unloading arrangements for their tank car that differ in shape and size, but all fit the needs of the products shipped. Tank cars are leased or owned mostly by non-railroad companies; therefore, there is no standard tank car.

#### **Athearn 62' Tank Car**

The oldest model available is Athearn's 62' tank car, a steel underframe non-pressure car. This is an ACF (American Car and Foundry) car designed in the early sixties, and still seen today. The underframe is the main supporting member to which the tank, bolsters, platforms, and end sills are attached. The center steel underframe design is still built today for alloy or aluminum tanks that lack structural strength. Modern tank cars utilize the tank shell as the primary supporting member to reduce weight. This is the frameless Van Dyke design. The Van Dyke design dates back to the pre-WWI days, and appeared again in the late fifties, and today is state of the art.

The 62' Athearn car has 51' 6" truck centers for a 26,000 gallon capacity; the 20,000 gallon capacity version tank car would have 42' 8" truck centers. The model, like the prototype, can change gallonage by adding or subtracting tank length. Athearn's 105" outside diameter tank shell is the typical size for a non-insulated tank car. With some simple kitbashing, this body shell can be converted into many different designs by cutting off length, changing to the frameless stub sill design, etc.

*GATX 3614, in series #3077-3615, (only ten cars total), is a 10,345 gallon uninsulated car in spec. DOT 111 A 60 W1. This car is the prototype for MDC's shorty tank car; note the friction bearing trucks.*





*RUSX 244, an ACF built 20,000 gallon insulated car, is a very close match for the MDC 50' model. The bolster saddles angle in, where as the MDC's are straight up and down following the GATX/Trinity design. US Rail Services, Inc. has 130 of these cars, series #201-249, with interior heater coils.*

#### **Model Die Casting Tank Cars**

Model Die Casting's tank car body follows the GATX (General American Transportation Corporation/Trinity) design, and is in reality an insulated tank car with a 111" outside diameter. Insulated tank car typically have a 4" outer liner of insulating material surrounding the body shell, with a 1/4" or 1/8" light weight outer covering. The two MDC tank cars are sold out of the box as "Shorty" and 50' tank cars. The "Shorty" is a insulated 10,000 gallon capacity car with 18' 3" truck centers. The non-insulated version would have a tank diameter of 102" mounted on the same truck centers. The prototype tank car, with a capacity of 8,000 gallons, would have an 87" inside diameter tank shell with (longer) 20' 6" truck centers. Due to track and train dynamics, 18' is the shortest truck centers that can safely run. Smaller tank diameters allow the car body to be longer. The 50' car has 37' truck centers, and a 111" diameter tank shell. Prototype GATX/Trinity cars that have the 37' 8" truck centers have a 108" shell diameter for a 20,000 gallon capacity. A car with a 110" shell diameter in 20,000 capacity will

*NATX 71275 is an insulated 20,000 gallon slope bottom car. North American built cars have a larger bolster saddle as a design feature when compared to other builders. Note the size of the outer lightweight shielding covering the saddles. The slope bottom is another unloading design feature that compares to the broken back unloading design used by many builders. This car has the center mounted brake system.*



have 35' 3" truck centers. Both MDC cars have a frameless stub sill design with non-insulated bolster saddle plates, and tank shell ends with radii utilized in the non-insulated design.

Joe Delia's A-Line, a division of Proto Power West, P.O. Box 7916 La Verne, CA 91750, has just released 3 types of ends to convert these MDC shells correctly into the insulated designs. One of the ends is the very distinctive ACF design with the outer trim. The other two are shallow radius curves used for insulated cars of GATX and other designs. The bolster saddle plates, or saddles on the tank cars, are steel plates welded to the tank shell with reinforcing plates. These come in various designs depending on the builder and shell configuration. The saddles on non-insulated cars appear different from insulated tank cars because of the outer shell applied to these cars. The outer shell covers the saddle, and only a part of the design can be seen. The box like framing around the saddle, made up of the outer shell, is a spotting feature for insulated cars.

Stub sill tank cars come with three types of brake systems. The steel underframe ACF tank car has the standard freight car





*NATX 29205, a North American built car, leased through GE Railcar Services, is a 29,000 gallon uninsulated spec. DOT 111 A 100 W1. This large capacity car is very typical of the design used for alcohol products. Placarded UN No. 1986 in Class 3 flammable liquids. This car shown in Las Vegas, Nevada is loaded with denatured alcohol. Note the two large flow (10,000 cu. ft. per min.) safety relief valves on each side of the service platform. Jerry L Holton photo.*

brake rigging mounted off the center frame member. The stub sill cars do not have this underframe member.

The most common stub sill system has the brake cylinder mounted to a steel plate welded to the tank shell, with the triple valve and reservoir mounted by the end walkway on the stub sill framing. This is the end mounted brake system with brake rigging. The center mounted system has the air brake components mounted in the center of the car with the brake rigging. Some center mounted systems have a channel iron mounted crossways welded to the bottom of the tank shell. The triple valve, reservoir, and cylinder are bolted to the channel iron, (as seen on NATX 71275).

The third air brake system is an end mounted system with integral brake beams and brake cylinders; no brake rigging. This system uses truck mounted brake cylinders, and eliminates all the associated brake linkage and rigging between the trucks. The system is like that used on highway trucks. Air brake pods are mounted in between the wheels.

#### **Walther Tank Cars**

*PTLX 223619 is leased by Irel Rail Corporation, in series #223299-223978, a group of 641 cars. The design feature of the insulated 23,000 gallon car is the end mounted brake system with integral brake beams, no brake rigging mounted on the underside, and GATX/Trinity vertical bolster saddles. A spotting feature for insulated tank cars, is the shielding at the top of the saddle, and the flatter radius end.*

Walthers has four new HO tank car models. The 30' "Funnel-Flow" tank car is a UTLX (Union Tank Car) 10,000 gallon capacity insulated Funnel-Flow design car. The 40' "Funnel-Flow" is a UTLX 16,000 gallon insulated UTLX Funnel-Flow design car. This car has been built to transport 11.9 lbs. per gallon of product. The 23,000 gallon 54' tank car is designed for 8.2 lbs. per gallon. The larger the cars capacity, the lighter the per gallon weight has to be to avoid exceeding structural limits. Both models have a 118" outside diameter, and the modeler is fortunate that Walthers has given these two cars a different UTLX design tank end. The 30' car comes with a convex design, and the 40'er has a shallow radius design, both used on UTLX insulated tank cars.

The Funnel-Flow, a trade name for Union Tank Car, is a design used by other builders with different styles and names, and it allows more complete unloading of a tank car. The car is shaped somewhat like a funnel, with the center (both top and bottom) lower than the ends. This gives the car a sagging or "broken back" appearance. Some builders lower the bottom





*The main spotting feature of the non-pressure group is the exposed fittings on the tops. From the top of this photo is a low flow volume (3,000 cu. ft. per min.) safety relief valve, a bolted cover manway, a stuffing box, (a top operated bottom valve), and the covered top unloading arrangement.*

shell to create a slope for unloading. This feature is important when the products carried are syrup's and other types of high viscosity fluids.

The newest entry is a 54' non-pressure car of the UTLX "Funnel-Flow" design; this is a 23,000 gallon capacity car. Walthers makes a pressure tank car in the UTLX design, it is 33,400 gallon straight barrel tank car with 54' 3" truck centers. This shell can be shortened to make 20,000 and 23,000 gallon non-pressure straight barrel insulated tank cars with 35' 10" and 41' 10" truck centers respectively. (See photo of UTLX 78220). UTLX larger capacity 29,000 gallon insulated tank cars can be modeled by using this body shell.

#### **Tank Car Fittings**

One of the best spotting features of non-pressure tank cars is the external fittings on the top of the car along with bottom unloading features. Let's take a look at the availability of fittings included in the current tank car kits.

Athearn's 62' tank car has an excellent assortment of ACF style fittings. The kit supplies a safety valve which is a common large volume flow design seen on other builders cars, an ACF style stuffing box, (a top operated bottom unloading valve) but no corresponding bottom unloading valve, an ACF shaped top unloading arrangement cover, and a 16" diameter, 1' high ACF design manway with cover.

MDC has only two styles of manways included in their kits.

*This 20,000 gallon insulated car has a straight shell body with a slight sloped bottom, and can be modeled by using Walthers' pressure tank car shell cut down. Walthers' kits come with roller bearing 100 ton trucks that match the trucks on this car, and others built by Union Tank Car Co. This car, in series #71051-79289, composed of 998 randomly numbered cars were all built in spec. DOT 111 A 60 W1. This car is transporting printing clay in a flammable solvent used in the manufacturing of printing ink.*

The other fittings are cast onto the body, and need to be improved. One manway is a 16" high bolted style, and the other is a 2' diameter short manway with a cover plate that has GATX's triangle shaped safety vent. This style of top plate and vent is used on phosphoric acid and food stuff tank cars. This cover plate can have the vent filed flat with the top for a non-vented manway cover plate.

Walthers has included a very good selection of fittings for the non-pressure tank car. Following their part numbering system, as shown on the parts list, let's see what they are.

- 24. A round style cover for a top unloading arrangement.
- 25. A short rounded style of cover for a top unloading arrangement.
- 26. Looks like a bolted safety vent using a rupture disk, but can also be internal spring style of safety valve.
- 27. A stuffing box, but without the corresponding bottom unloading valve.
- 29. An ACF and UTLX style of oval cover for top fitting arrangement.
- 31 and 32 are tall and short manways with bolted covers.
- 33. A low volume flow style of safety valve.

15, 22, and 21 are bottom outlet features, 15 can be a bottom valve shield saddle required on some cars for bottom discontinuity protection.

By using a combination of these fittings included in the currently available kits, some good examples of non-pressure tank cars can be modeled. Since there is such a great variation in the arrangement and use of the fittings from tank car to tank car, a photo of a particular car should be used. The modeler, like the prototype builder, can produce many of the variations seen in today's trains by changing ends, length, and fittings.

As an aid to identifying the types and classes of tank cars, I have produced "A Pocket Guide To Identifying Tank Cars". This guide is intended for the Haz-Mat emergency first responder to help visually group tank cars by appearance, fittings, and marking. It is also handy for the railfan and tank car modeler, and can be ordered from me for \$1.00 each, plus an SASE. Send to: John Ryczkowski 13305 Mahogany Dr., Reno, NV 89511.

In my next article, we'll build four non-pressure model tank cars, predominantly designed for flammable liquids, the lighter density commodities shipped in larger capacity tank cars.

#### **All Photos by the Author Unless Noted**



# World War II Yards

San Bernardino, CA March 1943, LC USW3 22204D



## War Information Photos

by C. Keith Jordan

We're fortunate that Jack Delano, working for the Office of War Information, found it easy to get color film during the War for his photography. This spectacular shot is of the Chicago and North Western Lines' Proviso Yard in May 1943. Take a moment and study the cars; mostly box cars, with a few reefers, and a string of gons thrown in for good measure. This picture begs the question, "What is boxcar red?" Visible are, perhaps, 50 shades of that elusive color, with some of the foreground cars sporting two different shades on the sides and ends. Take a look at the freshly painted cars versus those that have faded. While CNW cars predominate, over a dozen other roads can be seen. The third occupied track from the front even sports a box car from Southern Pacific's electric subsidiary, the Pacific Electric of Los Angeles. Of particular interest are the cars on the second track with the large "X" painted on the door. These were officially known as "trap" cars, but the railroaders used a more descriptive term, "dolly" cars because they had, of course, dollies inside. These cars were used for service to and from the Merchandise Mart in Chicago. They were low height cars, able to go into areas where locomotives couldn't go. Often switching was done with a handle of flats to reach a given spot. All can be seen in the cover photo, LC USW3 27701 D. In WWII, the United States' railroad system was stretched far beyond peacetime capabilities. Instead of being choked, the railroads responded in a manner unparalleled, even today. In this photo gallery, we'll see yards from all over the U.S., providing a visual sampling of the vast freight car fleets in use then. Every imaginable car was pressed into service at the time, and the

sight of the most modern steel cars next to venerable truss rod oldtimers was not to be seen again.

Using the information inherent in these photos, we can make some interesting observations. It wasn't until 1937 that the effects of the depression were finally disappearing. The railroads began to make equipment purchases to supplement the rebuilding that occurred in the beginning of the decade. Thus, the odd juxtaposition of virtually obsolete equipment, coupled to then state-of-the-art, became commonplace from 1938 to about 1948. Freight cars with truss rod underframes were to be outlawed in interchange in 1941, but many hung on until the end, or beginning of the end; of the War. For the freight car enthusiast, this represents a bonanza in equipment variety, and a visual treat.

Another interesting observation is the make-up of car types viz-a-viz the yard in which they were photographed. By looking at the car types, one can make some educated guesses about the location of the yard. Overwhelming numbers of coal ladened hoppers suggest yards in the shadows of Appalachia, but can also mean the yard at Green River, Wyoming. Tank cars clogging a yard can be easily seen in Hoboken or Los Angeles, just as reefers would in either San Bernardino or Pittsburgh.

By putting these photos in context, one can also understand the situation at hand. The dates fall basically into three categories; 1940, 1941, or 1943. While the yards are full in 1940, the photographer perhaps chose the day or time of day when the yard would be full. Certainly traffic in that year was busier than it had been in the previous decade, but not quite what it would be in 1943. Even in 1941, with all the signs pointing towards impending world war, traffic levels for 1942 were *twice* that of the pre-war year. Be careful though, because the

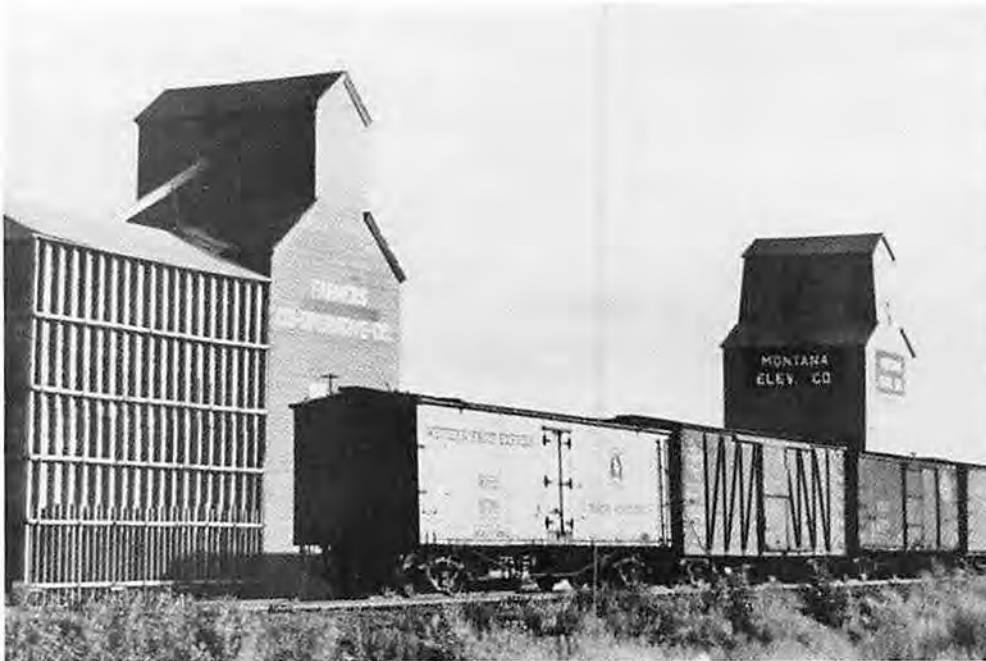




*Five months before Pearl Harbor, twenty-six year old John Vachon aimed his camera at the Milwaukee, Wisconsin yards. In return, he captured the image of a railroad hard at work. Besides the freight cars, of particular note is the fact that this yard is built on a curve, two of them, in opposite directions! How many modelers would have the nerve and real estate, to model such a scene? The cut of hoppers, of varying heights and capacity, are filled overflowing with coal. Steel plates, closely resembling the weights supplied with some kits, lay at the bottom of a couple of gons. The string of house cars in the left center contain cars with wood roofs. Steel clad roofs were introduced widely in the 'teens. LC USF34 63208 D.*

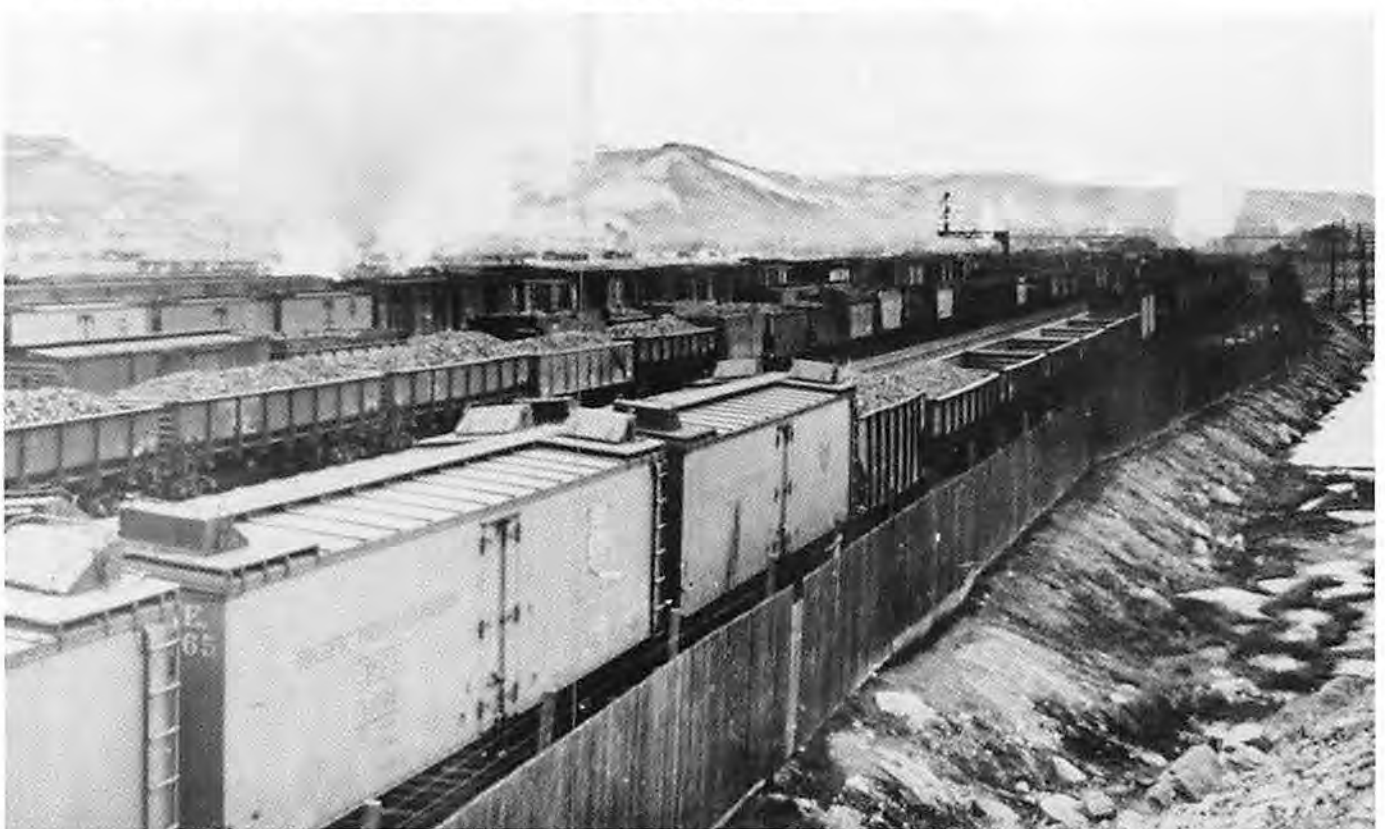


*The produce yard at Pittsburgh, Pennsylvania is literally choked with reefers in June of 1941. Most of these reefers have been emptied of their contents (as evidenced by the open hatch covers) at the nearby PRR fruit auction house, and await a return trip home. Most reefers are still wood sheathed, some even wood framed. LC USF34 62921 D.*



*Though not a yard photo per se, this shot by Marion Post Wolcott has some things to say to researchers and modelers. If we did not see the Montana Elevator Co. sign, would we know this was Montana by the cars or elevator architecture? The Great Northern and Milwaukee Road are the only cars on home turf; the Western Fruit Express is part of the Hill lines, but what's it doing on a grain siding? Also, note the WFEX reefer shares lineage with that of Fruit Growers Express (FGEX); the car is similar to its eastern cousins. The MILW car is a USRA single sheathed type, as is the storage bin on the elevator on the left! And why is the New York Central car here on an August day in 1941, rather than Buffalo? LC USF34 58170 D.*

**All Photos from the FSA/OWI Collection of Library of Congress unless noted**



*Green River, Wyoming in March of 1940, as recorded by Arthur Rothstein. This is UP coal territory, but note the PFE reefers which were R-30-5s in the 7101-10121 series built by Pullman in 1909-11. The January 1940 issue of the Official Railway Equipment Register listed only 72 left in service. LC USF34 29648 D.*

somewhat empty yard at San Bernardino opening photo, was taken in March of 1943, while the photo of a clogged Green River Yard on the UP was taken in March of 1940. So much for interpretation!

Part of the fun of these photos is the variety of clues for those searching them. Often, an intriguing car subject will be at the back or off to the side, with the crucial number or identifying feature in either outside edge of the photograph. However frustrating, the reward of that long lost car being the subject of the lens is worth it.

As historical modelers, we're grateful that in time of war, there was the foresight to photograph the effort of the nation's railroads. FSA/OSI photographers such as Jack Delano, Dorothea Lange, John Vachon, Arthur Rothstein, Al Palmer, and Marion Post Wolcott were not railfans; they were there to record what they saw. In many cases, as part of Roy Stryker's vision for the work, they were told what to photograph. The result is a treasure trove of images for us to peruse.



*The upper photo was taken in Minneapolis, in 1945, while the lower one was taken Proviso Yard in Chicago, about 1950. Since both of these were taken on the C&NW the change from wooden to steel cars is apparent. Modelers who have chosen a specific era will find this information invaluable, especially if 1940 to 1950 is their chosen time. Both photos, Joseph Follmar collection*







The two photos on this page were taken by Al Palmer in August 1942 at the Chattanooga, Tennessee yard of the Nashville, Chattanooga and St. Louis. In the top photo, 13 tracks are visible; all but one (quite possibly the only one) are filled with a variety of freight cars. The numerous tank cars remind us that coastwise shipping of petroleum products was dangerous, for the seas were prowled by German submarines. In the early days of the war, a fuel shortage was feared, so an overland pipeline was established. It can be said that not one tank car was ever sunk by a U-boat! LC USW3 54501 C.

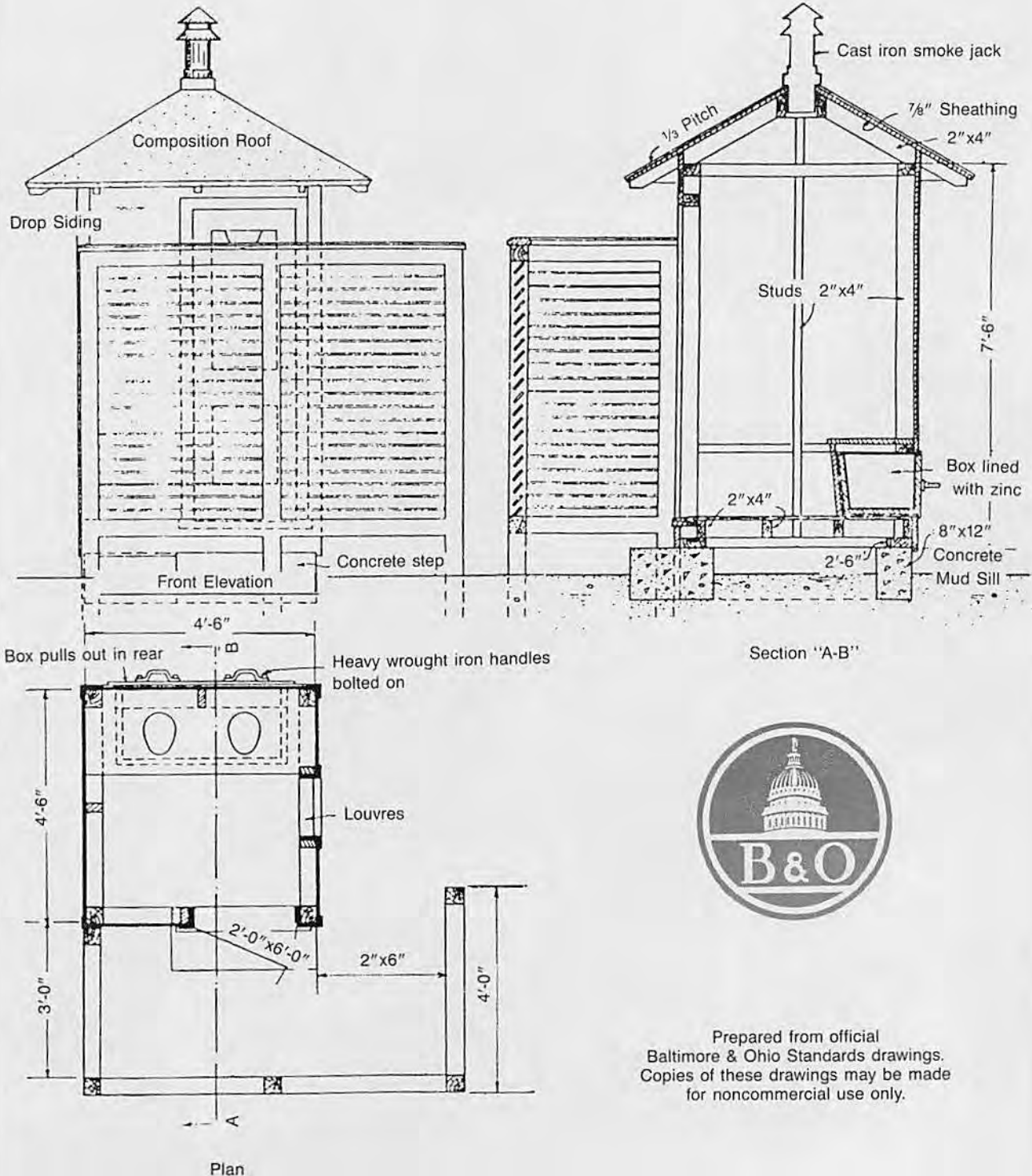


Photographer Palmer moved down the viaduct to record a different view of the yard. Of interest is the geographic diversity of the cars shown: Rock Island, Union Pacific, Grand Trunk, Pennsylvania, Baltimore & Ohio, Burlington, Milwaukee, Chesapeake & Ohio, General American, the Reading, and more. Also of interest are the two box cars with metal runningboards, an uncommon feature until after the war, and the tank car belonging to an extract company. LC USW3 54495 C.

# Standard Plans

## Baltimore & Ohio

# PRIVY



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Bruce R. Meyer photo, Bloomington, Illinois, May 8, 1971



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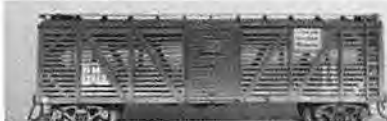
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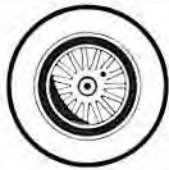
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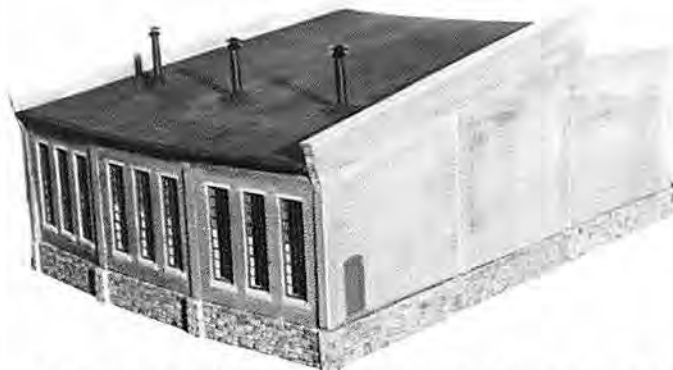
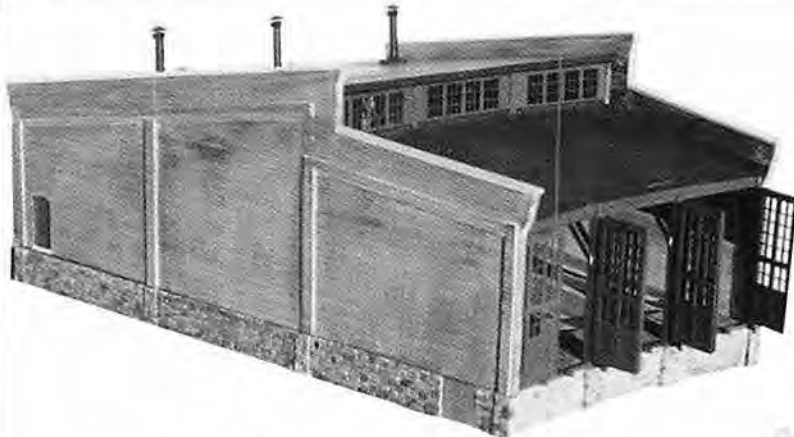
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# SCUTTLEBUTT

**Run 8 Productions** has announced new window sets for RailPower SD15, GP35, and Dash 8-40CW's, Athearn wide-view and bay-window cabs, and MDC's 4-window caboose. Bill Cialini says that, if everything goes well, they will be ready late spring or early summer. Bill's rather extensive list may be had for an envelope. (Box 25224, Rochester, NY 14625-0224.)

**Hobbytown of Boston** has the FEC/GARR Ortner rapid discharge 100T rock hopper, the one with the porches. This is a car we have long waited for. They also have GP7, GP9, and GP20 power chassis with scale-width shells, the first two, formerly Front Range. Their line of PA, FA, and E units is fully available. (Box 5145, Hollywood, FL 33031)

**Brass Car Sides.** Dennis Henry is still soliciting interest in the three brass sides: NYC PS 50-seat coaches, plan #7404, car #2600-2644; IC 2600-series PS coaches; and the fluted C&O/D&RGW/SAL/C&NW PS coaches, plan #7600, which will require add-on Evergreen fluting. These cars have been in the "wish stage" for some time; however, sufficient interest has not materialized. The time has come for Dennis to make a final decision whether to carry on with them or to move to other projects. Dennis has a very long list of cars in current stock. His sides overlay specific plastic kits available from other sources. (715 S. 7th St., St. Peter, MN 56082-1435.)

**National Car Cast.** In the December, 1989, *Model Railroading* there was a fine gondola construction story which featured sides and ends by this Canadian company. We have learned that the parts are still available for US \$3.00 each set, postpaid, and that National Car Cast is working on another, unspecified product. We got some of the gondola sets, and we recommend them for kitbash fans. We wish we had a name and/or telephone number, but we can only refer you to the address which appeared in *MRG* — it is current, and the back issue is available from the publishers.

**Athearn.** Bob Machias passes on the news that Athearn will begin marketing the F7B as a powered unit. The last two runs of Impack cars will be finished by the end of May. They are the Cotton Belt and Irel cars, and, after they are finished, Athearn will have some new product announcements. Bob says that the lettering and painting of these cars has been far more labor-intensive than they had planned. A reader wrote that he had talked with Athearn and that "they would never rerun the DD35, 86' and 10' high cube box cars, and the 62' tank car. Not so. Bob Machias confirms that, while these models may not be listed on the current production schedule, eventually they will be rerun. A company with a product line as broad and deep as Athearn's (or MDC's, for that matter) cannot even dream of running everything every year.

**Funaro & Camerlengo.** Stephen says that the IC cabooses we previously mentioned are ready except for the instructions. So are the DL&W rebuilt box cars, which are steel-side rebuilds from 1920's automobile cars. F&C have completely retooled the PRRLRRR GR gondola kit, which Stephen first did when he was seventeen, and John Nehrich will write the instruction sheets. F&C are working on a modernized version of the PRR GSH gondola, and, if there is sufficient demand, sometime this fall they will produce an earlier version. Stephen and Sharon are open to doing custom kits for interested parties. Basically you should be prepared to purchase a minimum of 150 kits at the wholesale price. After the initial arrangements, if you do not reorder in a year's time, then the rights to market the kit revert to F&C. Not, on the whole, a bad deal. Stephen says that they now have more than 300 kits in stock. We always thought, by the way, that Funaro & Camerlengo must have been the name of an obscure narrow-gauge mining railroad in Nevada, and we were surprised to learn that Sharon Camerlengo and Stephen Funaro are spouses. And they ain't Irish! Or from Nevada! (RD#3 Box 2800, Honesdale, PA 18431.)

**Steam Shack.** Roger Dumas has two automobile cars with end doors: the CV/GTW door-and-a-half car and the GTW 7' single-door car. By summer, Roger will have three versions of the GTW/CV 12' two-door automobile car: an early version, a version rebuilt to one-door, and another rebuild, this one with a raised roof. This fall we expect a 1923 CV ARA box car. (10 Engrem Ave., Rutland, VT 05701.)

**Rocky Mountain Press.** Randy Lee, the editor of *Model Railroading*, says they are going to expand by eight pages per issue, and there will be some new features. We will look forward to the larger *MRG*.

**Shell Scale** has some new decals which will soon appear. Their NS Operation Lifesaver GP60 sets (HO & N) were done from the actual locomotive, and differ somewhat from the NS official drawings and lettering diagram, which apparently was not followed 100% by the paint shop. Richard Shell says that customer satisfaction with the set is high. He will have the SW

Bicentennial SD15 set in HO & N, and a new Southern diesel set with accurate numbers and stripes. Shell Scale's number board sets have now been upgraded to include the black gasket. It is printed around the board except when the board's background color is black. Richard says that he has finished work on a set for NS switchers and slugs, which should be ready this month. (Rt. 5 Box 1460, Troutville, VA 24175.)

**Proto Power West, A-Line, Etc.** Sales of the power chassis are going quite well. Demand for the E unit has been great — hard to keep up with. Joe DeLa says the parts sprue for the Gunderson Husky Stack cars has been delayed, and he hopes the kit will have shipped by press time. The Gunderson cars typically operate in three unit sets and singly; whereas, the Thrall cars (Walthers prototype) operate only in three and four unit sets. Several readers have complained to us that fitting an A-Line 18" container into the Walthers car may be a problem because the taper on the well prevents getting the container in. Joe recommends beveling the edges of the container, after which it must be used only as a bottom unit, and kept in the car or out of sight, or carefully filing the well and repositioning the load lock parts. If you have a container handy as you assemble the Walthers kit, you should be able to make the needed modifications before anything is glued in place. Something to hope for: Joe says that they are experimenting with some photo-etched brass detail parts, which we will talk about if they work out to his satisfaction. Our fingers are crossed.

**Freight Cars Journal.** When we asked Dave Casdorff what he was working on for future issues, he said — BN covered hoppers, mainly grain, from the sixties to the present; CSXT fertilizer covered hoppers; GTW cars; Canadian National cars; a reefer issue by William K. Viekmann; Evans 52' mill gondolas of the 1970's; and waffle-sided box cars (40', 50', and 60'). That accounts for seven issues and a wealth of information for anyone interested in freight cars and/or models. Right on, Dave. We also asked Dave to predict what kinds of cars we might see if we are blocked by a freight train in 2010 — coal and rock hoppers, covered hoppers, tank cars, intermodal cars, and a few box cars. We would add RoadRailers to that list because we are regional chauvinists. (Box 2480, Monrovia, CA 91017-2480.)

**River Raisin Models.** We have a long letter from Jim Kindraka which is very positive and filled with S scale news. One of the more pleasant aspects of news-gathering is exposure to the cheerful, optimistic personalities of many people in the hobby who are busy implementing their dreams — and ours. It more than vitiated the depression of having to deal with others who steal ideas, parts, and even whole kits. The FV77 drive upgrade mechanisms which correct former problems have been shipped. River Raisin is turning attention to S scale's first modern brass GE diesels: three versions of C30-7's and a special run of the U33C. Two other projects are under consideration, and Jim asks specifically for indications of interest from S scale modelers: a NYC caboose and the C&O 2-6-6-6. River Raisin is almost out of some of their models, specifically the Milwaukee 40' horizontal rib side box car, the N&W Class A articulated, the PRR Alco DL-701, and the EMD E8-9 without dynamic brakes. They also have fine S scale decal sets, including one for 1939 FT EMC demonstrators, which is complete with all the stripes so that no masking is necessary, and another for NYC lightning-stripe E and F units. (6160 Upper Straits Blvd., West Bloomfield, MI 48324.)

**S Helper Service.** Don Thompson specializes in injection-molded plastic locomotives and rolling stock, some of which are done as a cooperative venture with American Models. Don has in stock Alco FA-2, FB-2, and RS-3's decorated for several roads, and is on the verge of releasing eight heavyweight passenger cars, of which there are two main divisions. The short 72' cars with clerestory roof will be a baggage car and a baggage/RPO for NYC prototype, and CRRNJ prototype combine, coach, and open platform observation. The standard length cars will be the Pullman #3119 12-1, #2585D 10-1-2, and a Cafe Car, all of which share the air-conditioned roof with molded in ducts, something not available even in HO. Photos of test shots of these cars have appeared in *MLM*. Future projects include a GP35 in cooperation with American Models, and possibly an EMD and/or a Baldwin switcher. The passenger cars may actually be available as you read this column. (2 Roberts Road, New Brunswick, NJ 08901, 908-545-0303.)

**Polly S** has announced 39 new railroad colors in 1/2 and/or 1 ounce bottles, bringing their total to 63 railroad colors. Included are metallic, lusterless, and gloss colors. Some names intrigue us. TH&B Cream, TH&B Maroon, Monon Gold, Utility Orange, ACL Purple, ACL Yellow, PRR Camp Car

Yellow, Flat Aluminum, Bright Aluminum, Stainless Steel. Obviously there are too many others to list, so call on your dealer.

**Tichy Train Group.** You will have probably already read of and seen the many versions of strap steps which Don is now making. On the immediate horizon is a combination leaf and coil spring Bettendorf truck, which the railroads used to dampen harmonic motion to reduce derailments from excessive oscillation of cars on jointed rail. Also a new kit: a USRA single-sheath rebuilt 40' box car with steel sides on the Georgia Railroad prototype. And, finally, a Chicago Bridge & Iron 100,000 gallon 28' diameter steel water tank.

**Life-Like.** In the toy series, Life-Like plans to release many of its cars with new paint schemes in the next season. Of the Proto 2000 series, the last run of the Alco FA-2 series are probably out by now, and work is progressing on the GP18. When we called Beth Werrell, she was sitting in the floor examining her resource files and slides to make sure the LV and NYS&W engines were properly numbered to correspond with their paint scheme. Having spent the last few days in the floor sorting and filling our *MLM* correspondence and notes, we can sympathize. Look for the first GP18's perhaps as early as August. Life-Like is also ready to release two new HO buildings: the Fairhaven Bottling Company, actually a brewery, and the 35th Street Warehouse, which will have a dock. Work on the R units is in progress, and discussions are continuing about the next locomotive project. There is some discussion about discontinuing the toy 6-axle Alcos. Kitbashers be aware.

**Feedback & Varia.** "Scuttlebutt" hopes that someone will do a quality plastic 6-axle Alco, and so do many of our readers. Other requested models are the SW1200, NW2, GP20, SD7, & SD9. Also the PS 4750 cu. ft. covered hopper and Southern waffle box cars. Prototypes must meet a very important criterion for serious consideration by a maker of models: a number of railroads popular with modelers must have owned the car or engine — otherwise the model may not sell enough copies to make a reasonable return on the initial investment. Even though, as several of our readers have pointed out, the Southern cars are everywhere, we doubt we will see a mass market company make them. And many of the more specialized manufacturers seem to prefer earlier eras. While we are on the topic of waffles, we had some reader feedback that the Walthers new car is too low, but our measurements confirm that it is either dead-on or very close to the dimensions Dave Casdorff thinks to be correct. At least for the CSXT/C&O prototype. Dave also told us that the Athearn Impack car is not correct for any Trailer Train scheme, but is OK for Cotton Belt and Irel. We love our Trailer Train sets, and we will pretend we never talked to Dave! He suspects that the surgery needed to render the car suitable for the later version(s) used by TTX would be too extensive for either the car or the surgeon to survive, if it weren't impossible. Reader feedback and suggestions about models are always welcome at "Scuttlebutt."

**S Scale America.** Larry Jackman is doing Gunderson Husky Stack cars in S, and Microscale will be making him two BN (single car & triple) sets, and one TTX set (single car). Beginning in late spring or early summer, he will have smooth-side, riveted containers in 40, 48, 45, 53, 24, and 20', in the order in which he mentioned them. Larry also makes scale metal handrail sets for the American Models GP9, RS-3, and GP35. For the GP9, he makes both early and late handrails, so, with some work on the shell, one could also have a GP7. He also has a 75T roller-bearing freight truck with scale or timplat wheels. (Box 671, Kenmore, WA 98028-0671.)

**Yellowstone Custom Services.** Gus Tureman called us just before leaving the snows of Montana for a family holiday in Hawaii. He has kept very busy with the painting and parts business, and he has a new catalog, which you may have for \$2.50, refunded in full with a \$25.00 purchase, which is the cost of one custom painted plastic locomotive shell for many railroads. Gus has some new horns, and soon will have cast grabirons for EMD diesels with the nut and bolt detail cast on top (late style) and bottom (early style). He will also predrill plastic shells for detailed fans and other add-on parts. (327 Yellowstone, West Yellowstone, MT 58758.)

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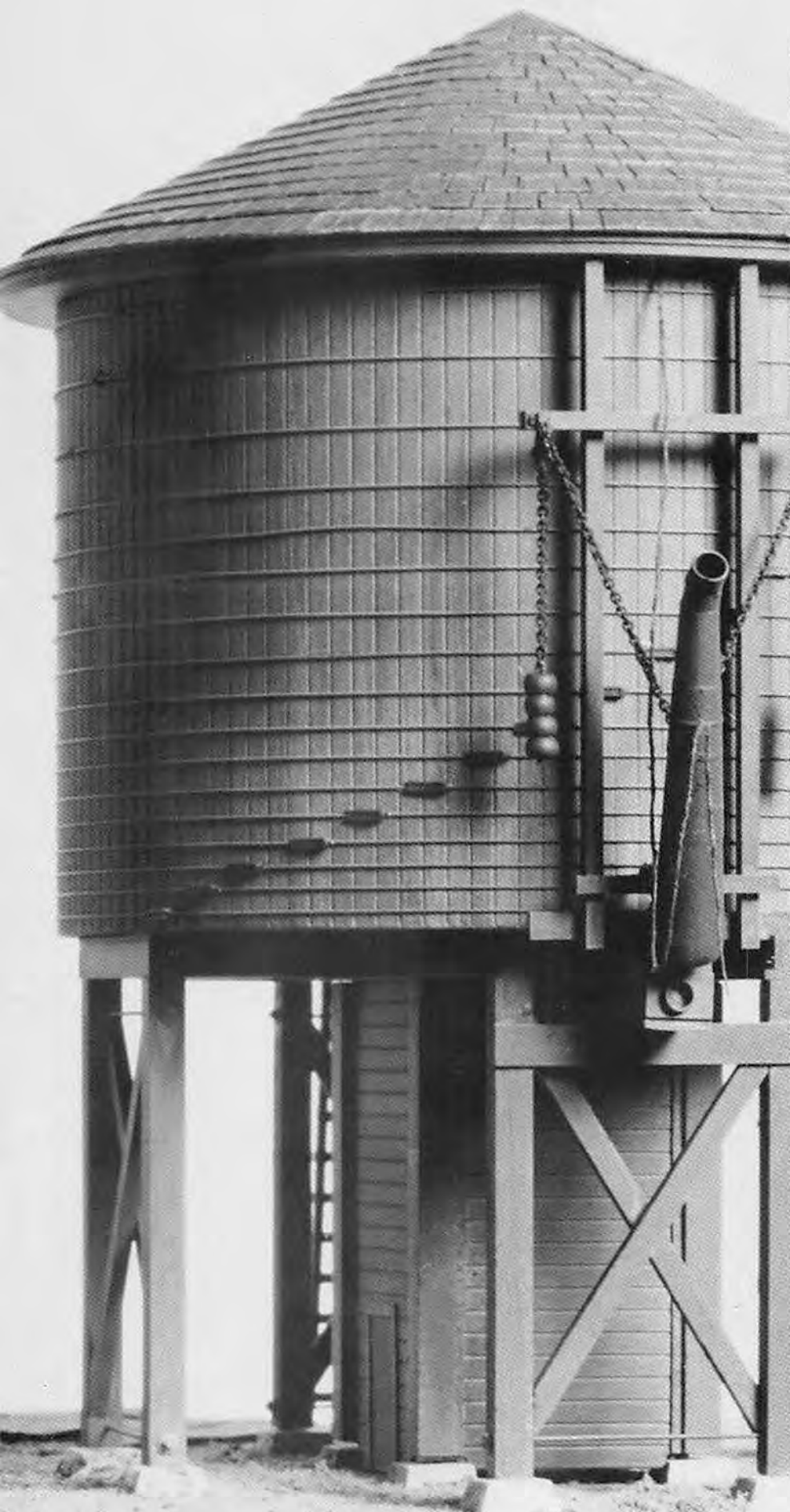
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