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CHAPTER THREE

The giant killers



How it all began: Former Rutland RS-1 No. 405 chirps into Chester, Vt., on the Green Mountain's portion of the former RUT main line between Bellows Falls, N.H., and Rutland, Vt. At a time when enclosed cab units were all the rage, this seemingly unremarkable machine set the trend for locomotive design that continues to this day.



2 An A-B set of drawbar-connected Boston & Maine FTs (in Boston in March 1950) shows the distinctive four-porthole styling and close spacing between units. The boxy structure on the roof is the dynamic brake housing. The F unit's "bulldog" carbody styling blended nicely with passenger cars but did not facilitate clear views to the rear for en route freight-car switching. *George Corey*



3 The blunt-nosed Alco FA was a dramatic improvement over earlier Alco cab-unit designs. Western Maryland 301 was one of four FA-2s on its roster. The vertical shutters on FA-1s are mounted farther back near the rear bulkhead.



4 EMD's BL1 (only one was built) and BL2 were intended to provide greater visibility for switching branch lines. The rapidly growing popularity of the road switcher brought production to an end after 13 months. Western Maryland's two BL2s were later paired with "slugs" for switching in Hagerstown, Md.

What began as boxy urban switchers and progressed to a more streamlined carbody segued to the ultimate diesel locomotive, the road switcher. Before that, however, styling and streamlining were primary considerations shortly before and, more dramatically, after World War II. Electro-Motive Corporation and successor Electro-Motive Division (of GM) E and F units proved to be an apt canvas for myriad colorful liveries. Alco was able to join the party following the war with its elegant PAs and FAs, as did Baldwin and finally Fairbanks-Morse with distinctively styled cab and hood units. It was quite a time!

The wagon train

A seemingly endless stream of covered wagons headed west as the remainder of what became the 48 contiguous United States was settled in the 1800s. An equally irresistible and revolutionary stream of "covered wagons," as diesel-electric cab units came to be called, spread out across the continent roughly a century later. No matter how hard steam enthusiasts, and not a few professional railroaders, bemoaned this incoming tsunami, it was not to be slowed, let alone stopped.

Although, like any large, heavy piece of machinery, a diesel locomotive requires periodic maintenance, that work was far less labor intensive and frequent than the routine servicing of even the best modern steam locomotive. True, some railroads ran their modern steam power over multiple divisions, but it was more typical to cut the engine off at each division point for inspection and servicing, as we discussed in the previous chapter. Diesels, on the other hand, were more like the family car, almost a turn-key machine.



5 Alco followed the RS-1 with the 1,500-h.p. RS-2 (1946–50) and similar 1,600-hp RS-3 (1950–56); six-motor (RSD-4 and -5) and A1A (RSC-2 and -3) versions were also offered. WM 186 is an RS-3: Note boxes on frame fore and aft of the cab.

From switcher to road switcher

The diesel-electric locomotive first gained a foothold in the form of switch engines. Here the railroads had the opportunity to discover that a relatively low-power, diminutive diesel could start and switch a train that took a 4,000-hp modern steam

locomotive to bring into the yard. They also discovered that the diesel switcher spent a lot less time in the roundhouse or shops than its steam contemporaries.

By stretching the frame a bit, adding a short hood, and equipping a switcher with better-riding road trucks, the road switcher was born. Compare an Alco S-class switcher



6 Dick Dilworth's utilitarian "Geep" debuted in late 1949. The carbody remained largely unchanged from the first GP7 until the introduction of the GP30 in 1961. Nickel Plate 490 is an early model GP9; note the four 36"-diameter rooftop fans (later GP9s had two 48"-diameter fans). GP7s also had two sets of louvers on the panels below the cab number. The NKP eschewed dynamic brakes. The unit has been repainted in the railroad's post-1959 wide-stripe scheme.



1

CHAPTER SIX

Modeling steam power

“The engine that saved a railroad” is how Nickel Plate Road authority John A. Rehor described the NKP’s superb fleet of Berkshires in the October 1962 *Trains* magazine. Born in 1934, by the late 1940s the class S Alcos (and class S-1 Limas) were negotiating the formerly narrow-gauge line from Frankfort, Ind., to East St. Louis, Ill., without breaking a sweat save for a few notorious grades out of river valleys. Here NKP’s first Berkshire, Alco-built no. 700, leans into a superelevated curve just west of Frankfort on my HO tribute to the NKP’s St. Louis Division as it appeared in the fall of 1954.

You can choose an era to model or let an era choose you. Either way, there are major compromises to accommodate: Pick this, lose that. I’ll cite some examples of choices that modelers made where their hands were forced by reality. As a result, one chose to freelance, the other to have a sizable fleet of 2-8-0s custom built. Despite today’s plethora of superbly detailed, good-running steam locomotive models in every scale and gauge, difficult choices remain. But the rewards remain equally high, **1**.

Considering capabilities

By titling this chapter “Modeling steam power,” as opposed to modeling a specific steam locomotive, the point is that we’ll take a high-level overview of what one should consider when choosing to model any part of the steam era but especially the last decade and a half of steam locomotives. That the rewards exceed the liabilities is apparent from steam models’ ongoing popularity with model manufacturers and importers and their customers. But, as with full-size steam power, there are liabilities we need to discuss.

One of the first surprises that typically greets the steam modeler is that the performance of a model locomotive may not equal its appearance. There’s a comment in Linn Westcott’s book about John Allen and his remarkable Gorre & Daphetid (pronounced “gory and defeated”) HO railroad that meant little to me until I too faced the same problem.

Under a photo of a Pacific Fast Mail Chesapeake & Ohio 2-6-6-2, Linn noted that John never could get the locomotive to perform as well as he expected. I later acquired two of the same model, an early brass import with decent detail, and they didn’t perform well for me, either. Until I had the suspension of the front engine rebuilt—it came from the factory with nothing more than a spring-loaded pin pushing down on a wide plate above the front six drivers (“engine”)—it performed like a light 0-6-0. Afterward, each Mallet would haul about 12 loaded hoppers up a 2.5-percent grade and around 30”-radius curves.

Was that adequate? C&O documentation suggests the prototype would pull between 12 and 20 hoppers under similar conditions, so—after the rebuilding and expenditure of many hundreds of dollars (times 2)—all was well, **2**.

Three of my Key Imports brass Nickel Plate Road 2-8-4s were loaded with weight and would handle loaded 20-plus-car coal trains up those grades and around those curves with ease. When the Allegheny Midland was dismantled and they resumed service



2

Joe Borick of Cheat River Engineering rebuilt my two Pacific Fast Mail C&O H-6s so that the front engine actually contributed to the tractive effort. They subsequently performed very much like the prototypes, one of which—1309—has been restored to service on the Western Maryland Scenic Railroad.



3

In the 1960s, Indiana’s Monon sported a varied roster of modern power, including no. 400, the first Century 628, brand new low-hood C-420 514, and high-hood 501 at Lafayette Yard in September 1967. Modeling this and earlier diesel power is appealing, but the resulting long trains greatly reduced train frequency.

on the Nickel Plate Road, tackling the worst westbound grade, which was well under 2 percent, was and is no problem. I usually stage these “lead sleds” at the east end of the division so they are ready to handle westbounds up to the railroad’s passing track length of 30 cars.

But other brass and “plastic” Berkshires were not up to the task. I still recall the sinking feeling I had when a test train out of Frankfort, Ind., stalled with a dozen cars. Alarming, efforts to add weight were unsuccessful

on the mass-produced locomotives.

Bill Darnaby had encountered the same problem with his Maumee Route 4-8-2s, which began as Hallmark brass Illinois Central Mountains. After the initial panic attack, he tried changing freight-car wheel sets to free-rolling metal ones from InterMountain. That basically solved the problem for both of us. (It also facilitated Bill’s subsequent installation of signals at interlocking plants, which required adding resistors to bridge the insulation on those wheelsets.)