

The BN

Expediter

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The official publication of *The Friends of the Burlington Northern Railroad*, the historical society focused on the Burlington Northern Railroad, the Burlington Northern Santa Fe Railway, and the BNSF Railway.



(above) BNSF coal train in Tulsa's Cherokee yard waiting on a crew change on August 31, 2012.

(below) Looking south from the Cherokee yard's "railfan parking lot" a nice lash up brings its train into the yard.

Both photos by Erik Edmonds.



Cover Photo: Looking west at the Greenwood Avenue crossing in downtown Tulsa on ??, 2012. Eastbound stack train is the Q-LACATG 7, westbound is the port local. Photo by Terry/Thomas Jenner.

Friends of the Burlington Northern Railroad

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The Friends of the Burlington Northern Railroad (FOBNR) was formed to gather, preserve, and share information about the history, current operations, and future development of the Burlington Northern Railroad and its successors. It follows the evolution of the railroad from its inception in 1970 with the merger of the Great Northern; Northern Pacific; Chicago, Burlington, and Quincy; and the Spokane, Portland and Seattle Railroads. We are a 501 (c) 3 non-profit corporation

The purpose of the FOBNR is educational. We wish to perpetuate the history of the Burlington Northern Railroad and its successors. We seek to collect and preserve any materials which help establish or illustrate the life, conditions, events, and activities of the railroad. We will disseminate this information through the publication of a newsletter, establishment of a web site, by maintaining an archive, and by conducting an annual convention somewhere along the lines operated by the railroad. We may also publish information in other media and may restore and operate historical railway equipment.

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The BN Expediter

The BN Expediter is published four times a year and is included with membership in the Friends of the Burlington Northern Railroad. Manuscripts, photographs and information are welcome for publication. Materials are submitted with the understanding that no monetary compensation will be paid upon publication. Items will be returned only if requested. Otherwise they will go into the archives.

Anything published in The BN Expediter (including the classifieds), must be focused on the Burlington Northern Railroad and its successors, from the 1970 merger on. Information and/or pictures that give historical perspective or context are acceptable (e.g., premerger road numbers). The disposition of a locomotive, other piece of equipment or property is also acceptable. Further information is available from the Editor.

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We're Looking for a New Editor!

After several years of service to the Friends of the Burlington Northern Railroad, Kris Johnson has decided to move on and has resigned as editor of The BN Expediter. We thank Kris for all the hours he has put in so that the rest of us can enjoy our quarterly publication.

Dave Poplawski, who was the editor for the first few years of the FOBNR's existence, has taken over as interim editor until a new, permanent one is found.

We are looking for someone with a basic knowledge of the BN and BNSF and some experience with collecting and organizing information for a newsletter. Experience with some modern desktop publishing software would be nice, but if none then the design and layout of each issue will be outsourced. The editor receives a financial honorarium for each issue, with the amount depending on whether the editor also does the layout.

If you are interested and would like more information, please contact Dave Poplawski at pop@mtu.edu. The search for a new editor will continue until the job is filled.



Information/Photos Needed

We're working on a major article about the oil boom in North Dakota that has evolved into new trains, new tracks, new operations, etc. We need any information you can supply about BNSF's oil transportation business. We especially need photos. Contact the editor as soon as possible if you can help.

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Tulsa



by Pat Hiatte and Dave Poplawski

On November 21, 1980, the merger of the Burlington Northern and the St. Louis San Francisco railroads became effective, making the BN the longest railroad in the United States. With that Tulsa, Oklahoma joined the ranks of metropolitan areas served directly by the BN.

The merger was questionable at the time, as most analysts figured that a merger with the Missouri Pacific would have made more strategic sense. It appeared to be more of an emotional decision on BN President Lou Menk's part, as he had spent more than 20 years with the Frisco in years past. Even Gerald Grinstein said it was a mistake as late as the early 90's.

But a mistake or not, the Tulsa railroad scene has been transformed in the past 30+ years, and the city is as busy as can be with BNSF rail traffic originating, terminating and passing through.

Tulsa in the early 80's

In the early days of the merger, Tulsa was at the center of four of BN's main-line subdivisions - the 1st to Springfield, Missouri, the 2nd to Avarad, Oklahoma and a connection with Santa Fe's transcontinental main line, the 6th to Oklahoma City and beyond, and the 9th to Ft. Worth, Texas.

Tulsa's big Cherokee Yard, just across the Arkansas River from downtown Tulsa, continued to play its role as the primary southwestern classification yard for the Springfield Region of BN, just as it had served the same purpose for the St. Louis-San Francisco (Frisco) Railway. Cherokee Yard and the region's other big hump yard, Tennessee Yard at Memphis, classified virtually all traffic originating or terminating on the Springfield Region.

The many familiar Frisco trains seen at Tulsa - QLA, for example, a run-through with the Santa Fe Railway from Memphis to Southern California - were complemented by new trains providing single-line service made possible by the 1980 BN-Frisco merger. Train 69 ran from Chicago to Tulsa and Trains HPS and SPH linked Houston with Seattle and Portland.

Both trains received 1,000-mile inspections at Tulsa, and HPS picked up Kansas City and beyond cars for classification at Kansas City's Murray Yard, all during a scheduled one-hour stop. The 3-1/2 hours' scheduled dwell time for SPH at Tulsa allowed for reclassification into five groups of cars, including blocks for the Fort Worth & Denver Railway at Teague, Texas, and the Missouri Pacific at Fort Worth.

Altogether, the BN train brief showed connections among 14 inbound and 15 outbound trains, with a minimum of eight hours required to make connections between trains. Most connections were made the same day, or the next day

for trains arriving after noon. Even BN's hottest trains, Group 1 Priority Trains HPS, QLA, SPH, 31 and 32, made connections at Tulsa.

Primary through train routes linked Tulsa to Memphis and Birmingham, Kansas City, and Irving and Fort Worth. In addition to the through freight trains, Tulsa originated or terminated (or both, in the case of three turns) five local trains six days a week. It all added up to a busy headquarters city for BN's Tulsa Division.

Tulsa Today

With the merger with the Santa Fe in 1996, the connection between the BN and the Santa Fe Transcon at Avarad became very important. BNSF could now provide single-carrier service between all its south-eastern US customers and everything west to California. Tulsa, being right in the middle of things, rose in importance almost immediately. Today one can see 30-40 trains originate, terminate, or pass through town daily.

Hot intermodal trains such as the Z-LACATG and Z-SBDATG between southern California and Atlanta (via Norfolk Southern) and the Z-MEMLAC between Memphis and Los Angeles stop only briefly to change crews. This crew change point is about to change soon, however. In 2012 BNSF converted the mostly TWC dispatched Avarad Sub to CTC. With the Cherokee Sub already CTC dispatched, BNSF is planning on running all Z-trains all the way from Enid to Springfield without changing crews at Tulsa. Crew changes for lower priority trains will remain as is, with eastbounds changing at Shirk, the location of a new siding about 10 miles west of town and westbounds changing at Trenton Street just east of downtown.

Numerous Q, S and V trains, such as the eastbound Q-CLOMSTL, S-LBAMEM and V-RICBIR and westbound Q-MEMLAC, S-MEMSCO and V-BIRSBD pass through Tulsa regularly. Coil steel train U-PITBIR makes regular appearances. Freight H-ASMTUL, H-BARTUL and M-BELTUL terminate, and the H-TULBAR originates at the Cherokee yard.

Cherokee Yard is now the third largest on the BNSF system in terms of number of freight cars classified. Every day over 1,600 cars are sorted and made up into trains for destinations in every compass direction.

Several locals work out of Cherokee yard. A couple head south to Okmulgee and Henryetta, another pair east to the Port of Catoosa and Claremore. Yet another works the industrial park north of Tulsa.

In April of 2013 the yard's locomotive shops began contract maintenance on GE locomotives. This coming year the shops will be expanded to include a drop table and overhead crane.



(above) This train was at the end of CTC northeast of downtown, 2 blocks east of Union Depot, near the location of where the Midland Valley and Katy crossed the Frisco and the Santa Fe had their station, on July 16, 2011. CTC has since been extended all the way to the connection with the Avard Subdivision at Hall and the Cherokee yard.

(below) This pair of engines is delivering a string of cars to a siding along side of Tulsa Union Depot, now the Jazz Depot, on March 12, 2010. The photo was taken from the South Boston Street overpass, looking southwest.

Both photos by Mike Condren.





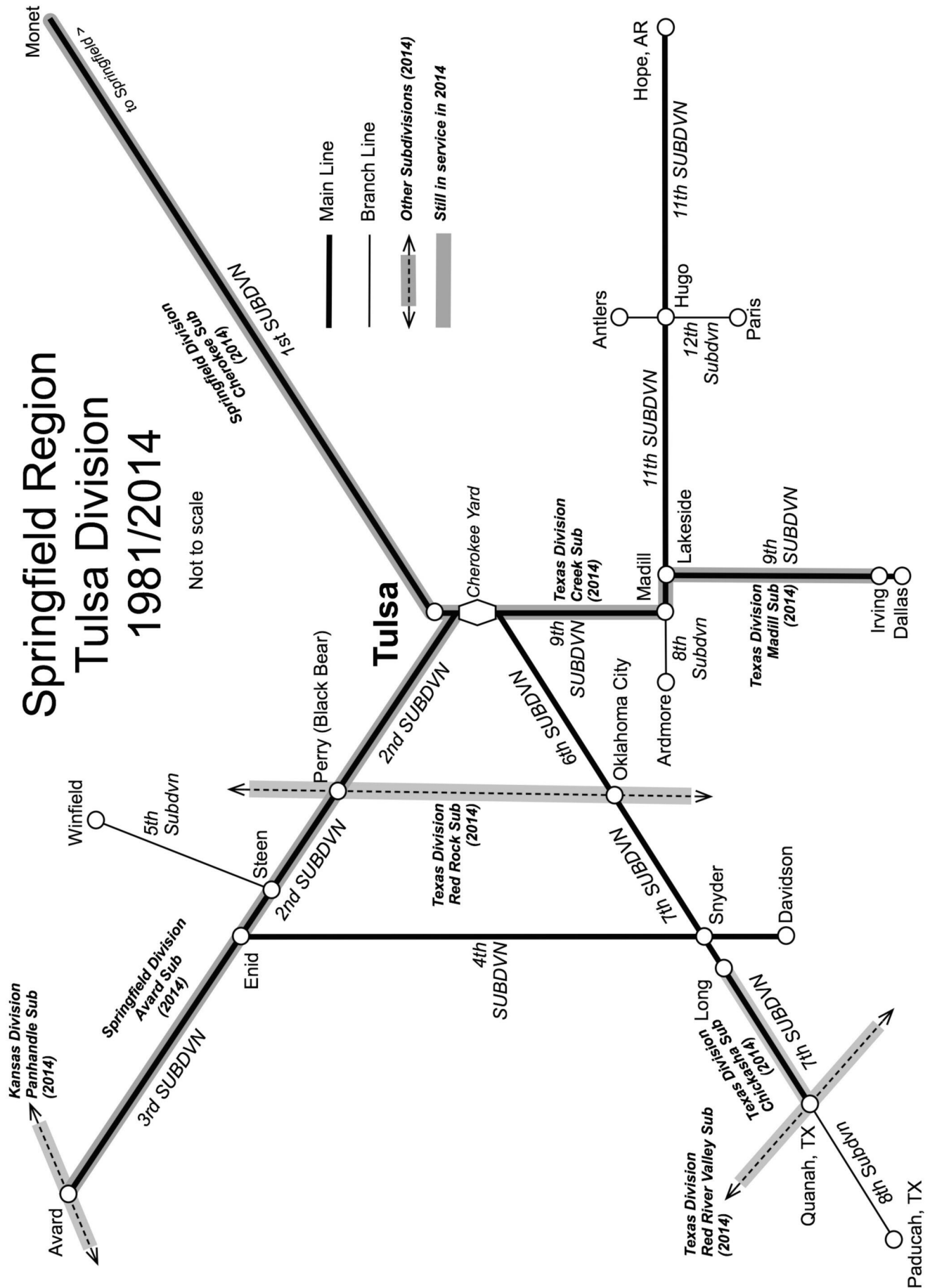
Action at the Greenwood Street crossing on the double track main line in downtown Tulsa. To the right is the interchange with Union Pacific. To the left interchange with the South Kansas & Oklahoma Railroad (SKOL). The westbound manifest on Main 1 (left) is the H-STL-TUL7; the westbound stack on Main 2 (right) is the Z-ATGSBD. March 31, 2013. Photo by Terry Jenner.



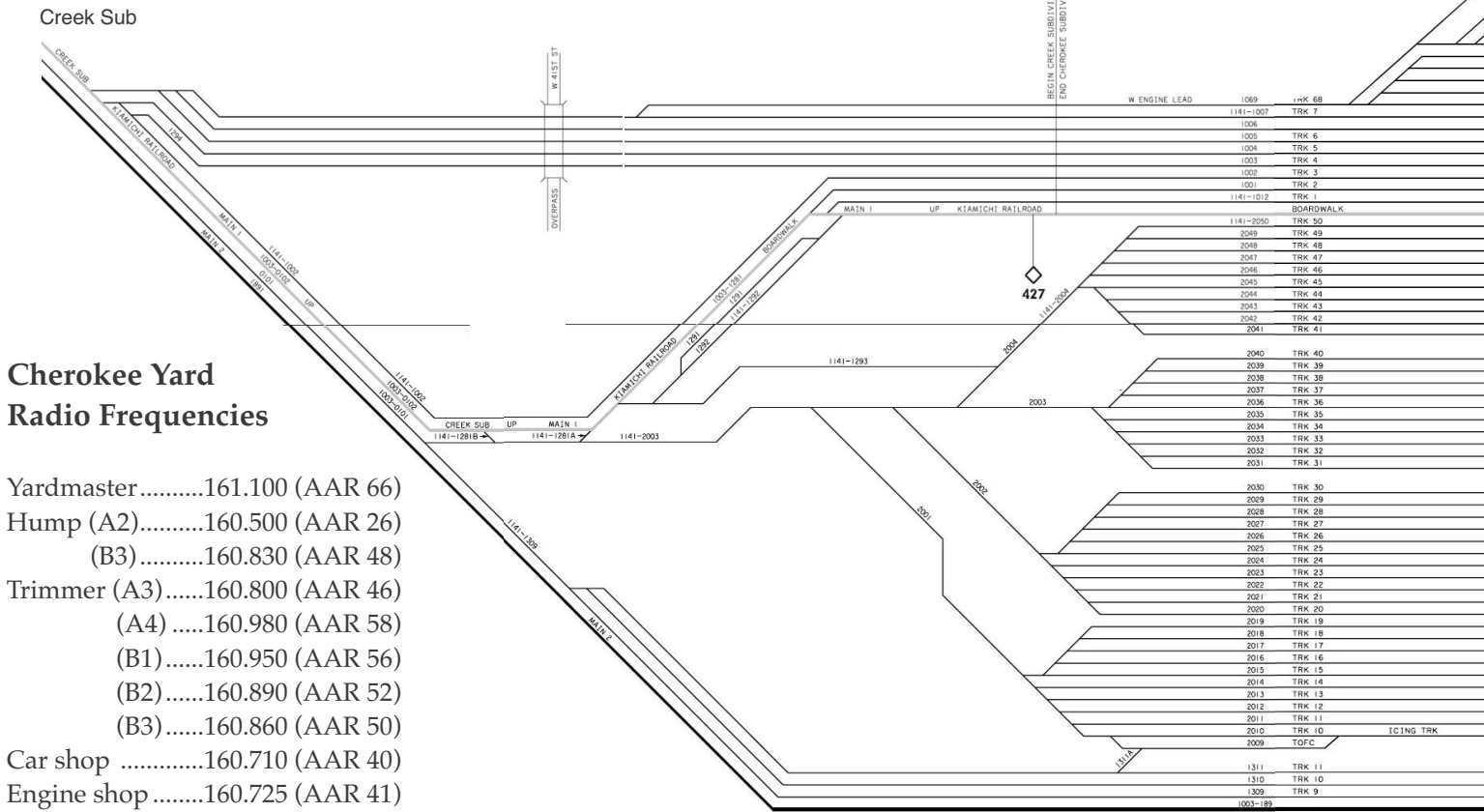
33 year old SD40-2 BNSF 1660 (originally BN 7062) leads the transfer run past the "railfan parking lot" at the north end of Cherokee yard to the Union Pacific connection at the yard at Union Depot in downtown Tulsa on July 16, 2011. Photo by Mike Condren.

Springfield Region Tulsa Division 1981/2014

Not to scale



Cherokee Yard



BN and Santa Fe cabooses slide through the retarder and into the bowl of the Cherokee hump yard on August 21, 1982 as seen from the platform outside the office at the top of the hump tower at the south end of the yard. Photo by Mike Condren.

1982



Timetables: Then and Now

TULSA DIVISION — 2nd SUBDIVN

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Rule (A) Signs	Capacity Aux. Trucks (Cars)	Length of Siding in Feet	Station Numbers	SECOND CLASS			Line Segment	Mile Post Location	Distance From Chero- kee Yd.	MAIN LINE STATIONS Office Cells	SECOND CLASS			
				QSF	QLA	637					CTB	666	638	
				Daily	Daily	Daily					Daily	Daily	Daily	
BKRT- YJ	Yard		96427	1500	1100	0945	1047	426.9	0.0	CY	CHEROKEE YD.	A 0700	A 0730	A 0930
	7	5,737	96046	1540	1136	1021		445.8	18.9	VU	MANNFORD	0420	0448	0840
	48		96069	1611	1206	1051		469.3	42.4		CASEY	0348	0418	0757
A								471.6	44.7		A.T.S.F.			
			96072					471.6	44.7		CAMP			
	20	9,287	96078	1625	1225	1105		478.0	51.1	PW	PAWNEE	0337	0407	0746
A								479.7	52.8		A.T.S.F.			
	40	8,868	96091	1642	1237	1122		490.6	63.7	VK	MORRISON	0321	0351	0730
A								502.7	75.8		A.T.S.F.			
			96103					502.7	75.8		BLACK BEAR			
M								506.7	81.6		A.T.S.F.			
Y	160		96109	1710	1305	1150		506.8	81.9	PY	PERRY	0256	0326	0700
	110		96127	1733	1328	1213		526.7	99.8		COVINGTON	0231	0301	0635
A								533.3	106.4		A.T.S.F.			
U								543.0	116.1		A.T.S.F.			
YJ			96143	1752	1347	1232		543.1	116.2	XT	STEEN	0210	0240	0610
A								544.2	117.3		O.K.T.			
BKRT- YJ	Yard		96145	A 1900	A 1400	A 1245		545.4	118.5	EN	ENID	0200	0230	0600

WESTWARD TRAINS ARE SUPERIOR TO EASTWARD TRAINS OF THE SAME CLASS. TIME IN SCHEDULES OR TRAIN ORDERS FOR TRAINS DEPARTING CHEROKEE YARD WILL APPLY AT MP 425-21.

It can be interesting to compare Tulsa area employee timetables from just after the BN/Frisco merger to current ones. For example, the timetable above, taken from the Springfield Region Timetable No. 1 dated July 26, 1981, shows BN's 2nd Subdivision of the Tulsa Division between the Cherokee yard and Enid. At the right is the current Avard Subdivision from the BNSF Springfield Division Timetable No. 2 (the Avard Sub goes all the way to to Avard, OK - only the eastern part is shown for comparison.

The first obvious difference is in the station names. Some new ones, many old ones gone. Back in '81 the AT&SF crossed the BN in several places ("station" names A.T.S.F.), with automatic interlockings at MP 472.6, 479.7, 502.7 and 533.3, a manual interlocking at MP 506.7 and an unprotected crossing at 543.0. All these old AT&SF branch lines are now abandoned, along with all the interlockings and crossings. There are new sidings (e.g., an 8,256 footer at Hallett) and some sidings have been lengthed (from 5,737 feet to 7,550 feet at Mannford).

Another difference is in how the lines were dispatched. Back in '82 it was all train order territory. It has all just recently been converted from TWC to CTC.

Another huge difference is that there were scheduled trains running on the BN back in 1981. For example, train QSF (Quannah San Francisco) left Cherokee yard at 1500 (3pm) and handled traffic going to the AT&SF at Avard des-

tinued for northern California. Eastbound CTB (California Tulsa Birmingham) showed up at Enid at 200 (2am) and handled traffic from California coming from the AT&SF. Interestingly there were no meets between east and west bound trains on the lines shown here.

W E S T W A R D ↓	Length of Siding (Feet)	Station Nos.	Mile Post	Avard Subdivision MAIN LINE STATIONS	Rule 4.3	Type of Oper.	Line Segment	Miles to Next Stn.	↑ E A S T W A R D
	Adjoining Sub: Cherokee Information for Cherokee Yard is found in the Cherokee sub timetable.								
		425.2		HALL	X	CTC	1047	0.5	
		425.7		DX	TX(2)			2.6	
		428.3		AVERY				7.8	
8,976	96032	436.1		SHIRK				9.7	
11,170	96046	445.8		MANNFORD				12.8	
8,256	96062	458.6		HALLETT				10.7	
	96069	469.3		CASEY				4.7	
10,200		474.0		CAMP				4.0	
	96078	478.0		PAWNEE				12.6	
14,600	96091	490.6		MORRISON				12.0	
	96103	502.6		BLACK BEAR Adj. Sub: Red Rock, MP 502.5	MJ	6.2			
	96109	508.8		PERRY Adj. Sub: Red Rock, MP 508.2	J	16.9			
7,550	96125	525.3		CALLAHAN		7.9			
	96134	533.2		FAIRMONT		CTC 2 MT	MT1 9.9 MT2 9.5	0.4	
		542.7		EAST ENID (MT2)				2.4	
		543.2		CP STEEN				10.5	
		543.9		WEST ENID Adj. RR: UP, MP 544.5	AJRT				

the current Avard Subdivision continues west to Arvard, OK



(above) The Perry, Oklahoma station, clearly of Santa Fe origin, actually sits on BNSF's Red Rock Subdivision, the north-south line between Arkansas City, Kansas and Fort Worth, Texas. The Avard Subdivision runs parallel to the Red Rock Sub through town, just east of downtown, and is less than a 100 feet from the other side of the station.

(below) A westbound intermodal on the Avard Subdivision is heading southwest at this point, parallel to the Red Rock Sub tracks in the foreground. In a mile or so this train will curve pretty much due west and head for Enid and then to Avard and the connection with the Transcon and points west.

Both photos taken on August 30, 2013 by Mike Condren.



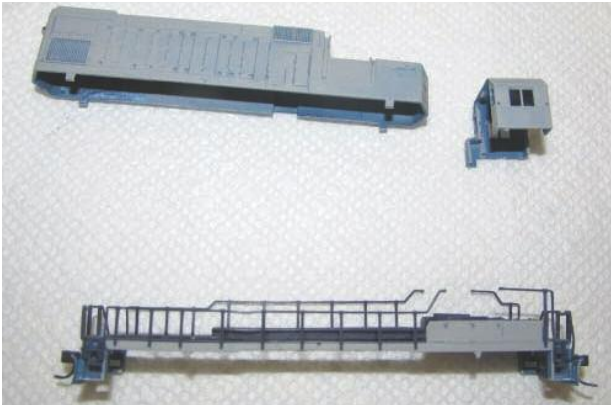


Figure 1

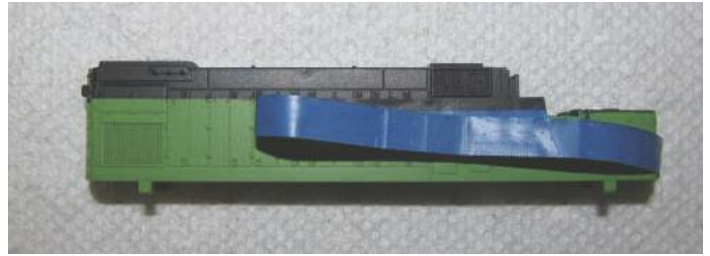


Figure 4



Figure 2



Figure 5

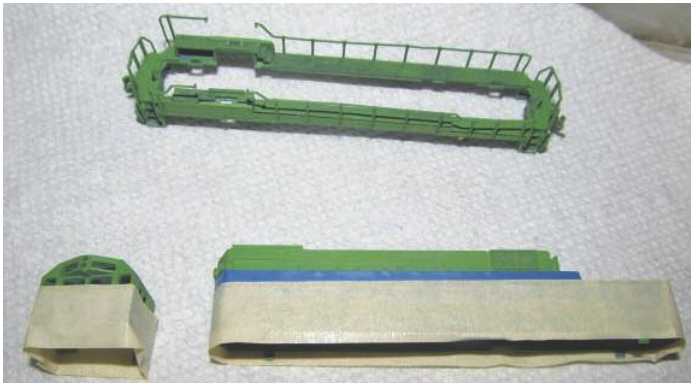


Figure 3



Figure 6



Painting an N-scale BN GP15

by John Adams (photos by the author)

Reproducing a BN GP15-1 in N scale is really not a terribly difficult project – assuming you have all the necessary materials (more on that later). My model actually started as a Mopac unit and started with dissassembly and removal of all the glass, horns, etc. The shell then spent a night in 90% alcohol which softened the paint enough to remove the blue paint with a toothbrush. After a washing in warm soapy water and being left to dry I was left with the 3 pieces shown in Figure 1 (at left). From this point it is imperative to handle only with gloves to avoid skin oils that will prevent paint adhesion.

The next step was to transfer the shell to the paint booth. I have a wire holder I bought years ago and shows a lot of the history of my paint projects. I am still using Floquil Polly Scale paints and thin them with about 15% thinner. The first coat is then applied with an Aztec airbrush (Figure 2).

The next step is always fun, which is to mask off all the areas to be left green. This is a challenging step to try to adequately seal the edges. The blue tape shown is not the standard blue painter's tape, it is very thin and much more rubbery. I find it does best at making a good seal with hood doors, etc. (Figure 3).

At the next step, which is to paint the black, some people will first spray green over the edges to complete the sealing process, but I find 2 secrets help to be able to avoid that step. First, I try to spray the black on in very light coats so that it is dry as it hits the model. Second, I learned a trick from a custom painter at a train show – hold the model upside down as you spray on the roof color! So simple, but so helpful.

Taking off the masking tape is always a nerve wracking moment, hoping you haven't bled underneath the tape and that the tape doesn't peel off the existing layer of paint. To prevent the later I take the masking tape initially and stick it to a piece of plate glass I keep by my desk to remove just a little adhesive. Then to remove the tape itself its best to peel the tape right back on itself and not to pull upward at all (Figure 4).

At this point I hand paint out any imperfections, as well as hand paint the walkways and steps. Polly Scale full strength applied with a micro-brush works great with this (Figure 5).

After the painting is finished, its time for the decals. And to use this as a teachable moment - please try to be organized and have all your supplies ready when you start and keep them together. I had a meeting to go to for 4 days, so I took all my decaling supplies to do in the hotel room in the evening, except I forgot the setting solutions. When I returned home and unpacked, the decals sheets got left on the counter - to be thrown out with the newspaper recycling. Since hobby shops with a good in stock supply of decals are becoming fewer and much farther between, that often means ordering.

When the decals did come in I pulled out my picture of 1377 and started the process with Microscale 60-25 BN diesel decals. I use their solutions and find I am able to decal directly onto the Polly Scale surface. After that I painted the corner handrails with a microbrush and sprayed the entire shell with Dull Cote.

Turning to the chassis, I then painted the blue fuel tank and trucks from the ex-Mopac chassis black. This step does require some care to not get any paint on the wipers and the contact points with the frame. I had already installed a DCC decoder, so I was ready to re-assemble (Figure 6)..

At that point I re-installed the window glazing and horns and was able to deliver the locomotive to the BN yard to start earning its keep (below).





's GP15-1s on the



The Frisco merger with the BN brought 431 new locomotives to the BN roster. Most were of models BN already had, but the MP15, GP15-1, GP40-2 and SD38-2 were new additions to the fold.

The GP15-1 was essentially a road-switcher version of the MP15 (DC). It had old style "Dash 1" electrical components (hence the "-1" designation) and conventional air filters instead of the more modern inertial air filters as on GP38-2s. Probably its most distinguishing external feature is the tunnel-motor-style cooling system. Frisco's units were also somewhat unique in the placement of a clear lens Pyle-National Gyrallite recessed into the top of the nose. This was a feature that made it easy to spot an ex-Frisco unit of almost any model on the BN after having been painted green.

GP15-1s can handle fairly tight 23 degree curves¹, just like the MP15. This is in contrast to most modern 4-axle units like the GP28-2 that need curves of at least 19 degrees, and even better than older 4-axle units like the GP9 that could handle 21 degree curves. Most 6-axle units need 16 degrees, while older switchers like the SW1200 and SW1500 can handle 30 degrees.

Frisco had 25 GP15-1s on it roster at the time of the merger, all just over three years old (the units were built in August and September of 1977). They were purchased to replace aging GP9s that were being sold off, and to have a versatile, light-weight unit that could be used in yard, local and main line service. This was in contrast to GP38-2s that were too heavy for many locations, and to the MP15s that were restricted to yard duty and local transfer service due to their small cabs and lack of onboard toilets.

When delivered, the units were painted in the standard Frisco Mandarin red and white scheme and numbered 100-124. Since those slots were already taken by several of BN's existing SW7s, renumbering into the 1375-1388 series commenced within two weeks of combined operation of the two railroads and finished less than four months later. One by one they were repainted from Frisco colors into BN's Cascade green, with the last one being completed in June of 1983.

It comes as no surprise that BN assigned the units to the Springfield shops for maintenance. They generally were restricted to run on ex-Frisco trackage, although there is plenty of evidence of them escaping to other parts of the railroad (for example, see the captions with the photos that are associated with this article).

After the BNSF merger the units were once again renumbered, this time into the 1475-1499 series, and restin-ciled for BNSF between 1998 and 2000. Only one unit, the 1478, got repainted (Heritage I), emerging from VMV's paint shop in Paducah, Kentucky the day after Christmas, 1998,

looking for all the world like a brand new unit.

Time has taken its toll. In 2003 five units were retired and sold to Locomotive Leasing Partners. In 2007 five more went to Larry's Truck and Electric, one to National Railway Equipment, and two more to unknown destinations. In 2009 five more went to GATX in a trade for GP38-2s.

At present there are only two GP15-1s left on the roster. One of those is the 1478, the one in Heritage I paint. The other, the 1482, is still green.

Information for this article came from *Diesel Era* Volume 22 Number 1 (January/February 2011), Bob Del Grosso's *Burlington Northern Locomotive Directory* 1992 and *BNSF Railway Company 2006 Locomotive review and Locomotive Diagrams*, Hol Wagner's *Burlington Northern 1977-80 Annual*, Greg McDonnell's *Field Guide to Modern Diesel Locomotives* and www.thedieselshop.us/BNSF.HTML.

¹The higher the degree of curvature the tighter the curve. Some useful conversions between degree of curvature and radius (approximate):

- 30° = 193' (27" in HO scale)
- 23° = 251' (35" in HO scale)
- 21° = 274' (40" in HO scale)
- 19° = 303' (42" in HO scale)
- 16° = 359' (16" in HO scale)

GP15-1 Specifications

Horsepower.....	1,500
Weight.....	240,000 lbs
Length.....	54 ft 11 in
Width.....	10 ft 3 in
Height.....	14 ft 4 in
Fuel Capacity.....	2400 gal
Sand Capacity.....	72 cu ft
Cooling System.....	230 gal
Lubricating Oil.....	165 gal
Prime Mover.....	12-645E
Main Generator.....	D32-D14
Traction Motors.....	D-77B
Gear Ratio.....	62:15
Wheel diameter.....	40 in
Starting Tractive Effort.....	64,400 lbs
Continuous Tractive Effort.....	46,800 lbs
Maximum Speed.....	70 MPH
Minimum Continuous Speed.....	9.3 MPH
Brake System.....	26-L
Dynamic Braking.....	not equipped
Air Conditioning.....	not equipped



(above) Ex-Frisco GP15-1 1391, shown here in Omaha, Nebraska on September 12, 1981, is an example of how the units were renumbered by painting over the exiting Frisco number below the cab window and stenciling on BN and the new number. The bright white paint stands out next to the grimy exterior of the rest of the unit. Photo by David M. Johnson, from the Keith Ardinger collection.

(below) BN GP15 1377 is waiting its next assignment in Omaha, Nebraska on April 16, 1983. Even though EMD calls it a GP15-1, BN shows it as a GP15 on the frame just to the right of its maintenance base in Springfield. Photo by Joe Brockmeyer, from the Keith Ardinger collection.





(above) GP15-1 1482, one of only two left on the BNSF roster as of 2014. The unit is basking in a warm winter's sun in Grand Forks, North Dakota on January 17, 2002. Note that the nose-mounted gyralite has been removed and the mounting notch welded over. Photo by Pat Monahan, from the Keith Ardinger collection.

(below) GP15-1 1478 is the only one of its kind to be repainted by BNSF. On this sunny May 6, 2006 it is leading CSX train Q-231 through Sidney, Ohio. It's quite an unusual consist for a CSX train. Believe it or not, the BNSF unit is the youngest unit of the three (and perhaps is why it is on the point). The GP15-1 was built in 1977, whereas the UP 2846, an SD40-2T (rebuilt ex-SP SD45T-2), was built in 1972 and the UP 3258, an SD40-2, was built in 1974. Photo by Jeff North.

