

Track Standard Drawing Revisions

Listed below are the Engineering Track Standards that have been created, updated and/or revised in the past 6 months.

Any questions, please contact Mike Gilliam at 402-544-2384.

Complete Set of Standard Drawings

9/21/20 - re-organized entire book of Track Standards

0080G – Standard Turnout Applications

10/5/26 – updated entire Standard

0547 – Jump Frog Warning Sign

10/5/26 – removed drawing from Standards

3250B – No. 9 Jump Frog 115lb

10/5/26 – removed verbiage stating “diverging traffic should not exceed 65 cars at one time”, and removed note requiring jump frog warning sign to be installed per Std Dwg 0547

3252B – No. 9 Jump Frog 136lb

10/5/26 – removed verbiage stating “diverging traffic should not exceed 65 cars at one time”, and removed note requiring jump frog warning sign to be installed per Std Dwg 0547

3260B – No. 10 Jump Frog 115lb

10/5/26 – removed verbiage stating “diverging traffic should not exceed 65 cars at one time”, and removed note requiring jump frog warning sign to be installed per Std Dwg 0547

3262B – No. 10 Jump Frog 133lb

10/5/26 – removed verbiage stating “diverging traffic should not exceed 65 cars at one time”, and removed note requiring jump frog warning sign to be installed per Std Dwg 0547

3264B – No. 10 Jump Frog 136lb

10/5/26 – removed verbiage stating “diverging traffic should not exceed 65 cars at one time”, and removed note requiring jump frog warning sign to be installed per Std Dwg 0547

3270B – No. 11 Jump Frog 115lb

10/5/26 – removed verbiage stating “diverging traffic should not exceed 65 cars at one time”, and removed note requiring jump frog warning sign to be installed per Std Dwg 0547

3272B – No. 11 Jump Frog 136/141lb

10/5/26 – removed verbiage stating “diverging traffic should not exceed 65 cars at one time”, and removed note requiring jump frog warning sign to be installed per Std Dwg 0547

6003G – Approved Trackwork Suppliers

8/11/26 – removed Rail One from concrete tie suppliers

0902A – Compromise Joints

6/1/26 – added new note 4 and painting details

Section	Level 1	Level 2	Level 3	Previous Drawing Number	New Drawing Number	Description
Ballast, Roadbed Sections and Geometry	Roadbed Sections	<u>Ballast, Roadbed Sections and Geometry</u>				
		Roadbed Sections				
				0001E	0001	Roadbed Sections For Wood Tie Track Construction
				0002E	0002	Roadbed Sections For Concrete Tie Track Construction
	Ballast			0003B	0003	Roadbed Section For Industrial Track Construction
				0007	0007	Trench Drains
		Ballast				
				0008	0008	Recommended Ballast Section for Renewed Turnouts and Derails
	Geometry			0010E	0010	Ballast and Subballast Gradation Table
				0013A	0013	Grain Size Distribution for Subgrade Soils
		Geometry				
				0015C	0015	Curve Marking Standard
				0016	0016	Vertical Curve Design
				0017A	0017	Facing Point Turnout Arrangement
				0018	0018	Minimum Tangent Distance
				0019A	0019	Superelevation Of Curves-general
				0020D	0020	Superelevation Of Curves - Equilibrium
				0021E	0021	Superelevation Of Curves - 1
				0022E	0022	Superelevation Of Curves - 2
				0023E	0023	Superelevation Of Curves - 3" Unbalance, FRA Max Allowable
				0025E	0025	Rail Marking For Engines, Cars Or Eqpt Clear Of Rd Grade Xings
				0026G	0026	Clearance Point Marking
				0030D	0030	Standard Treatment For End Of Track
				0038L	0038	Standard Minimum Operating Clearances
	Misc			0039	0039	Overhead Cable Warning Marker Sphere
				0050E	0050	Design Data For Turnout Layout
		Misc				
				0075A	0075	Standard Right-of-way Fence
				0076B	0076	High Security Gate At Grade Crossing
					0077	High Security Fencing
Concrete, Wood and Steel Ties and Panels	Concrete Ties			0080L	0080	Standard Turnout Applications
				0090B	0090	Geoweb Underlayment
				0095	0095	Hot Mix Asphalt Underlayment
		<u>Concrete, Wood and Steel Ties and Panels</u>				
		Concrete Ties				
				0201G	0201	Concrete Tie 505S-50 for Safelok III Fasteners
				0202D	0202	Concrete Guard Rail Tie, Grt-up
				0203E	0203	Concrete Grade Crossing Tie For Safelok I Fasteners
				0204G	0204	Concrete Tie 497S For Safelok I Fasteners
				0206F	0205	Concrete Turnout Ties
	Steel Ties			0208B	0206	Concrete Guard Rail Tie For Safelok III Fasteners
				0209B	0207	Concrete Grade Crossing Tie For Safelok III Fasteners
				0215B	0208	Rubber Padded Concrete Ties
				0216A	0209	Concrete Tie UP15 For Safelok III Fasteners
	Wood and Composite Ties			0225A	0210	Concrete Tie 101L For Vossloh W30HH Fastening System
					0211	Standard Guard Rail Tie and Guard Rail Transition Tie For Vossloh W30HH Fastening System
		Steel Ties				
				0205C	0220	Steel Duct Transition Tie For Power Switches
	Panels			0237B	0221	Steel Yard Ties For 6" Base Rail
		Wood and Composite Ties				
				0210F	0230	Wood Cross Ties
	Misc			0211K	0231	Preplating Dimensions for Wood Ties
				0213A	0232	Switch Machine Ties Tapered and Dapped
				250000R3	0233	Ties for Power Switch Layouts
		Panels				
Road Crossings	Concrete Ties			0254	0254	136 LB. Track Panel with 16" Plates and 8'-6" Ties
				0255D	0255	136 LB. Concrete Track Panel
		Misc				
				0220J	0270	Standard Transition Zones
	Steel Ties	<u>Road Crossings</u>				
		Road Crossings				
				0301J	0301	Installation Of Road Crossing With Prefab Timber Panels
				0302B	0302	Light Duty Road Crossing Asphalt with Rubber Seal Sections
	Wood and Composite Ties			0304J	0304	Installation Of Road Crossing With Precast Concrete Panels
				0308B	0308	General Manufacturing Specifications for Road Crossing with Concrete Panels
				0309C	0309	Landing Pad
				0310	0310	Type IV Barricade For Road Crossing Closure
	Panels			0311	0311	Startrack Standard Road Crossing
				0312	0312	Startrack Heavy Duty Road Crossing
				200100R2		
				200102R2		
	Misc			200200R2		
				200201R2	0324 (REMOVED)	Precast Concrete Panels for 9' Long Wood Ties (9W)
				200300		
				200302R1	0326	Precast Concrete Panels for 10' Long Concrete Ties (10C)
Tie Plates, Fasteners and Accessories	Concrete Ties			200400R2		
				200401R1	0328	Precast Concrete Panels for 8'-6" Long Concrete Ties (85C)
				200900R4	0330	Typical Details for Concrete Panels
				200902	0331	Curved Concrete Panels
	Steel Ties				0332	Scooter Crossing
		<u>Tie Plates, Fasteners and Accessories</u>				
		Fasteners and Fastening Accessories				
				0401D	0401	Safelok III Clip and Insulator Assembly
	Panels			0402E	0402	Safelok III Integral Abrasion Pad Assembly
				0408C	0404	Concrete Tie 2-Part Pad Assembly for E-Clip Fastening System
				0415D	0406	Insulators For Safelok I Fastening System
				0416E	0407	Abrasion Pad Assembly for Safelok 1
	Misc			0418A	0408	Insulators For E-Clip Fastening System On Concrete Ties
				0420C	0409	Coach Screw, Insert, and Helical Washer For Concrete Ties
				0427B	0410	Safelok III Assembly For Insulated Joint Bar
				0428	0411	Safelok III Clip Assembly for Non-Insulated Joint Bar
	Steel Ties			0429	0412	Concrete Tie With Safelok III Clip Assembly
				0430D	0413	Concrete Tie Safelok I Clip Assembly
				0432D	0414	Insulated Joint Clip Assembly for Safelok 1 on Concrete Ties
				0406B		
	Misc			0414B	0415	Steel Tie Fastening Components
				0433A		

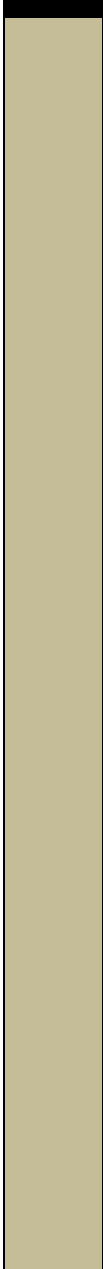
Tie Plates, Fasteners and Accessories	Fasteners and Fastening Accessories		130005R3	0416	6" Track Spike	
			0453I	0417	Spiking Pattern	
			0454A	0418	Evergrip Lag Screw	
			0457B	0419	Heavy Duty Rail Anchor	
			0460I	0420	Rail Anchor Patterns For NewRail Installations	
			0461C	0421	Rail Anchor Patterns For CWR On Open Deck Bridges	
			0464	0422	Vossloh W30HH Fastening System	
			0465	0423	Vossloh W30HH Tension Clamp And Lag Screw	
			0466	0424	Vossloh W30HH Guide Plate And Abrasion Assembly	
			0468	0425	Vossloh W30HH Assembly For Insulated And Non-Insulated Joint Bars	
			130110	0429	Safelok, Non-insulated weld-on shoulder p/n 38250	
			130111	0430	Safelok, Insulated weld-on shoulder p/n 36606 and Cast spacer p/n 36699	
			130800R4	0431	Rectangular head timber coach screw	
			131500R4	0432	3/4" Self Tapping Timber Screw	
			132000R3	0433	Spring clips for safelok fasteners	
			132100R1	0434	Joint bar spacer and spring clip	
			132400	0435	Weld-on shoulder for Pandrol clips	
		132500R2	0436	e2055 Clip		
		132600R4	0437	e2063 Clip for Use on Joint Bars		
		132700R1	0438	Pandrol Clip Type PR601A		
		135010R1	0439	Bar Stock Anchor For 5 ½" And 6" Base Rail		
		132200	0441	Insulated Joint Bar Clip, Cast Pin and Insulator		
	Tie Plates	Tie Plates				
			0438	0460	Double Shoulder Tie Plate 5 1/2" And 6" Base Rail SP	
			0439A	0461	14" Double Shoulder 6-Hole Tie Plate For 6" Base Rail	
			0440C	0462	Double Shoulder Tie Plate For 5 1/2 Base Rail	
			0441C	0463	14" Double Shoulder 8-Hole Tie Plate For 6" Base Rail	
			0442D	0464	Double Shoulder 6-Hole Tie Plate For 6" Base Rail	
			0445A	0465	Weld-On Mini-Plate For Steel Switch Ties 5 1/2" and 6" Base Rail	
			0447D	0466	E-Clip Cast Plate For Use On Bridges	
			0455A	0467	Curve Block Tie Plates	
			0462D	0468	Victor Plate	
			263000R4	0469	Rolled Tie Plate 5 1/2" or 6" Rail Base for Use with E-Clips	
			263300R1	0470	Modified e-Clip Plate For Tight Areas in Turnouts With 6" Base Rail	
Roadway Signs and Track Marking						
Roadway Signs and Track Marking		Roadway Signs and Track Marking				
			0501	0501	Letters And Numerals For Roadway Signs	
			0502B	0502	Single Letter And Numeral Sign	
			0505	0503	Speed Test Sign	
		0506B	0504	High Threat Urban Area Sign		
		0507B	0505	Structure Marker Signs		
		0510	0506	Descending Grade Sign and Reflectors		
		0513	0507	Clearance Warning Signs		
		0515	0508	Mile Post Equation Sign		
		0518	0509	Private Roadway Grade Crossing Sign Within Quiet Zone		
		0519B	0510	Culvert Location Tie Marking		
		0520	0511	Marking For Track Identification		
		0521	0512	Marking For Trench Drains		
		0522	0513	End Of Track Sign		
		0523	0514	Critical Lead Marking		
		0525C	0515	Derail Sign		
		0526	0516	Snow Flanger Sign		
		0527	0517	Hazard Signs		
		0528	0518	Caution Sign For Unloading Tank Cars		
		0529L	0519	Public Highway Crossing Sign		
		0530G	0520	Emergency Phone Number at Road Crossing Sign		
		0531F	0521	Private Roadway Grade Crossing Sign		
		0532	0522	Private crossing closure notification sign		
		0533A	0523	Occupied Camp Car Sign Assembly		
		0534A	0524	Live Track Warning Signs		
		0535F	0525	Mile Post Marker		
		0536	0526	State Line Sign		
		0537A	0527	Temporary Rail Mounted Flag Holder		
		0538F	0528	Private Property And No Dumping Signs		
		0539B	0529	Permanent Speed Restriction Signs		
		0540	0530	No Trespassing Rail Marking		
		0541C	0531	Flags For Temporary Track Conditions		
		0542B	0532	Placement Of Flags For Temporary Track Conditions		
		0543H	0533	Station Signs For Other Than CTC Territory		
		0544F	0534	Vertical Control Point Sign		
		0545	0535	Non-Controlled Crossing O.O.S. Sign		
		0547E	0536	Stop Sign		
		0548A	0537	Yield Sign		
		0549	0538	Yard Limit Sign		
		0550C	0539	End of UPRR Maintenance Sign		
		0551B	0540	Top Of Rail Marker For Use Under Structures		
		0552A	0541	Top Of Rail Markers For Use At Tunnels		
		0554	0542	Track Breach Protection Sign		
		0555A	0543	Whistle Signal Signs		
		0556	0544	Quiet Zone Marker		
		0560B	0545	Moveable Point Frog Signs		
		0561B	0546	Sign Locations For Moveable Point Frog Turnouts		
		0565	0549	Radio Display Sign		
		0574	0550	Right Of Way Access Road Bridges Removed From Service		
		0575B	0551	Standard Barricade for Placement at Bridge Backwalls		
		0577	0552	Power Assisted Switch Cabin Sign		
		0578	0553	Left Hand Signal Sign		
		0580	0554	Remote Control Locomotives Sign (General)		
		0581	0555	Remote Control Locomotives Sign (Entrances)		
		0582B	0556	Remote Control Warning Sign		
		0583	0557	Remote Control Locomotive Signs - Entrances- Dual Language		
		0584	0558	Remote Control Locomotive Signs - General -Dual Language		
		0585A	0559	Remote Control Zone Fold Down Sign		
		0582	0561	Begin and End 6.14 Territory Sign		
		0593	0562	Begin and End Track Warrant Control Signs		
		0594	0563	Begin and End CTC Signs		
		0596C	0564	Station and Control Point Sign For CTC		
		220000R5	0565	Identification Tags for Track Components		
			0566	Container Label		
			0567	Direct To Locomotive (DTL) Fueling Sign		

				0568	Speed Restriction Fold Down Sign		
				0569	Tunnel Station Sign		
			0599K	0599	Sign Post Specifications And Installation Instructions		
		Rail Sections					
Rail Sections		Rail Sections					
			0700A	0701	75 Lb. Through 76 Lb. Rail Sections		
			0705A	0702	80 Lb. Through 85 Lb. Rail Sections		
			0710A	0703	90 Lb. Rail Sections		
			0715A	0704	100 Lb. Through 113 Lb. Rail Sections		
			0720A	0705	112 Lb. And 115 Lb. Rail Sections		
			0725A	0706	119 Lb. Through 132 Lb. Hf And 140 Rail Sections		
			0730B	0707	133 Lb. Rail Section		
			0735A	0708	132 Lb. And 136 Lb. Rail Sections		
			176500R2	0709	136 RE Lb. Rail Section		
			177000R4	0710	141 Lb. Rail Section		
			0745	0721	Beveling Rail Ends and Deburring Bolt Holes		
			0746A	0722	Specifications For Rail Sections And Rail Drilling		
			0747	0723	Tee Rail Sections And Dimensions		
			0748B	0724	Rail Identification Chart		
		Joint Bars, Transition Rails and Bolts and Accessories		Joint Bars, Transition Rails and Bolts and Accessories			
				Joint Bars			
	0904H			0901	Miscellaneous Joint Bars		
	0948B			0902	Compromise Joints		
	0960S			0903	Insulated Joint Plug Rails		
	0961B			0904	Transition Insulated Joint Plug Rails		
	190030			0905	Poly Insulated Joint 141-136-132 RE Rail		
Transition Rails	Transition Rails						
				0941	0920	Compromise Transition Rail 133 Lb. To 115Lb. Worn	
				0942A	0921	Compromise Transition Rail 115 Lb. To 90 Lb. Worn	
				0943B	0922	Compromise Transition Rail 136 Lb. To 133 Lb. Worn	
				0944B	0923	Transition Rail 141 Lb. To 132 Lb. Worn	
				0945B	0924	Transition Rail 136 Lb. To 132 Lb. Worn	
				0946E	0925	Compromise Transition Rail 141 Lb. To 133 Lb. Worn	
				0947B	0926	Compromise Transition Rail 136 Lb. To 115Lb.	
				0962	0927	Transition Rail 133 Lb. To 133 Lb. Worn	
					0928	Transition Rail 115 Lb. To 115 Lb. Worn	
Bolts and Accessories	Bolts and Accessories						
				0949C	0940	Reinforcement Weld Straps For Field Welds 115 and 133 Lb	
				0950H	0941	Track Bolt	
				0471	0942	Heavy Duty Hex Frog And Crossing Diamond Bolt Assemblies	
Frogs and Frog Components				Frogs and Frog Components			
				General Information			
					151905	3000	Frog Identification
					3025 PAGES 1-4	3005	Union Pacific Frog Item Number Listing
					155500R2	3010	Universal Mitered Heel Rails for 136 Lb. Rail Bound Manganese's
					155600R5	3011	Tapered Universal Heel Rails for 136/141 Lb. RBM & Spring Frogs
			156000R1	3015	FGP gauge Plate		
			3000A	3020	Nomenclature For Spring Frog Components		
			3005A	3021	Nomenclature For RBM And SMSG Frog Components		
			3015B	3022	Nomenclature For Moveable Point Frog Components		
			3032D PAGES 1-3	3030	Straight Rail Kits for Frogs on Concrete Turnouts		
		RBM Frogs	RBM Frogs				
			Current RBM Frogs	General Information	159901R2	3040	Specifications for 136/141 Lb. Rail Bound Manganese Frogs
			Current RBM Frogs	Frog Plates	3033B	3042	Retrofit Plates for No. 10-20 RBM Frogs 115-141 Lb
			Current RBM Frogs	General Information	151900R1	3044	Point and Flangeway Dimensions for Heavy Point Conformal RBM Frogs 136/141 Lb.
			Current RBM Frogs	Frog Plans	151000R2	3050	No. 9 Rail Bound Manganese Frog 136 Lb.
			Current RBM Frogs	Frog Plates	151100		
			Current RBM Frogs	Frog Plates	151101	3052	No. 9 Frog Plates Rail Bound Manganese 136 Lb.
			Current RBM Frogs	Frog Plans	153000R2	3060	No. 11 Rail Bound Manganese Frog 136/141 Lb.
			Current RBM Frogs	Frog Plates	153100R1		
			Current RBM Frogs	Frog Plates	153101R1	3062	No. 11 Frog Plates Rail Bound Manganese 136/141 Lb.
			Current RBM Frogs	Frog Plans	157000R4	3070	No. 15 Rail Bound Manganese Frog 136/141 Lb.
			Current RBM Frogs	Frog Plates	157100R1		
			Current RBM Frogs	Frog Plates	157101R1	3072	No. 15 Frog Plates Rail Bound Manganese 136/141 Lb.
			Current RBM Frogs	Frog Plans	158000R1	3080	No. 20 Rail Bound Manganese Frog 136/141 Lb.
			Current RBM Frogs	Frog Plates	158100R1		
			Current RBM Frogs	Frog Plates	158101R1	3082	No. 20 Frog Plates Rail Bound Manganese 136/141 Lb.
			Current RBM Frogs	Frog Plans	159000R1	3090	No. 24 Rail Bound Manganese Frog 136/141 Lb.
			Current RBM Frogs	Frog Plates	159100R1		
Current RBM Frogs	Frog Plates		159101R1	3092	No. 24 Frog Plates Rail Bound Manganese 136/141 Lb.		
Historical RBM Frogs	Frog Plans		3035D	3100	No. 7 Railbound Manganese Frog 12'-0" 133 Lb.		
Historical RBM Frogs	Frog Plans		3040E	3105	No. 9 Railbound Manganese Frog 16'-0" 133 Lb.		
Historical RBM Frogs	Frog Plans		3045G	3110	No. 10 Railbound Manganese Frog 133 Lb.		
Historical RBM Frogs	Frog Plans		3046D	3115	No. 10 Railbound Manganese Frog 26'-2" 115 & 136 Lb.		
Historical RBM Frogs	Frog Plans		3050F	3120	No. 14 Railbound Manganese Frog 133 Lb.		
Historical RBM Frogs	Frog Plans		3051F	3125	No. 14 Railbound Manganese Frog 33' - 9" 115 & 136 Lb.		
Historical RBM Frogs	Frog Plans		3053D	3130	No. 15 Railbound Manganese Frog 29'-3" 115 Lb & 136 Lb		
Historical RBM Frogs	Frog Plans		3054D	3135	No. 16 Railbound Manganese Frog 34' -1" 115 & 136 Lb.		
Historical RBM Frogs	Frog Plans		3070G	3140	No. 20 Railbound Manganese Extended 42' -5" Frog 133 Lb.		
Historical RBM Frogs	Frog Plans		3071D	3150	No. 20 Railbound Manganese Frog 35'-0" 136 Lb (SP)		
Self Guarded Frogs	Self Guarded Frogs						
	General Information		159900	3200	Specifications for 136 Lb. Self Guarded Manganese Frogs		
	General Information		151901	3202	Dimensions for Standard, Point Solid Mang. Frogs		
	Frog Plans		151200	3205	No. 9 Solid Self Guarded, Manganese Frog 136 Lb., 9'-9		
	Frog Plans		3041C	3210	No. 9 SMSG Frog 9'-9" With Safelok Fasteners and Plates		
	Frog Plates		151300R1	3215	No. 9 Frog Plates 41-53 SSG 136 Lb		
	Frog Plans		153200	3220	No. 11 Solid Self Guarded, Manganese Frog 136 Lb., 12'-2 1/2" Long		
	Frog Plates		153300	3222	No. 11 Frog Plates 45-49, & 58-61 SSG 136 Lb		
Jump Frogs	Jump Frogs						
	Frog Plans		3036	3250	No. 9 Jump Frog 115 Lb. Rail		
	Frog Plans		3037	3252	No. 9 Jump Frog 136 Lb. Rail		
	Frog Plans		3042E	3260	No. 10 Jump Frog 115 Lb. Rail		
	Frog Plans		3043G	3262	No. 10 Jump Frog 133 Lb. Rail		
	Frog Plans		3038	3264	No. 10 Jump Frog 136 Lb. Rail		
	Frog Plans		3039	3270	No. 11 Jump Frog 115 Lb. Rail		
	Frog Plans		3044H	3272	No. 11 Jump Frog 136/141 Lb. Rail		
Spring Rail Frogs							

	Spring Rail Frogs	Frog Plans		3049E	3305	No. 11 All Rail Spring Frog 136/141 Lb.
		Frog Plans		3059	3310	No. 15 Solid Spring Frog 115 Lb. Rail
		Frog Plans		3060C	3315	No. 15 Solid Spring Frog 136/141 Lb. Rail
		Frog Plans		3083C	3320	No. 20 Solid Spring Frog 136/141 Lb. Rail
		Frog Plans		3086A	3330	No. 24 Solid Spring Frog 136/141 Lb. Rail
		Frog Plans		3047F	3350	No. 10 All Rail Spring Frog 133 Lb.
		Frog Plans		3048D	3355	No. 10 All Rail Spring Frog 136 Lb SP Tie Spacing
		Frog Plans		157	3360	No. 14 Extended 40'-2" 136 Lb Spring Frog SP Design
		Frog Plans		3052F	3370	No. 14 Manganese Insert Spring Frog 133 Lb.
	Moveable Point Frogs	Moveable Point Frogs				
		Frog Plans		3080E PAGE 1 AND 2	3400	No. 20 Moveable Point Frog, 133 Lb.
		Frog Plans		3085A	3410	No. 24 Moveable Point Frog, 136/141 Lb.
		Frog Plans		3090C PAGE 1 AND 2	3420	No. 30 Moveable Point Frog, 133 Lb.
	Crossing Diamonds	General Information		2252A	3430	Point Clamps For Asymmetrical Points And MPF's
		Crossing Diamonds				
	Crossing Diamonds	General Information		3020B PAGE 1 AND 2	3500	Part Identification For Crossing Frogs
		Guard Rails				
	Guard Rails	Guard Rails				
				4000E	4001	Inner Guard Rail
				4005E PAGE 1 AND 2	4002	Double Inner Guard Rail For Open Deck Bridges
				4015G PAGE 1 AND 2	4003	Double Inner Guard Rail For Ballast Deck Bridges
				4016	4004	Inner Guard Rail Plates for Concrete Ties
				4019D	4005	Adjustable Frog Guard Rails For Wood Turnouts 15'-0" and
				4030C	4006	Adjustable Frog Guard Rails For Concrete Turnouts 15'-0" and 26'-0"
				4031	4007	Skewed Adjustable Guard Rail For No. 24 Semi-Tangential Turnout
				4090F	4008	Frog Guard Rail Settings For Turnouts
				160100R5	4009	13'-0", 19'-6", and 26'-0" Boltless Adjustable Guard Rails - 132 - 141 Lb
				160200	4010	No. 9 & 11 Turnout Self-Guarded Frog Traffic Rail Plates
				160800	4011	Specifications For 136 Lb Adjustable Guard Rails
	Switches and Switch Components	Switches and Switch Components				
		Switch Plans				
		UP 133# Switch Plans		1400C		16'-6" Standard 133 Lb Switch Plan
		UP 133# Switch Plans		1405E PAGE 1 AND 2	1600	16'- 6" Premium Wood 133 Lb. Re Switch Plan
		UP 133# Switch Plans		1505E	1610	24'-0" Premium Wood 133 Lb. Re Switch Plan
		UP 133# Switch Plans		1805F	1620	39'-0" Premium 133 Lb. Re Switch Plan
		Current Switch Plans		1850B PAGES 1-3	1800	82'-0" Concrete #30-133 Lb Switch Plan
		Switch Components				
		Switch Points	Current Switch Points	1300F PAGE 1 AND 2	1300	Switch Points Other Than 133 Lb.
		Switch Points	General Specifications	249902R1		Specification for 136/141 Lb. Switch Points
		Switch Points	General Specifications	249903R1	1307	Specification for 136/141 Lb. Manganese Switch Point Tip Castings
		Switch Points	Switch Points (Historical)	1390 PAGE 1 AND 2	1310	Replacement Components For 16'-6" Samson Point Switch On 90LB Rail
		Switch Points	Heel Blocks	241400R1	1315	Floating Heel Block 132/141 Lb.
		Switch Points	Heel Blocks	1030B	1316	Floating Heel Block Joint Assembly
		Switch Points	Heel Blocks	1035A	1317	Floating Heel Block For Extended Switch Points
		Switch Points	Heel Blocks		1318	Bolted Heel Assembly for Hump Switches 5 Hole Bent Joint Bar
		Switch Points	Current Switch Points	241100R3		
		Switch Points	Current Switch Points	241101	1320	No. 9 16'-6" Samson Switch Point, 39'-0" Point Rail
		Switch Points	Current Switch Points	243100R5		
		Switch Points	Current Switch Points	243101R3	1325	No. 11 19'-6" Curved Samson Switch Point, 40'-7 1/2" Point Rail
		Switch Points	Current Switch Points	245100R6		
		Switch Points	Current Switch Points	245101R3	1330	No. 15 26'-0" Curved Samson Switch Point 136/141 Lb. 40'-10" Point Rail
		Switch Points	Current Switch Points	246100R9		
		Switch Points	Current Switch Points	246101R1	1335	No. 20/24 39'-0" Curved, Samson Switch Point, 136/141 Lb. 45'-9" Point Rail
		Switch Points	Current Switch Points	1507A	1340	136/141 Lb. Switch Points For No. 24 Semi-Tangential Turnout
		Switch Points	Switch Point Guards	1200A	1351	Adj. Switch Point Guard For Racor Security Rail Brace
		Switch Points	Switch Point Guards	1205A	1352	Adj. Switch Point Guard For Conley Rail Brace
		Switch Points	Switch Point Guards	1210A	1353	Adj. Switch Point Guard For Racor Adjustable Rail Brace
		Switch Points	Switch Point Guards	1215A	1354	Adj. Switch Point Guard For Pettibone Rail Brace
		Switch Points	UP 133# Switch Points	1406E PAGE 1 AND 2	1605	16'-6" Switch Points For 133 Lb. Rail
		Switch Points	UP 133# Switch Points	1506D PAGE 1 AND 2	1615	24'-0" Switch Points For 133 Lb. Rail
		Switch Points	UP 133# Switch Points	1810D PAGES 1-4	1621	39'-0" Premium 133 Lb. Samson Switch Points (std And Extended)
		Stock Rails		249901R1	1400	Specification for 136/141 Lb. Stockrails
		Stock Rails		241500R1	1405	Straight "Universal" and Bent Samson Stock Rails 136/141 Lb.
		Stock Rails		1100F	1410	Stock Rails 115 - 136 Lb
		Stock Rails		1101A	1490	136/141 Lb. Stock Rails For No. 24 Semi-Tangential Turnout
		Switch Plates	Current Switch Plates	243309R1	1525	Riser Slide Plates For All 136/141 Lb. Turnouts
		Switch Plates	Current Switch Plates	241306R1	1540	Brace and Slide Plates For All 136/141 Lb Turnouts
		Switch Plates	Current Switch Plates	0485G	1541	Adjustable Rail Braces And Associated Plates
		Switch Plates	Current Switch Plates	0486	1542	Brace Plate 90 - 110 Lb Rail Sizes
		Switch Plates	Current Switch Plates	241309R6	1550	Switch Plate Roller Plates and Roller Assembly 136/141 Lb.
		Switch Plates	UP 133# Switch Plates	1900E PAGE 1 AND 2	1625	Switch Plates And Packages For 16'-6", 24'-0" And 39'-0" 133 Lb. Rail
		Hollow Steel Ties		1450B PAGES 1 AND 2	1570	No. 11 Hollow Switch Tie Assembly 136/141 Lb.
		Hollow Steel Ties		1600B PAGES 1 AND 2	1571	No. 15 Hollow Switch Tie Assembly 136/141 Lb.
		Hollow Steel Ties		1700D PAGES 1-3	1572	No. 20/24 Hollow Switch Tie Assembly 136/141 Lb.
		Switch Components				
		Switch Stands / Targets / Rods	General Information	2020D 0586A	2100	Switch Targets
		Switch Stands / Targets / Rods	General Information	2205	2103	Switch Stand Target Identification Markings
		Switch Stands / Targets / Rods	General Information	2050	2105	Switch Padlock
		Switch Stands / Targets / Rods	General Information	2250A	2107	Switch Point Clamp
		Switch Stands / Targets / Rods	General Information	2101A	2115	Switch Stand Placement
		Switch Stands / Targets / Rods	General Information	2225A	2120	Method For Labeling Spiked Switch Lock
		Switch Stands / Targets / Rods	Current Rods	2175B	2125	Connecting Rod Assemblies
		Switch Stands / Targets / Rods	Current Switch Stands	2103A	2130	No. 112E High Switch Stand
		Switch Stands / Targets / Rods	Current Switch Stands	2111F PAGE 1 AND 2	2132	36-E And 36-EH Switch Stands



Switch Stands / Targets / Rods	Current Switch Stands	2115A	2134	Switch Stand No. 22 Automatic Safety
Switch Stands / Targets / Rods	Current Switch Stands	2116C	2136	No. 22-E Switch Stand
Switch Stands / Targets / Rods	Current Switch Stands	2120A	2138	No. 1003ARS Automatic Switch Stand
Switch Stands / Targets / Rods	Current Switch Stands	2121A	2140	No.1004ARS Manual Switch Stand
Switch Stands / Targets / Rods	Historical Switch Stands	2100A	2150	No. 6 High And No. 1 Low Switch Stands
Switch Stands / Targets / Rods	Historical Switch Stands	2110B	2155	No. 36-D & No. 36-H Switch Stands
Switch Stands / Targets / Rods	Current Switch Stands	2135I PAGES 1-3	2160	Installation Of Model 10 Electric Lock
Switch Stands / Targets / Rods	Current Rods	2200F PAGE 1 AND 2	2170	Spring Switch Components
Switch Stands / Targets / Rods	Current Rods	241600R3	2190	No. 1 Switch Rod For Manual Switch and Nos. 2 and 3 Rods For Manual and Power Switches
Switch Stands / Targets / Rods	Current Rods	241601R5	2195	No. 1 & No. 4 Switch Rods For Power Switch
Switch Stands / Targets / Rods	Current Rods	0475	2196	Insulated gauge Rod
Switch Stands / Targets / Rods	UP 133# Rods	2230A	1690	Horizontal Switch Rods For 133 Lb. Re Rail
Switch Stands / Targets / Rods	UP 133# Rods	2235I PAGE 1 AND 2	1691	Vertical Switch Rods For Points Drilled 2 7/8 Above Base 133 Lb. Rail
Switch Stands / Targets / Rods	Current Switch Stands	136000R3	2165	9" Switch Latch Hook
Switch Rollers / Plates		2220C	2200	Switch Point Roller & Plate Assembly For 16'-6" & 24'-0" Switches
Switch Rollers / Plates		2222D	2210	Switch Point Roller & Plate Assembly For 39'-0" Wood Switch
Switch Rollers / Plates		2223C PAGE 1 AND 2	2230	Ekoslide Switch Point Roller
Switch Rollers / Plates		2245D	2240	Auxiliary Throwing Device For Wood No. 20 Turnouts



Turnouts and Turnout Components				
Turnout General Information				
Turnout Information		5001B	5001	Nomenclature for Most Turnouts
Turnout Information		349900R1	5002	Specifications for 136 Lb. Turnout Panels
Turnout Information		5002	5003	Switch Machine Configuration For Power Operated Switches
Turnout Information		5090C PAGES 1-8	5004	Turnback Curve Layout
Turnout Information		151910R1	5005	Wire Bonding Layout for all Turnouts
Wood Turnout Layouts				
Wood Turnout Layouts	Current Wood Turnouts	5000G PAGES 1-4	5007	No. 7 Turnout 136 Lb Rail
Wood Turnout Layouts	Current Wood Turnouts		5008	No. 8 Turnout 136 Lb Rail
	Current Wood Turnouts	341000R5		No. 9 Turnout 136 Lb. Panel No. 1
	Current Wood Turnouts	341001R4		No. 9 Turnout 136 Lb. Panel No. 2
	Current Wood Turnouts	341002R5		No. 9 Turnout 136 Lb. Panel No. 3 With Optional RBM Frog
	Current Wood Turnouts	341003R2		No. 9 Turnout 136 Lb. Panel No. 4
	Current Wood Turnouts	341004R2		No. 9 Turnout 136 Lb. Panel No. 3 With Optional SMSG Frog
	Current Wood Turnouts	341100		No. 9 Turnout 16'-6" Straight Switch, Turnout Geometry
Wood Turnout Layouts	Current Wood Turnouts	341200R5	5009	No. 9 Turnout With RBM and SMSG Frogs Bill of Materials
Wood Turnout Layouts	Current Wood Turnouts	NA	5010	Short No. 9 Turnout 136 Lb. Rail
	Current Wood Turnouts	343000R8		No. 11 Turnout 136/141 Lb. Panel No. 1
	Current Wood Turnouts	343001R7		No. 11 Turnout 136/141 Lb. Panel No. 2
	Current Wood Turnouts	343002R5		No. 11 Turnout 136/141 Lb. Panel No. 3 With Optional RBM Frog
	Current Wood Turnouts	343003R3		No. 11 Turnout 136/141 Lb. Panel No. 4
	Current Wood Turnouts	343004R2		No. 11 Turnout 136/141 Lb. Panel No. 3 With Optional SMSG Frog
	Current Wood Turnouts	343005R4		No. 11 Turnout 136/141 Lb. Panel No. 3 With Optional Jump Frog
	Current Wood Turnouts	343100		No. 11 Turnout 19'-6" Curved Switch, Turnout Geometry
Wood Turnout Layouts	Current Wood Turnouts	343200R12	5011	No. 11 Turnout with RBM, SMSG, Jump and Spring Frogs Bill of Materials
	Current Wood Turnouts	345000R7		No. 15 Turnout 136/141 Lb. Panel No. 1
	Current Wood Turnouts	345001R3		No. 15 Turnout 136/141 Lb. Panels No. 2 and No. 3
	Current Wood Turnouts	345002R3		No. 15 Turnout 136/141 Lb. Panel No. 4
	Current Wood Turnouts	345003R1		No. 15 Turnout 136/141 Lb. Panel No. 5
	Current Wood Turnouts	345100		No. 15 Turnout 26'-0" Curved Switch, Turnout Geometry
	Current Wood Turnouts	345200R7	5015	No. 15 Turnout 136/141 Lb. with RBM and Spring Frogs, Bill of Materials
	Current Wood Turnouts	346000R5		No. 20 Turnout 136/141 Lb. Panel No. 1
	Current Wood Turnouts	346001R3		No. 20 Turnout 136/141 Lb. Panel No. 2
	Current Wood Turnouts	346002R2		No. 20 Turnout 136/141 Lb. Panel No. 3
	Current Wood Turnouts	346003R3		No. 20 Turnout 136/141 Lb. Panel No. 4
	Current Wood Turnouts	346004R1		No. 20 Turnout 136/141 Lb. Panel No. 5
	Current Wood Turnouts	346100		No. 20 Turnout, With 39'-0" Curved Switch, Turnout Geometry
Wood Turnout Layouts	Current Wood Turnouts	346200R6	5020	No. 20 Turnout with RBM and Spring Frogs 136/141 Lb. Bill of Materials
		347000R5		No. 24 Turnout 136/141 Lb. Panel No. 1
		347001R1		No. 24 Turnout 136/141 Lb. Panel No. 2
		347002R3		No. 24 Turnout 136/141 Lb. Panel No. 3
		347003R2		No. 24 Turnout 136/141 Lb. Panel No. 4
		347004R2		No. 24 Turnout 136/141 Lb. Panel No. 5
		347005R1		No. 24 Turnout 136/141 Lb. Panel No. 6
		347006R1		No. 24 Turnout 136/141 Lb. Panel No. 7
		347100R1		No. 24 Turnout 39'-0" Curved Switch, Turnout Geometry
				No. 24 Turnout with RBM and Spring Frogs 136/141 Lb. Bill of Materials
Wood Turnout Layouts	Current Wood Turnouts	347200R7	5024	
Wood Turnout Layouts	Historical Wood Turnouts	5003C PAGES 1 AND 2	5070	No. 8 Standard 115 lb. Yard Turnout
Wood Turnout Layouts	Historical Wood Turnouts	5010C PAGES 1 AND 2	5071	Layout Plans for No. 8 1/2 Yard Turnout
Wood Turnout Layouts	Historical Wood Turnouts	5015F PAGES 1-4	5072	No. 9 Turnout 133 Lb. Rail
Wood Turnout Layouts	Historical Wood Turnouts	5016B PAGES 1 AND 2	5073	No. 9 Turnout SP Design
Wood Turnout Layouts	Historical Wood Turnouts	5020E PAGES 1-3, 5	5075	No. 10 Standard 133 Lb. Turnout
Wood Turnout Layouts	Historical Wood Turnouts	5022B PAGES 1 AND 2	5076	No. 10 Turnout SP Design
Wood Turnout Layouts	Historical Wood Turnouts	5025G PAGES 1-4	5077	No. 10 Premium Wood Turnout 133 Lb. Rail
Wood Turnout Layouts	Historical Wood Turnouts	5037B PAGES 1 AND 2	5080	No. 14 Turnout SP Design
Wood Turnout Layouts	Historical Wood Turnouts	5040D PAGES 1-4	5081	No. 14 Premium Wood Turnout 133 Lb. Rail
Wood Turnout Layouts	Historical Wood Turnouts	5041B PAGES 2-3	5082	No. 14 133 Lb. Mainline Turnout
Wood Turnout Layouts	Historical Wood Turnouts	5047C PAGES 1-3	5085	No. 15 Turnout
Wood Turnout Layouts	Historical Wood Turnouts	5049B PAGES 1-3	5087	No. 16 Turnout MP Design
Wood Turnout Layouts	Historical Wood Turnouts	5052B PAGES 1-3	5090	No. 20 Turnout SP Design
Wood Turnout Layouts	Historical Wood Turnouts	5055F PAGES 1-5	5091	No. 20 Wood Turnout 133 Lb.
Crossover Layouts				

Turnouts and Turnout Components	Crossover Layouts	Current Crossovers	5000G PAGE 5	5030	No. 7 Crossover
	Crossover Layouts	Current Crossovers	5004A PAGES 1-4	5031	No. 9 Crossover
	Crossover Layouts	Current Crossovers	5005A PAGES 1-5	5032	No. 11 Crossover
	Crossover Layouts	Current Crossovers	5006A PAGES 1-5	5033	No. 15 Crossover
	Crossover Layouts	Current Crossovers	5007A PAGES 1-5	5034	No. 20 Crossover
	Crossover Layouts	Current Crossovers	5008A PAGES 1-5	5035	No. 24 Crossover
	Crossover Layouts	Historical Crossovers	5010C PAGES 1 AND 2	5060	No. 8 1/2 Crossover
	Crossover Layouts	Historical Crossovers	5015F PAGE 5	5061	No. 9 Crossover 133 Lb. Rail
	Crossover Layouts	Historical Crossovers	5020E PAGE 4	5062	No. 10 Standard 133 Lb. Crossover
	Crossover Layouts	Historical Crossovers	5041B PAGE 1	5063	No. 14 133 Lb. Crossover
	Crossover Layouts	Historical Crossovers	5047C PAGE 4	5064	No. 15 Crossover
	Crossover Layouts	Historical Crossovers	5056A PAGE 1 AND 2	5065	No. 20 Main Line Crossover 133 Lb.
	Steel Tie Turnouts				
	Steel Tie Turnouts		5017G PAGE 1 AND 2	5040	No. 9 Steel 136 Lb. Turnout
	Steel Tie Turnouts		5019B PAGES 1-3	5041	No. 10 Steel Yard Turnout 133 Lb. Rail
	Steel Tie Turnouts		5032C PAGES 1 AND 2	5042	No. 11 Steel 136 Lb. Turnout
	Concrete Turnouts				
	Concrete Turnouts		5030G PAGES 1-4	5050	No. 10 Concrete Turnout 133 Lb. Rail
	Concrete Turnouts		5035E PAGES 1-4	5051	No. 11 Concrete Tie Turnout 136/141 Lb.
	Concrete Turnouts		5045E PAGES 1-4	5052	No. 14 Concrete Turnout 133 Lb. Rail
	Concrete Turnouts		5048B PAGES 1-5	5053	No. 15 Concrete Tie Turnout 136/141 Lb.
	Concrete Turnouts		5060L PAGES 1-6	5054	No. 20 Concrete Turnout 136/141 Lb.
	Concrete Turnouts		5065D PAGES 1-6	5055	No. 24 Concrete Turnout 136/141 Lb.
	Concrete Turnouts		5066B PAGES 1-6	5056	No. 24 136/141 Lb Semi-Tangential Concrete Turnout
	Concrete Turnouts		5070D PAGES 1-6	5057	No. 30 Concrete Turnout - 133 Lb
	Turnout Plates				
	Turnout Plates	Current Turnout Plates	241307	1500	No. 9 Turnout Plates
	Turnout Plates	Current Turnout Plates	243307R1	1505	No. 11 Turnout Plates
	Turnout Plates	Current Turnout Plates	245307R2	1510	No. 15 Turnout Plates
	Turnout Plates	Current Turnout Plates	246307R1	1515	No. 20 Turnout Plates
	Turnout Plates	Current Turnout Plates	247307R1	1520	No. 24 Turnout Plates
	Turnout Plates	UP 133# Turnout Plates	1904E	1640	No. 7 and No. 9 133 Lb Turnout Plates
	Turnout Plates	UP 133# Turnout Plates	1905D PAGE 1 AND 2	1645	No. 10 Turnout Plates for 133 Lb
	Turnout Plates	UP 133# Turnout Plates	1920D PAGE 1 AND 2	1655	No. 14 Premium Turnout Plates - 133 Lb.
	Turnout Plates	UP 133# Turnout Plates	1935E PAGE 1 AND 2	1660	No. 20 Premium Turnout Plates - 133 Lb.
	Insulated Gauge Plates				
	Insulated Gauge Plates	UP 133# Insulated Gauge Plates	1902C PAGE 1 AND 2	1670	No. 7 Wood Turnout Insulated gauge Plates - 133 Lb.
	Insulated Gauge Plates	UP 133# Insulated Gauge Plates	1903D PAGE 1 AND 2	1671	No. 9 Wood Turnout Insulated gauge Plates - 133 Lb.
	Insulated Gauge Plates	UP 133# Insulated Gauge Plates	1906D PAGE 1 AND 2	1672	No. 10 Wood Turnout Insulated gauge Plates - 133 Lb.
	Insulated Gauge Plates	UP 133# Insulated Gauge Plates	1921E PAGE 1 AND 2	1673	No. 14 Wood Turnout Insulated gauge Plates - 133 Lb.
	Insulated Gauge Plates	UP 133# Insulated Gauge Plates	1936D PAGES 1-3	1674	No. 20 Wood Turnout Insulated gauge Plates - 133 Lb.
	Insulated Gauge Plates	UP 133# Gauge Plates	1006A	1680	gauge Plates GP7 and GP16 for 133 Lb 24'-0" Wood Switches
	Insulated Gauge Plates	UP 133# Gauge Plates	1007A PAGE 1 AND 2	1681	gauge Plates GP6A, GP5, GP9, GP14, & GP20 for 133 Lb 39'-0" Wood Switches
	Insulated Gauge Plates	UP 133# Gauge Plates	1025D PAGES 1 AND 2	1685	Machine gauge Plates For Wood Turnouts 133 Lb. Rail
	Insulated Gauge Plates	UP 133# Gauge Plates	1005C PAGE 1 AND 2	1687	Switch gauge Plates For Wood Turnouts 133 Lb. Rail
Turnout Components	Insulated Gauge Plates	Current Insulated Gauge Plates	249900R1	1700	Specification for 136/141 Lb. Insulated gauge Plates
	Insulated Gauge Plates	Current Insulated Gauge Plates	241300R1	1701	No. 9, 11 & 15 Insulated gauge Plate GP1 For Tie No. 1 - Manual
	Insulated Gauge Plates	Current Insulated Gauge Plates	241301	1702	All Turnouts Insulated gauge Plate GP0/2A For Tie No. 0 - Power
	Insulated Gauge Plates	Current Insulated Gauge Plates	241302R1	1703	No. 9, 11, 15, 20 & 24 Insulated gauge Plate GPM1 For Tie No. 1 - Power
	Insulated Gauge Plates	Current Insulated Gauge Plates	241303R1	1704	No. 9, 11, 15, 20 & 24 Insulated gauge Plate GPM2 For Tie No. 2 - Power
	Insulated Gauge Plates	Current Insulated Gauge Plates	241304	1705	All Turnouts Insulated gauge Plate GP For Ties No. 6A & 10A
	Insulated Gauge Plates	Current Insulated Gauge Plates	241305R1	1707	No. 9 & 11 Insulated gauge Plate GP5 & GP9 For Ties No. 5 & 9
	Insulated Gauge Plates	Current Insulated Gauge Plates	241311R1	1709	No. 9 Insulated gauge Plate GP14 on Tie No. 14
	Insulated Gauge Plates	Current Insulated Gauge Plates	241312R1		No. 9 Insulated gauge Plate GP23 on Tie No. 23
	Insulated Gauge Plates	Current Insulated Gauge Plates	241313R1		No. 9 Insulated gauge Plate GP32 on Tie No. 32
	Insulated Gauge Plates	Current Insulated Gauge Plates	243311R2	1715	No. 11 Insulated gauge Plate GP17
	Insulated Gauge Plates	Current Insulated Gauge Plates	243312R2		No. 11 Insulated gauge Plate GP31
	Insulated Gauge Plates	Current Insulated Gauge Plates	243313R2		No. 11 Insulated gauge Plate GP38
	Insulated Gauge Plates	Current Insulated Gauge Plates	245300R1	1720	No. 15 Insulated gauge Plate GP5
	Insulated Gauge Plates	Current Insulated Gauge Plates	245301R1		No. 15 Insulated gauge Plate GP12
	Insulated Gauge Plates	Current Insulated Gauge Plates	245310R2		No. 15 Insulated gauge Plate GP26
	Insulated Gauge Plates	Current Insulated Gauge Plates	245311R2		No. 15 Insulated gauge Plate GP38
	Insulated Gauge Plates	Current Insulated Gauge Plates	245312R2		No. 15 Insulated gauge Plate GP50
	Insulated Gauge Plates	Current Insulated Gauge Plates	246311R1	1725	No. 20 Insulated gauge Plate GP35
	Insulated Gauge Plates	Current Insulated Gauge Plates	246312R2		No. 20 Insulated gauge Plate GP58
	Insulated Gauge Plates	Current Insulated Gauge Plates	246313R2		No. 20 Insulated gauge Plate GP72
	Insulated Gauge Plates	Current Insulated Gauge Plates	246300R1	1730	No. 20/24 Insulated gauge Plates GP5 & GP13
	Insulated Gauge Plates	Current Insulated Gauge Plates	246301R1		No. 20/24 Insulated gauge Plates GP9 & GP20
	Insulated Gauge Plates	Current Insulated Gauge Plates	247310R1	1740	No. 24 Insulated gauge Plate GP32
	Insulated Gauge Plates	Current Insulated Gauge Plates	247311R1		No. 24 Insulated gauge Plate GP46
	Insulated Gauge Plates	Current Insulated Gauge Plates	247312R2		No. 24 Insulated gauge Plate GP61
	Insulated Gauge Plates	Current Insulated Gauge Plates	247313R2		No. 24 Insulated gauge Plate GP76
	Insulated Gauge Plates	Current Insulated Gauge Plates	245315R1	1799	"T" Insulator and Lifting Hook Details
Details	Derails				
			2000C PAGE 1 AND 2	2000	Permanent Derail Installation Instructions
			2003B	2003	Portable Derail Lightweight model TS
			2007G	2007	Sliding Derail With Wheel Crowder
			2008B	2008	Close Clearance Derail

				2009A	2009	Sliding Bi-Directional Derail With Wheel Crowder
				2005F	2020	16'-6" Double Switch Point Derail
				2006	2021	Single Switch Point Derail
				2010A	2022	Concrete Tie Double Switch Point Derail
		Misc. and Crossing Diamonds				
Misc. and Crossing Diamonds	Misc. Drawings and Indexes	Misc. Drawings				
				6003A	6002	Grounding Detail for Loading and Unloading Flammable Commodities
				6010O PAGE 1 AND 2	6003	Approved Trackwork Suppliers
				6020	6004	Sand Fence
				6030 PAGE 1 AND 2	6005	High Speed Track Transition Zones for Concrete Tie Grade Crossings
				6032	6007	Bridge Construction Approach Welds
				6040A PAGES 1-3	6008	Wayside Lubricator Installation
				6050A PAGE 1 AND 2	6009	Track Panel Tie Down
				6061	6010	Expansion Joints
	Crossing Diamonds	Crossing Diamonds				
				6060 PAGE 1 AND 2	6060	Crossing Diamonds Torquing Procedure

STANDARD TURNOUT APPLICATIONS

DIVERGES FROM A...

WHERE A(N)...	YARD LEAD OR INDUSTRIAL LEAD (< 15 MPH)	YARD LEAD OR INDUSTRIAL LEAD (> 15 MPH)	WOOD TIE SIDING	TIMBER MAINLINE (LESS THAN OR EQUAL TO 20 TRAINS / DAY)	TIMBER MAINLINE (GREATER THAN 20 TRAINS / DAY)	CONCRETE TIE SIDING	CONCRETE MAINLINE
INDUSTRY TRACK OR SET OUT TRACK	#9 W/ SMSG-FLANGE BEARING**	# 11 W/ SMSG-FLANGE BEARING**	#11 W/ JUMP *	#11 W/ JUMP *	#11 W/ JUMP *	#11 CONC W/ JUMP *	#11 CONC W/ JUMP *
INDUSTRY LEAD WHERE TRACK SPEED ON DIVERGING ROUTE IS 10 MPH OR LESS.	#11 W/ SMSG	# 11 W/ SMSG-FLANGE BEARING**	#11 W/ JUMP *	#11 W/ JUMP *	#11 W/ JUMP *	#11 CONC W/ JUMP *	#11 CONC W/ JUMP *
INDUSTRY LEAD WHERE TRACK SPEED ON DIVERGING ROUTE IS GREATER THAN 10 MPH.	#15 W/ RBM (NO HST)	#15 W/ RBM (NO HST)	#11 W/ SPRG (NO HST)	#15 W/ SPRG (NO HST)	#15 W/ SPRG (WITH HST)	#15 W/ RBM	#15 W/ SPRG (WITH HST)
YARD TRACK	#9 W/ SMSG-FLANGE BEARING**	# 11 W/ SMSG-FLANGE BEARING**	N/A	N/A	N/A	N/A	N/A
YARD LEAD OR SWITCHING LEAD	#11 W/ SMSG	#11 W/ RBM (NO HST)	#11 W/ RBM (NO HST)	#11 W/ RBM (NO HST)	#11 W/ RBM (WITH HST)	#11 W/ RBM	#11 W/ RBM (WITH HST)
SIDING (≤ 10 MPH)	N/A	N/A	N/A	#11 W/ JUMP *	#11 W/ JUMP *	N/A	#11 CONC W/ JUMP *
SIDING (> 10 MPH)	N/A	N/A	N/A	#15 W/ RBM (NO HST)	#15 W/ RBM (WITH HST)	N/A	#15 W/ RBM (WITH HST)

BETWEEN MAIN TRACKS

WHERE A(N)...	TIMBER MAINLINE (LESS THAN OR EQUAL TO 20 TRAINS / DAY)	TIMBER OR CONCRETE MAINLINE (GREATER THAN 20 TRAINS / DAY)
MAIN TRACK (HAND THROW CROSSOVER)	#11 W/ RBM (NO HST)	#11 W/ RBM (WITH HST)
SINGLE MAIN TO MULTIPLE MAIN WHERE DIVERGENT SPEED OF 40 MPH OR LESS IS REQUIRED	#20 W/ RBM (NO HST)	#20 W/ MPF (WITH HST)
MULTIPLE MAIN TRACK (DUAL CONTROL CROSSOVER) WHERE DIVERGENT SPEED OF 40 MPH OR LESS IS REQUIRED	#20 W/ RBM (NO HST)	#20 W/ MPF (WITH HST)
JUNCTIONS WHERE TWO OR MORE MAIN TRACKS CONVERGE AND WHERE DIVERGENT SPEED OF 40MPH OR LESS IS REQUIRED	#20 W/ RBM (NO HST)	#20 W/ MPF (WITH HST)

ABBREVIATIONS: CONC=CONCRETE, MPF=MOVABLE POINT FROG, RBM=RAIL BOUND MANGANESE FROG, SMSG=SOLID MANGANESE SELF GUARDED FROG, SPRG=SPRING, W=WITH, HST=HOLLOW STEEL TIE, SMSG-FLANGE BEARING=SOLID MANGANESE SELF GUARDED FLANGE BEARING FROG

* WHEN LOCATION IS IN A CURVE USE A SPRING FROG

** USE SMSG-FLANGE BEARING FOR NETWORK, REGIONAL AND LARGE LOCAL YARDS. ALL OTHER APPLICATIONS USE A SMSG.

RECOMMENDED SWITCH STAND APPLICATIONS FOR HAND THROW SWITCHES

SWITCH STAND MODEL	MAST HEIGHT	OPERATING CONTROL	TRAILABLE	IN-TRACK APPLICATION
36-EH	HIGH	RAISED TRI-HANDLE	NO	MAIN AND SIDINGS
1008ARS	HIGH	RAISED STRAIGHT HANDLE	NO	MAIN AND SIDINGS
112-E	HIGH	COLUMN HANDLE	NO	MAIN AND SIDINGS
1004ARS	LOW	RAISED STRAIGHT HANDLE	NO	MAIN AND SIDINGS
1003ARS	LOW	RAISED STRAIGHT HANDLE	YES	OTHER THAN MAIN AND SIDINGS
22-E	LOW	RAISED TRI-HANDLE	YES	OTHER THAN MAIN AND SIDINGS
YM-16	LOW	DTMF/NX	YES	OTHER THAN MAIN AND SIDINGS

NOTES:

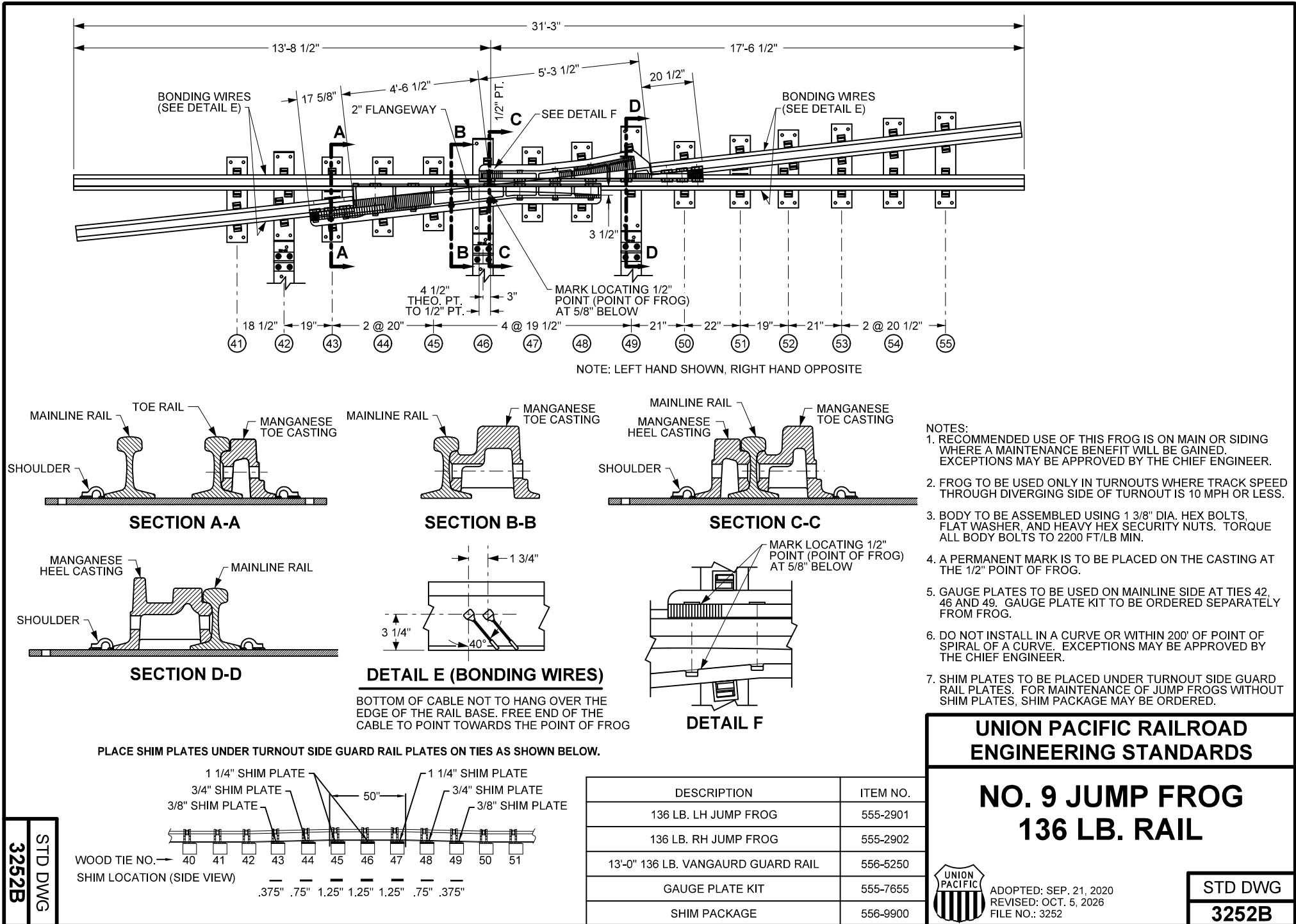
- THIS TABLE IS TO BE USED AS RECOMMENDED DESIGN GUIDELINES.
- AT EACH CROSS OVER WHERE THERE IS MORE THAN ONE FROG, MPF'S ARE NOT TO BE MIXED WITH ANY OTHER FROG TYPES.
- WOOD AND CONCRETE TURNOUTS WILL BE FURNISHED IN 136# RAIL.
- LOCAL CONDITIONS SUCH AS PASSENGER OPS OR CUSTOMER REQUESTS MAY REQUIRE THE USE OF TURNOUTS NOT CONSISTENT WITH THIS MATRIX. EXCEPTIONS MUST BE APPROVED BY THE AVP-MAINTENANCE FOR THE AFFECTED TERRITORY (I.E. SPSCL AND SJRRC ROUTE).
- WHEN CROSSOVERS ARE REQUIRED BETWEEN DIFFERING TRACK TYPES, THE HIGHER CLASS TRACK WILL GOVERN THE TURNOUT NUMBER TO BE USED FOR BOTH TURNOUTS.
- MPF USAGE CONTINGENT ON SUPPORT BY SIGNAL.
- CONCRETE TURNOUT RECOMMENDATIONS ARE FOR FULL TURNOUT REPLACEMENTS. IF JUST THE FROG IS BEING REPLACED, REPLACE WITH EXISTING FROG TYPE.
- WHEN THE APPLICATION REQUIRES A #11 TURNOUT TO BE POWERED, AND GEOMETRY AND CLEARANCE ALLOWS, UPGRADE TO A #15 POWER TURNOUT.

UNION PACIFIC RAILROAD
ENGINEERING STANDARDSSTANDARD TURNOUT
APPLICATIONS

ADOPTED: SEP. 21, 2020
REVISED: OCT. 5, 2026
FILE NO.: 0080

STD DWG

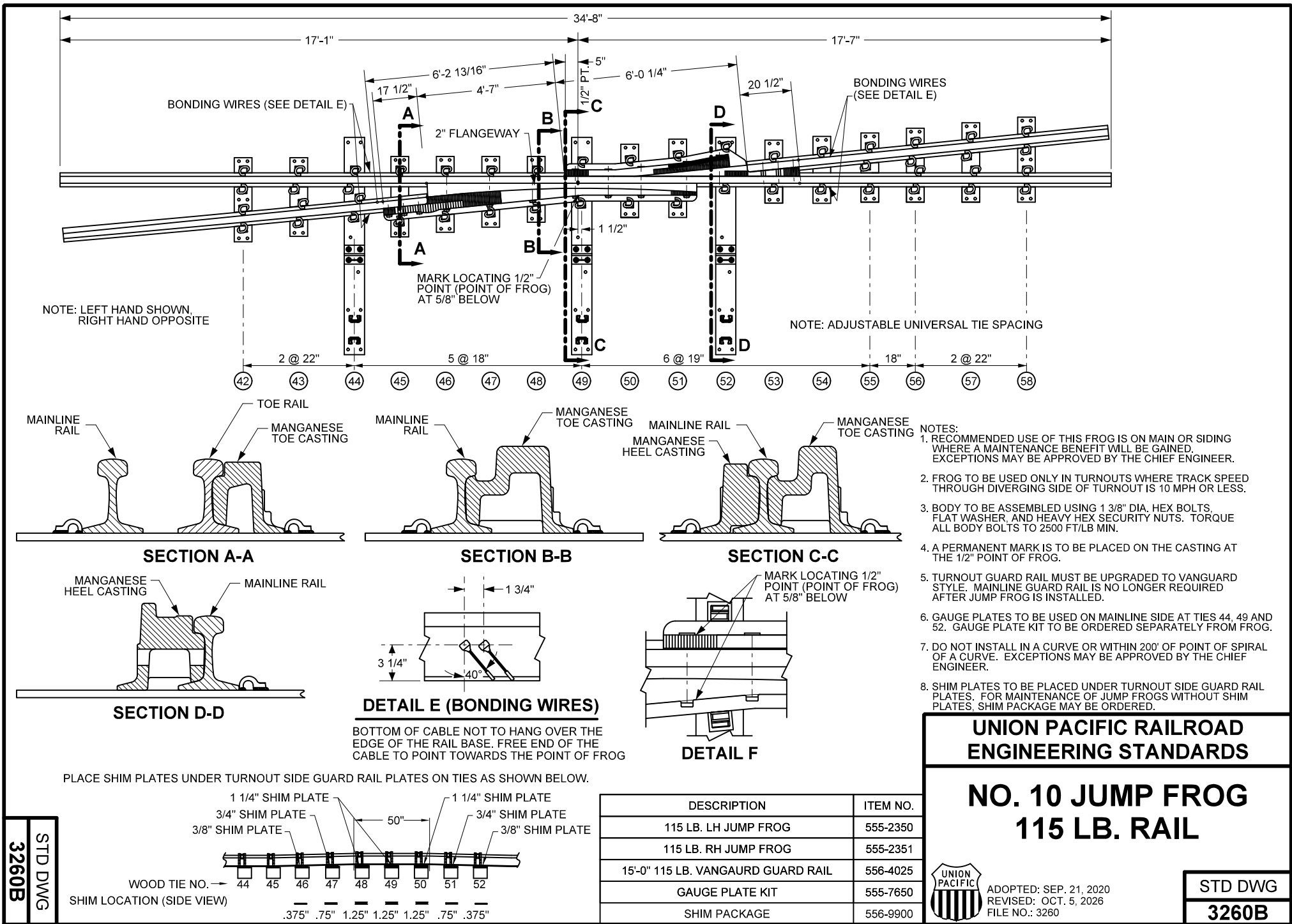
0080G

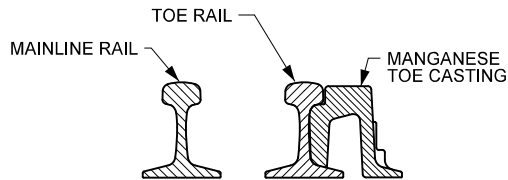
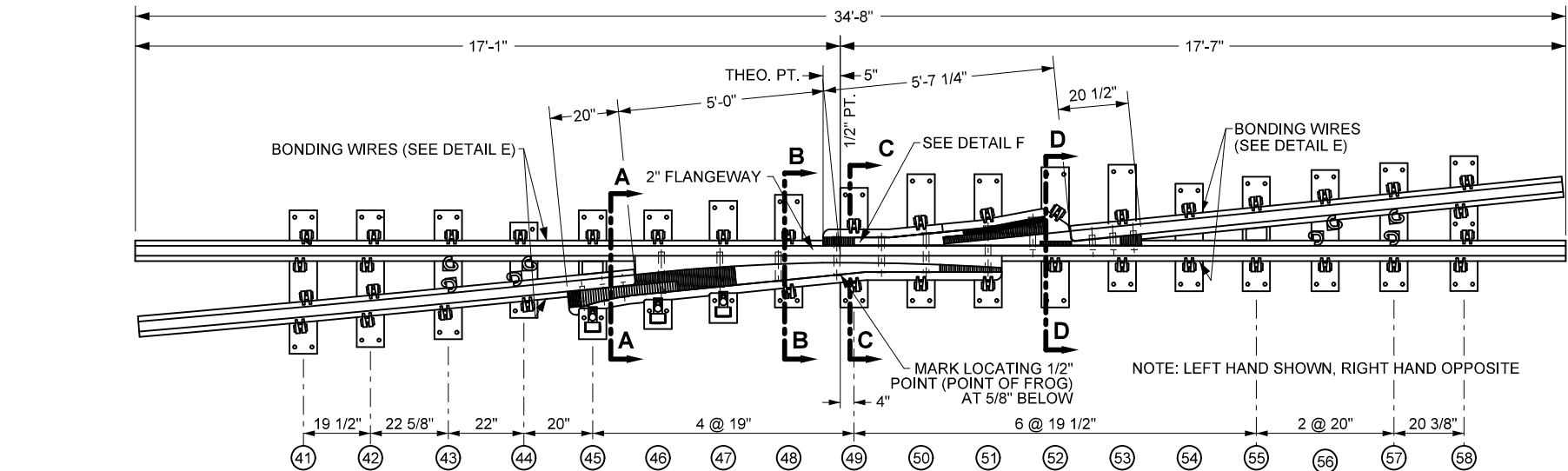


NOTES:

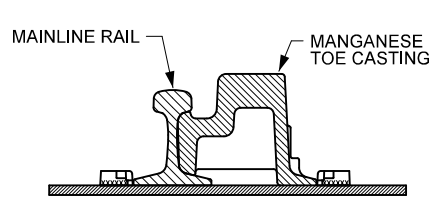
1. RECOMMENDED USE OF THIS FROG IS ON MAIN OR SIDING WHERE A MAINTENANCE BENEFIT WILL BE GAINED. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
2. FROG TO BE USED ONLY IN TURNOUTS WHERE TRACK SPEED THROUGH DIVERGING SIDE OF TURNOUT IS 10 MPH OR LESS.
3. BODY TO BE ASSEMBLED USING 1 3/8" DIA. HEX BOLTS, FLAT WASHER, AND HEAVY HEX SECURITY NUTS. TORQUE ALL BODY BOLTS TO 2200 FT/LB MIN.
4. A PERMANENT MARK IS TO BE PLACED ON THE CASTING AT THE 1/2" POINT OF FROG.
5. GAUGE PLATES TO BE USED ON MAINLINE SIDE AT TIES 42, 46 AND 49. GAUGE PLATE KIT TO BE ORDERED SEPARATELY FROM FROG.
6. DO NOT INSTALL IN A CURVE OR WITHIN 200' OF POINT OF SPIRAL OF A CURVE. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
7. SHIM PLATES TO BE PLACED UNDER TURNOUT SIDE GUARD RAIL PLATES. FOR MAINTENANCE OF JUMP FROGS WITHOUT SHIM PLATES, SHIM PACKAGE MAY BE ORDERED.



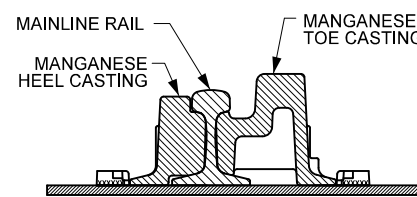




SECTION A-A

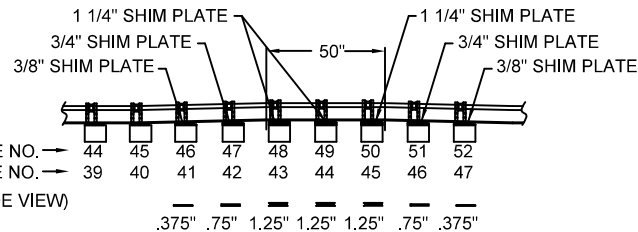


SECTION B-B



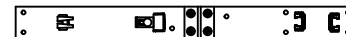
SECTION C-C

PLACE SHIM PLATES UNDER TURNOUT SIDE GUARD RAIL PLATES ON TIES AS SHOWN BELOW.



SHIM LOCATION (SIDE VIEW)

.375" .75" 1.25" 1.25" 1.25" .75" .375"



GAUGE PLATE

FOR USE WITH WOOD TIE TURNOUTS

DESCRIPTION	ITEM NO.
133 LB. LH JUMP FROG	555-3729
133 LB. RH JUMP FROG	555-3730
15'-0" 133 LB. VANGUARD GUARD RAIL	556-5599
GAUGE PLATE KIT (FOR USE ON WOOD TIES)	555-7655
SHIM PACKAGE	556-9900

NOTES:

1. RECOMMENDED USE OF THIS FROG IS ON MAIN OR SIDING WHERE A MAINTENANCE BENEFIT WILL BE GAINED. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
2. FROG TO BE USED ONLY IN TURNOUTS WHERE TRACK SPEED THROUGH DIVERGING SIDE OF TURNOUT IS 10 MPH OR LESS.
3. BODY TO BE ASSEMBLED USING 1 3/8" DIA. HEX BOLTS, FLAT WASHER, AND HEAVY HEX SECURITY NUTS. TORQUE ALL BODY BOLTS TO 2200 FT/LB MIN.
4. A PERMANENT MARK IS TO BE PLACED ON THE CASTING AT THE 1/2" POINT OF FROG.
5. FOR WOOD TIE TURNOUTS, GAUGE PLATES TO BE USED ON MAINLINE SIDE AT TIES 46, 48 AND 51. GAUGE PLATE KIT TO BE ORDERED SEPARATELY FROM FROG.
6. DO NOT INSTALL IN A CURVE OR WITHIN 200' OF POINT OF SPIRAL OF A CURVE. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
7. SHIM PLATES TO BE PLACED UNDER TURNOUT SIDE GUARD RAIL PLATES. FOR MAINTENANCE OF JUMP FROGS WITHOUT SHIM PLATES, SHIM PACKAGE MAY BE ORDERED.

UNION PACIFIC RAILROAD
ENGINEERING STANDARDS

NO. 10 JUMP FROG
133 LB. RAIL

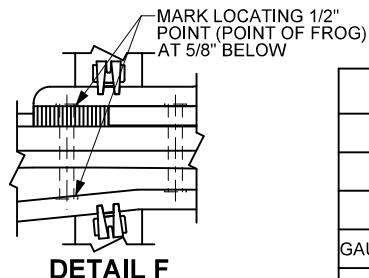


ADOPTED: SEP. 21, 2020
REVISED: OCT. 5, 2026
FILE NO.: 3262

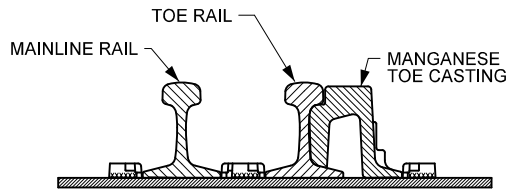
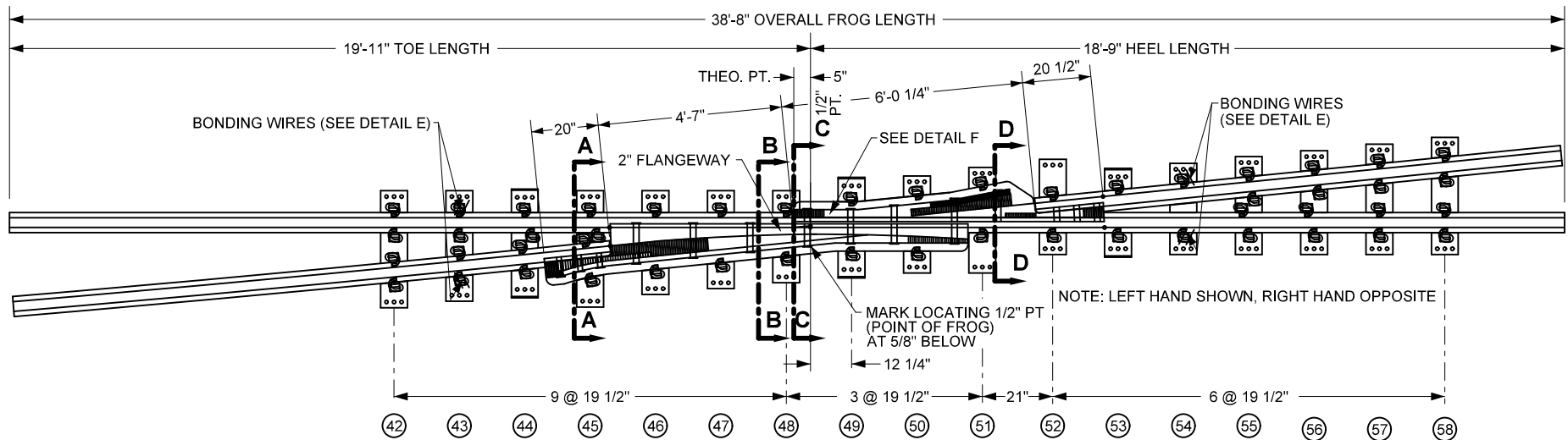
STD DWG
3262B

DETAIL E (BONDING WIRES)

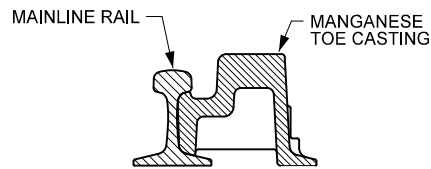
BOTTOM OF CABLE NOT TO HANG OVER THE EDGE OF THE RAIL BASE. FREE END OF THE CABLE TO POINT TOWARDS THE POINT OF FROG



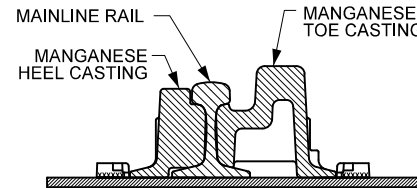
DETAIL F



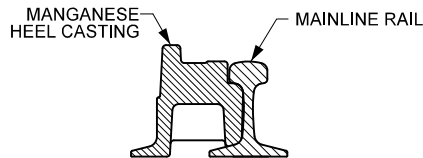
SECTION A-A



SECTION B-B

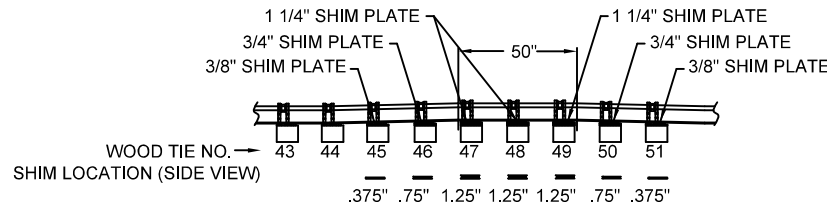


SECTION C-C



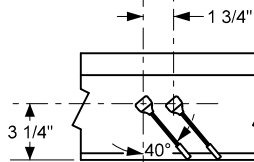
SECTION D-D

PLACE SHIM PLATES UNDER TURNOUT SIDE GUARD RAIL PLATES ON TIES AS SHOWN BELOW.



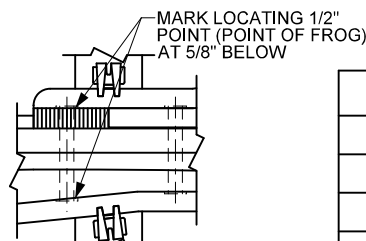
WOOD TIE NO. →
SHIM LOCATION (SIDE VIEW)

.375" .75" 1.25" 1.25" 1.25" .75" .375"



DETAIL E (BONDING WIRES)

BOTTOM OF CABLE NOT TO HANG OVER THE EDGE OF THE RAIL BASE. FREE END OF THE CABLE TO POINT TOWARDS THE POINT OF FROG



DETAIL F

NOTES:

1. RECOMMENDED USE OF THIS FROG IS ON MAIN OR SIDING WHERE A MAINTENANCE BENEFIT WILL BE GAINED. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
2. FROG TO BE USED ONLY IN TURNOUTS WHERE TRACK SPEED THROUGH DIVERGING SIDE OF TURNOUT IS 10 MPH OR LESS.
3. BODY TO BE ASSEMBLED USING 1 3/8" DIA. HEX BOLTS, FLAT WASHER, AND HEAVY HEX SECURITY NUTS. TORQUE ALL BODY BOLTS TO 2200 FT/LB MIN.
4. A PERMANENT MARK IS TO BE PLACED ON THE CASTING AT THE 1/2" POINT OF FROG.
5. GAUGE PLATES TO BE USED ON MAINLINE SIDE AT TIES 45, 48 AND 51. GAUGE PLATE KIT TO BE ORDERED SEPARATELY FROM FROG.
6. DO NOT INSTALL IN A CURVE OR WITHIN 200' OF POINT OF SPIRAL OF A CURVE. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
7. SHIM PLATES TO BE PLACED UNDER TURNOUT SIDE GUARD RAIL PLATES. FOR MAINTENANCE OF JUMP FROGS WITHOUT SHIM PLATES, SHIM PACKAGE MAY BE ORDERED.

UNION PACIFIC RAILROAD
ENGINEERING STANDARDS

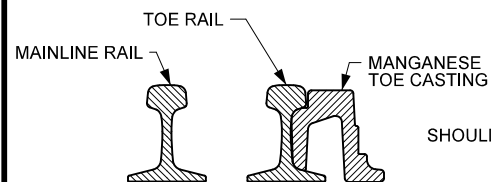
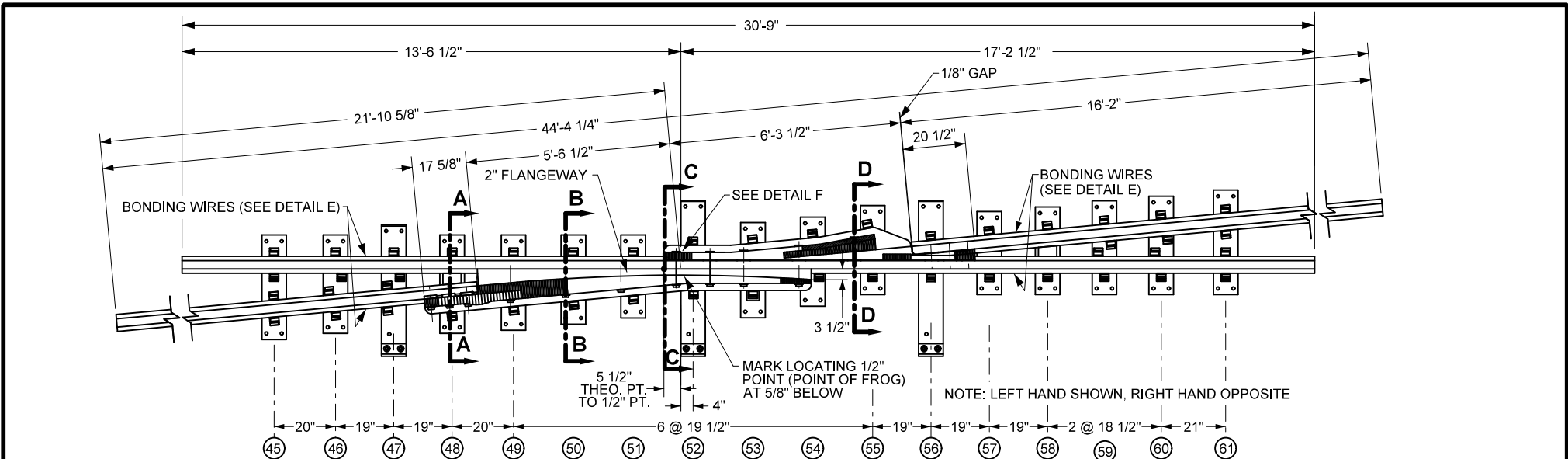
NO. 10 JUMP FROG
136 LB. RAIL



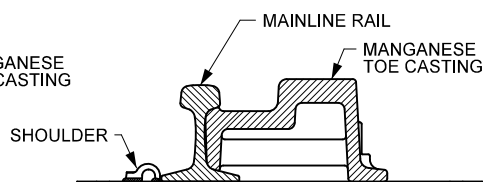
ADOPTED: SEP. 21, 2020
REVISED: OCT. 5, 2026
FILE NO.: 3264

STD DWG
3264B

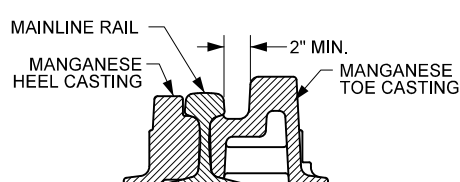
DESCRIPTION	ITEM NO.
136 LB. LH JUMP FROG	555-4231
136 LB. RH JUMP FROG	555-4232
15'-0" GUARD RAIL	556-5599
GAUGE PLATE KIT	555-7655
SHIM PACKAGE	556-9900



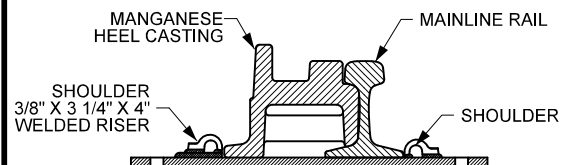
SECTION A-A



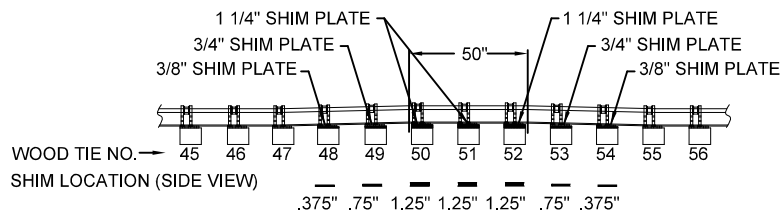
SECTION B-B
PLACE SHIM PLATES UNDER TURNOUT SIDE GUARD RAIL PLATES ON TIES AS SHOWN BELOW.



SECTION C-C



SECTION D-D



- NOTES:
1. RECOMMENDED USE OF THIS FROG IS ON MAIN OR SIDING WHERE A MAINTENANCE BENEFIT WILL BE GAINED. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
 2. FROG TO BE USED ONLY IN TURNOUTS WHERE TRACK SPEED THROUGH DIVERGING SIDE OF TURNOUT IS 10 MPH OR LESS.
 3. BODY TO BE ASSEMBLED USING 1 3/8" DIA. HEX BOLTS, FLAT WASHER, AND HEAVY HEX SECURITY NUTS. TORQUE ALL BODY BOLTS TO 2500 FT/LB MIN.
 4. A PERMANENT MARK IS TO BE PLACED ON THE CASTING AT THE 1/2" POINT OF FROG.
 5. TURNOUT GUARD RAIL MUST BE UPGRADED TO VANGUARD STYLE. MAINLINE GUARD RAIL IS NO LONGER REQUIRED AFTER JUMP FROG IS INSTALLED.
 6. GAUGE PLATES TO BE USED ON MAINLINE SIDE AT TIES 47, 52 AND 56. GAUGE PLATE KIT TO BE ORDERED SEPARATELY FROM FROG.
 7. DO NOT INSTALL IN A CURVE OR WITHIN 200' OF POINT OF SPIRAL OF A CURVE. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
 8. SHIM PLATES TO BE PLACED UNDER TURNOUT SIDE GUARD RAIL PLATES. FOR MAINTENANCE OF JUMP FROGS WITHOUT SHIM PLATES, SHIM PACKAGE MAY BE ORDERED.

UNION PACIFIC RAILROAD ENGINEERING STANDARDS

NO. 11 JUMP FROG 115 LB. RAIL

DESCRIPTION	ITEM NO.
115 LB. LH JUMP FROG	555-2903
115 LB. RH JUMP FROG	555-2904
15'-0" 115 LB. VANGUARD GUARD RAIL	556-4025
GAUGE PLATE KIT	555-7650
SHIM PACKAGE	556-9900

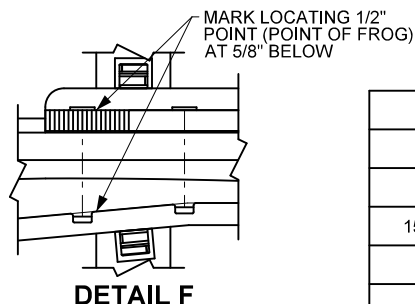


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FILE NO.: 3270

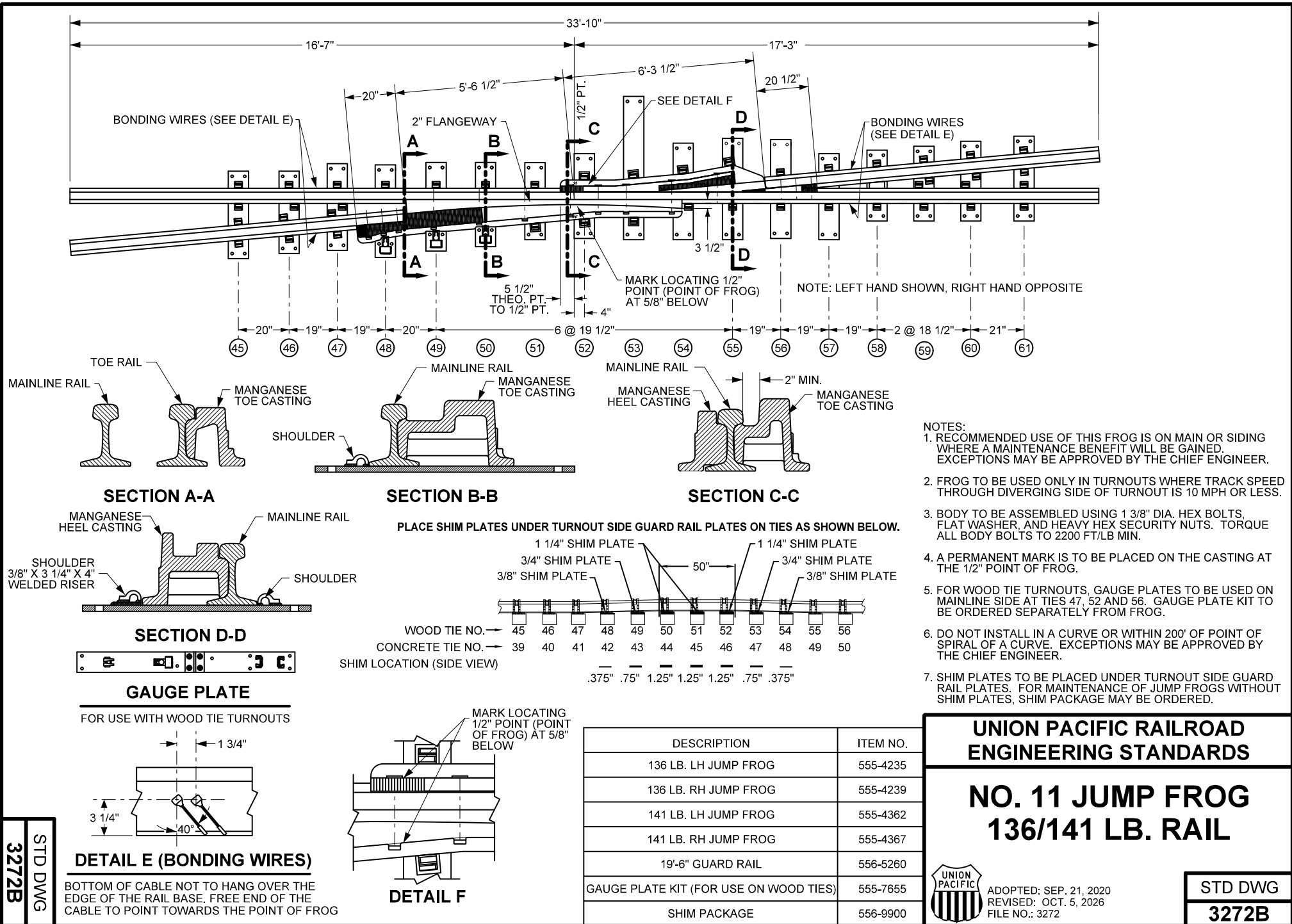
STD DWG
3270B

DETAIL E (BONDING WIRES)

BOTTOM OF CABLE NOT TO HANG OVER THE EDGE OF THE RAIL BASE. FREE END OF THE CABLE TO POINT TOWARDS THE POINT OF FROG



DETAIL F



- NOTES:
1. RECOMMENDED USE OF THIS FROG IS ON MAIN OR SIDING WHERE A MAINTENANCE BENEFIT WILL BE GAINED. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
 2. FROG TO BE USED ONLY IN TURNOUTS WHERE TRACK SPEED THROUGH DIVERGING SIDE OF TURNOUT IS 10 MPH OR LESS.
 3. BODY TO BE ASSEMBLED USING 1 3/8" DIA. HEX BOLTS, FLAT WASHER, AND HEAVY HEX SECURITY NUTS. TORQUE ALL BODY BOLTS TO 2200 FT/LB MIN.
 4. A PERMANENT MARK IS TO BE PLACED ON THE CASTING AT THE 1/2" POINT OF FROG.
 5. FOR WOOD TIE TURNOUTS, GAUGE PLATES TO BE USED ON MAINLINE SIDE AT TIES 47, 52 AND 56. GAUGE PLATE KIT TO BE ORDERED SEPARATELY FROM FROG.
 6. DO NOT INSTALL IN A CURVE OR WITHIN 200' OF POINT OF SPIRAL OF A CURVE. EXCEPTIONS MAY BE APPROVED BY THE CHIEF ENGINEER.
 7. SHIM PLATES TO BE PLACED UNDER TURNOUT SIDE GUARD RAIL PLATES. FOR MAINTENANCE OF JUMP FROGS WITHOUT SHIM PLATES, SHIM PACKAGE MAY BE ORDERED.

UNION PACIFIC RAILROAD ENGINEERING STANDARDS	
NO. 11 JUMP FROG 136/141 LB. RAIL	
	ADOPTED: SEP. 21, 2020 REVISED: OCT. 5, 2026 FILE NO.: 3272
STD DWG 3272B	STD DWG 3272B

TRACKWORK

- VOESTALPINE NORTRAK
 - ALL TURNOUT SIZES AND ALL MATERIAL THAT COMPRISES A TURNOUT
 - SMMSG, RBM, ALL SPRING, JUMP, MPF FROGS
 - MACHINED AND FORGED TRANSITION RAILS
 - HOLLOW STEEL TIE (HST)
 - PRE-PLATING OPERATION IN CHEYENNE, WY COMPLIES WITH ALL UPRR UNION REQUIREMENTS
- PROGRESS RAIL
 - TURNOUT SIZES NO. 20 AND LESS AND ALL MATERIAL THAT COMPRISES TURNOUTS NO. 20 AND LESS
 - SMMSG, RBM, ALL SPRING, JUMP FROGS
 - MACHINED AND FORGED TRANSITION RAILS
 - ROBOTIC PREPLATING OPERATING COMPLIES WITH ALL UPRR UNION REQUIREMENTS
- PROGRESS/VOSSLOH (CLEVELAND TRACK)
 - TURNOUT SIZES NO. 11 AND LESS FOR NON-MAINLINE APPLICATIONS AND ALL MATERIAL THAT COMPRISES TURNOUTS NO. 11 AND LESS FOR NON-MAINLINE APPLICATIONS
 - SMMSG, RBM FROGS
 - PRE-PLATED TURNOUTS CAN ONLY BE SHIPPED TO FORMER MOPAC AND CNW TERRITORIES
- A&K RAILROAD MATERIALS
 - TURNOUT SIZES NO. 11 AND LESS FOR NON-MAINLINE APPLICATIONS AND ALL MATERIAL THAT COMPRISES TURNOUTS NO. 11 AND LESS FOR NON-MAINLINE APPLICATIONS
 - SMMSG, RBM FROGS
 - PRE-PLATED TURNOUTS CAN ONLY BE SHIPPED TO FORMER MOPAC AND CNW TERRITORIES
 - MACHINED TAPER RAILS FOR NON-MAINLINE APPLICATIONS
- ATLANTIC TRACK
 - TURNOUT SIZES NO. 11 AND LESS AND ALL MATERIAL THAT COMPRISES TURNOUTS NO. 11 AND LESS
 - SMMSG, RBM FROGS
 - MACHINED AND FORGED TRANSITION RAILS
 - PRE-PLATED TURNOUTS CAN ONLY BE SHIPPED TO FORMER MOPAC AND CNW TERRITORIES

COMPROMISE JOINT BARS

- VOSSLOH (CLEVELAND TRACK) (FORGED IN US ONLY)

JOINT BARS (NEW)

- VOSSLOH (CLEVELAND TRACK) (CHINA AND DOMESTIC)
- A&K RAILROAD MATERIALS (CHINA)

TRACK BOLTS (BOLTS, NUTS & WASHERS)

- PROTTSA (MEXICO)
- TAICONG ZHONGBO
- VIA PACIFIC (CHINA)
- LEWIS BOLT & NUT
- A&K RAILROAD

FROG BOLTS

- LEWIS BOLT
- COPPER STATE

SELF-CENTERING BOLT SYSTEM

- SELF-CENTERED BOLT AND NUT
 - LEWIS BOLT & NUT
- SELF-CENTERING WASHER
 - LEWIS BOLT & NUT
 - HOWARD STEEL COMPANY

TRACK WASHERS

- ITW SHAKEPROOF

LOCKNUTS

- LEWIS BOLT & NUT
- COPPER STATE
- SECURITY LOCKNUT

CEDAR TIE PLUGS

- ATLANTIC AND PACIFIC RAIL SUPPLY
- TRANS CANADA WOOD PRODUCTS LTD.
- BSP MANUFACTURING INC.

BONDED INSULATED JOINTS

- KOPPERS (FORMERLY PORTEC, HUNTINGTON, WV PLANT ONLY)
- A&K RAILROAD MATERIALS
- LB FOSTER

INSULATED JOINT BARS

- A&K RAILROAD MATERIALS
- SENECA RAILROAD & MINING
- KOPPERS (FORMERLY PORTEC, HUNTINGTON, WV PLANT ONLY)
- LB FOSTER

PRECAST CONCRETE CROSSING PANELS

- AMERICAN CONCRETE
- OMEGA INDUSTRIES
- MAGNUM

PREFAB WOOD CROSSING PANELS

- KOPPERS
- GARLAND GASTON LUMBER

FROG RETARDER KITS

- NORTRAK SPRING WING CONTROLLER

RAIL (STANDARD STRENGTH)

- EVRAZ
- STEEL DYNAMIC INC. (FORT WAYNE, IN)

RAIL (INTERMEDIATE STRENGTH HEAD HARDENED)

- EVRAZ
- STEEL DYNAMIC INC. (FORT WAYNE, IN)

- NIPPON STEEL CO

RAIL (PREMIUM STRENGTH HEAD HARDENED)

- EVRAZ
- NIPPON STEEL CO

TIES (WOOD)

- STELLA-JONES (FULTON, KY, ALEXANDRIA, LA, MONTEVALLO, AL, WINSLOW, IN, BANGOR, WI, ELOY, AZ AND RUSSELLVILLE, AR)
- AMERITIES (THE DALLES, OR AND HOPE, AR)
- KOPPERS (DENVER, CO, GUTHRIE, KY AND N. LITTLE ROCK, AR)
- McCORD TIES & TIMBER (FALKVILLE, AL)
- NATT (SCOTT CITY, MO)

TIES (CONCRETE)

- VOSSLOH (ROCLA) (AMARILLO, TX, PUEBLO, CO & TUCSON, AZ)
- VOESTALPINE NORTRAK

- VOESTALPINE NORTRAK (TURNOUT & SPECIALTY TIES)

TIES (COMPOSITE)

- EVERTRAK
- SICUT

ANCHORS

- PROGRESS RAIL
- LEWIS BOLT AND NUT (FOR NEW TURNOUTS ONLY)

TIE PLATES (ROLLED)

- SUMITOMO / ARKANSAS STEEL ASSOCIATES

TIE PLATES (CAST)

- PROGRESS RAIL
- VOESTALPINE NORTRAK
- PANDROL (BRIDGE PLATES ONLY)

ABRASIVE WHEELS

- NORTON / NORZON
- GEISMAR
- ALLISON

EXPANSION JOINTS

- ATLANTIC TRACK
- CMI PROMEX
- PROGRESS RAIL

FIELD WELD MATERIALS

- RAILTECH BOUTET
- ORGO THERMIT

TRACK SPIKES

- AMERISTEEL (ALL FACILITIES)
- NUCOR BIRMINGHAM

TIMBER SCREW SPIKES

- LEWIS BOLT & NUT COMPANY (STANDARD AND EVERGRIP)

BALLAST

- VULCAN MATERIALS - TABLE MOUNTAIN (OROVILLE, CA)
- RCL ROCKS - SIERRA BLANCA (SIERRA BLANCA, TX)
- CERTAIN TEED - GADS HILL (GADS HILL, MO)
- MARTIN - MARIETTA - JONES MILL (MALVERN, AR)
- L.G. EVERIST - DELL RAPIDS (DELL RAPIDS, SD)
- HARNEY ROCK & PAVING - HARNEY ROCK (N. POWDER, OR)
- MARTIN - MARIETTA - TWIN MOUNTAIN (MILFORD, UT)
- MARTIN - MARIETTA - MILL CREEK (MILL CREEK, OK)
- VULCAN MATERIALS CO. - KNIPPA (UVALDE, TX)
- MERIDIAN AGGREGATES - GRANITE CANYON (GRAND CANON, WY)
- GRANITE MOUNTAIN - GRANITE MOUNTAIN (SVEETHOME, AR)
- MARTIN - MARIETTA - BLACK SPUR (UVALDE, TX)
- FRED WEBER, INC. - IRON MOUNTAIN (IRON MOUNTAIN, MO)
- TRAP ROCK & GRANITE (IRONTON, MO)

UNION PACIFIC RAILROAD ENGINEERING DRAWINGS

APPROVED TRACKWORK SUPPLIERS



ADOPTED: SEP. 21, 2020
REVISED: AUG. 11, 2026
FILE NO.: 6003

MISC DWG

6003G

PAGE 1 OF 2

APPROVED ELASTIC FASTENING SYSTEM COMPONENTS

SAFELOK I		
ITEM NUMBER	ITEM DESCRIPTION	APPROVED SUPPLIER
503 - 5101	ALT. LONG REACH SAFELOK 1 SPRING CLIP. STANDARD DWG 0433.	PROGRESS RAIL / PANDROL / VOESTALPINE NORTRAK
503 - 5150	GALVANIZED SAFELOK I SPRING CLIP.	PROGRESS RAIL / PANDROL
503 - 5250	STANDARD SAFELOK 1 INSULATOR. STANDARD DWG 0406.	PROGRESS RAIL / PANDROL
503 - 6246	SAFELOK I NARROW INSULATOR. FOR USE IN CORRECTING WIDE GAUGE. STANDARD DWG 0406.	PANDROL
503 - 5390	SAFELOK 1 HEAVY DUTY INSULATOR. STANDARD DWG 0406.	PROGRESS RAIL / PANDROL
503 - 6178	SAFELOK 1 WIDE INSULATOR. FOR USE IN CORRECTING WIDE GAUGE. STANDARD DWG 0406.	PANDROL
503 - 5490	ABRASION PAD ASSEMBLY FOR SAFELOK I.	VOESTALPINE NORTRAK / PANDROL / PROGRESS RAIL
410 - 5460	LEVER TYPE RAIL CLIP APPLICATOR. FOR INSTALLING SAFELOK I SPRING CLIPS.	PROGRESS RAIL
410 - 5464	UNIVERSAL RAIL CLIP REMOVAL TOOL. SCISSOR TYPE FOR REMOVING SAFELOK I CLIPS FROM CONCRETE AND STEEL TIES.	PROGRESS RAIL
410 - 5467	LEVER ACTION RAIL MANIPULATOR TO ALLOW CLEARANCE FOR INSULATORS.	PROGRESS RAIL

SAFELOK III		
ITEM NUMBER	ITEM DESCRIPTION	APPROVED SUPPLIER
503 - 6161	SAFELOK III STANDARD CLIP WITH 2 TOE INSULATORS INSTALLED.	PANDROL
503 - 6164	GALVANIZED SAFELOK III STANDARD CLIP WITH 2 TOE INSULATORS INSTALLED.	PANDROL
503 - 6167	TWIN STEM SHOULDER FOR SAFELOK III FASTENING SYSTEM.	PANDROL
503 - 6171	SAFELOK III CLIP TOE INSULATOR.	PANDROL
503 - 6162	SAFELOK III SIDE POST INSULATOR.	PANDROL
503 - 6168	SAFELOK III INTEGRAL ABRASION ASSEMBLY. TIE PAD INCLUDES 2 SIDEPOST INSULATORS, RAIL PAD AND ABRASION PLATE.	PANDROL
503 - 6169	NYLON INSULATOR FOR USE AT INSULATED JOINT LOCATION ON SAFELOK III FASTENING SYSTEM. STANDARD DWG 0410.	PANDROL
503 - 6172	JOINT CLIP FOR USE AT INSULATED JOINT LOCATION ON SAFELOK III FASTENING SYSTEM. STANDARD DWG 0410.	PANDROL
410 - 5458	SAFELOK III RAIL CLIP REMOVAL TOOL. SCISSOR TYPE.	PANDROL
410 - 7437 AND 410 - 7438	SAFELOK III TIE NIPPING TOOL. HOOK AND BAR.	INDUSTRIAL RAILWAY SUPPLY

E-CLIP		
ITEM NUMBER	ITEM DESCRIPTION	APPROVED SUPPLIER
503 - 6100	E-2055 STANDARD RIGHT HAND PANDROL E-CLIP FOR WOOD AND CONCRETE TIE APPLICATIONS.	PANDROL / UNITED STEEL AND FASTENERS
503 - 6101	ECL-2055 GALVANIZED RIGHT HAND PANDROL E-CLIP FOR WOOD AND CONCRETE TIE APPLICATIONS FOR TUNNELS AND GRADE CROSSINGS.	PANDROL
503 - 6125	E-2056 LEFT HAND PANDROL E-CLIP FOR WOOD AND CONCRETE TIE APPLICATIONS.	PANDROL
503 - 6150	E-2063 MODIFIED PANDROL E-CLIP FOR JOINT BAR LOCATIONS (INSULATED AND STANDARD). CLIP FOR WOOD AND CONCRETE TIE APPLICATIONS.	PANDROL
503 - 6202	TWO PART PAD ASSEMBLY FOR E-CLIP FASTENING SYSTEM. 8 MM.	PANDROL
503 - 6240	WIDE POST E-CLIP INSULATOR WITH .56" WIDE POST FOR USE WITH E-CLIP FASTENING SYSTEM ON CONCRETE TIES. TO CORRECT GAUGE ISSUES. STANDARD DWG 0408.	PANDROL
503 - 6245	NARROW POST E-CLIP INSULATOR WITH .213" POST FOR USE WITH E-CLIP FASTENING SYSTEM ON CONCRETE TIES. TO CORRECT GAUGE ISSUES. STANDARD DWG 0408.	PANDROL
503 - 6250	HEAVY DUTY STANDARD INSULATOR E-CLIP. FOR USE ON FIELD SIDE APPLICATIONS IN CURVES GREAT THAN 1 DEGREE 30 MINUTES. STANDARD DWG 0408.	PROGRESS RAIL / PANDROL
503 - 6260	STANDARD DUTY INSULATOR E-CLIP. FOR USE IN TANGENT TRACK AND CURVES LESS THAN 1 DEGREE 30 MINUTES. STANDARD DWG 0408.	PROGRESS RAIL / PANDROL
503 - 6502	FORGED STEEL WELD ON SHOULDER FOR E - 2055 CLIP. FOR SPECIAL PLATE WORK.	PANDROL / VOESTALPINE NORTRAK / PROGRESS RAIL

FASTCLIP		
ITEM NUMBER	ITEM DESCRIPTION	APPROVED SUPPLIER
503 - 6165	FASTCLIP ASSEMBLY. TWO CLIPS WITH TWO INSULATORS ATTACHED.	PANDROL

UNION PACIFIC RAILROAD ENGINEERING DRAWINGS

APPROVED TRACKWORK SUPPLIERS

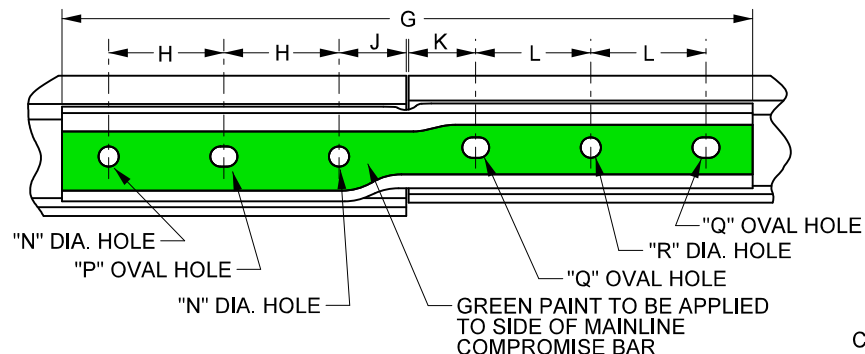


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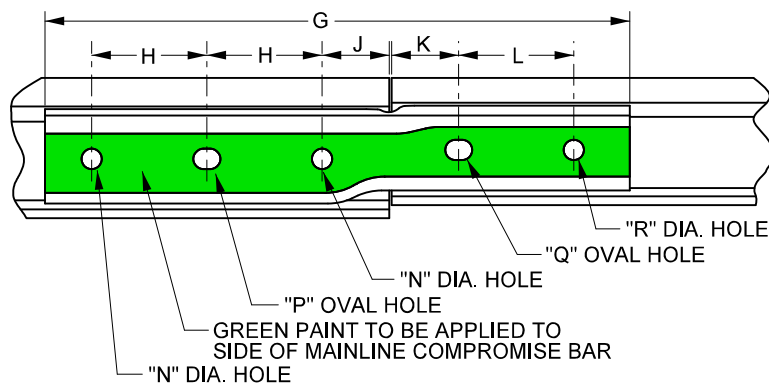
MISC DWG

6003G

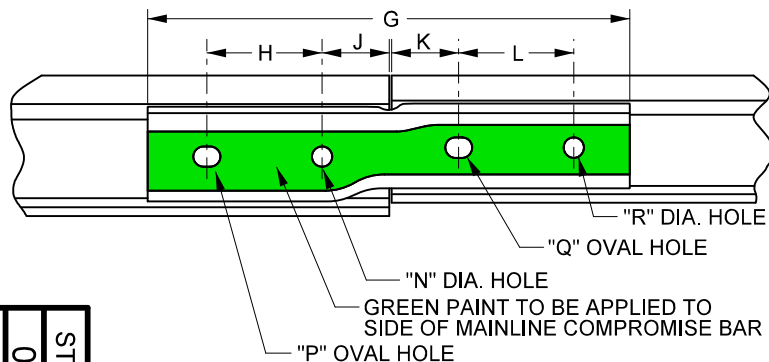
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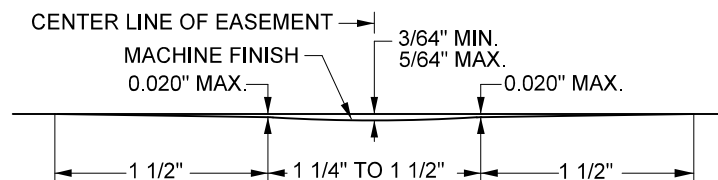
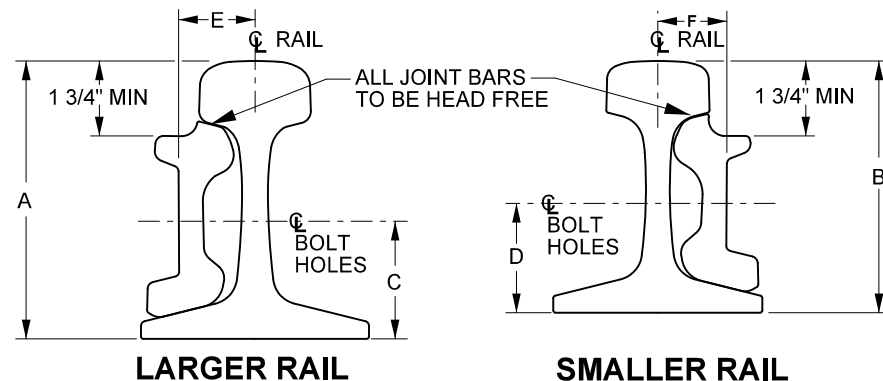
6-HOLE OUT BAR DETAIL



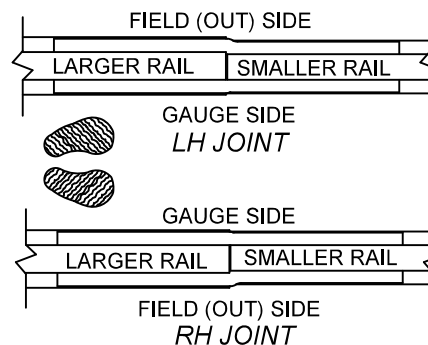
5-HOLE OUT BAR DETAIL



4-HOLE OUT BAR DETAIL



TYPICAL EASEMENT PROFILE



HANDLED JOINTS

NON-HANDLED JOINTS

NOTES:

1. AT PERMANENT CONNECTIONS OF DIFFERENT RAIL SECTIONS, COMPROMISE JOINTS OR COMPROMISE WELDS SHALL BE INSTALLED IN ACCORDANCE WITH CHIEF ENGINEER'S INSTRUCTIONS AND WHERE PRACTICABLE, THEY SHALL NOT BE LOCATED IN MAIN TRACK CURVE OR OPEN DECK BRIDGES, OR IN TURNOUTS.
2. STD DRAWINGS SHOULD BE REFERENCED FOR MANUFACTURING PURPOSE AND TO IDENTIFY THE ROUND AND OVAL HOLE PATTERNS.
3. SEE PAGE 2 FOR DIMENSION CHART & DETAILS FOR TRACK BOLTS, SEE STD DWG 0941
4. PAINT SIDES OF ALL MAINLINE CWR RAIL SECTIONS WITH THE OUTER PORTION OF THE BARS PAINTED FLOURESCENT GREEN ON BOTH SIDES (GAUGE AND FIELD). TOP OF BARS TO BE LEFT LEAR FOR MONTHLY INSPECTION MARKING.

UNION PACIFIC RAILROAD
ENGINEERING STANDARDS

COMPROMISE JOINTS



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RAIL TO RAIL	RH ITEM	LH ITEM	BAR TYPE	A (NEW)	A (WORN)	B (NEW)	B (WORN)	C	D	E	F	G	H	J	K	L	N	P	Q	R	C.E. DWG NO.
136RE - 133RE	552-4370		6 HOLE	7 5/16"	---	7 1/16"	---	3 3/32"	3"	2"	2"	38"	6"	3 1/2"	3 1/2"	6"	1 1/8"	1 1/8" x 1 1/2"	1 1/8" x 1 1/2"	1 1/8"	83859
136RE - 132RE	552-4309		6 HOLE	7 1/4"	---	7"	---	3 3/32"	3 3/32"	1 31/32"	1 31/32"	36"	6"	3 1/2"	3 1/2"	6"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 13/32"	1 1/16"	84017
136RE - 119RE	552-4186	552-4155	6 HOLE	7 5/16"	---	6 13/16"	---	3 3/32"	2 7/8"	1 31/32"	1 13/16"	36"	6"	3 1/2"	3 1/2"	6"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 13/32"	1 1/16"	83829
SP136RE-119RE	552-9365	552-9225	6 HOLE	7 5/16"	---	6 13/16"	---	3 3/32"	2 7/8"	2"	2"	36"	6 1/2"	2 1/2"	2 1/2"	6 1/2"	1 7/32"	1 7/32" x 1 9/16"	1 7/32" x 1 9/16"	1 7/32"	---
D&RGW136RE-119RE	552-4187	552-4188	6 HOLE	7 5/16"	---	6 13/16"	---	3 3/32"	2 7/8"	2"	2"	36"	6"	2 15/16"	2 15/16"	6"	1 3/16"	1 3/16" x 1 9/16"	1 3/16" x 1 9/16"	1 3/16"	---
136RE - 115RE	552-4124	552-4093	6 HOLE	7 5/16"	---	6 5/8"	---	3 3/32"	2 7/8"	1 31/32"	1 13/16"	36"	6"	3 1/2"	3 1/2"	6"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 13/32"	1 1/16"	83729
136RE - 112RE	552-4063	552-4032	6 HOLE	7 5/16"	---	6 17/32"	6 11/32"	3 3/32"	2 7/8"	2"	2"	36"	6"	3 1/2"	2 1/2"	6 1/2"	1 1/8"	1 1/8" x 1 1/2"	1 1/8" x 1 1/2"	1 1/8"	83862
SP136RE-SP110RE	552-9385	552-9285	4 HOLE	7 5/16"	---	6 1/4"	6 1/16"	3 3/32"	2 5/8"	2"	1 13/16"	26"	6 1/2"	2 1/2"	2 11/16"	5 1/2"	1 7/32"	1 7/32" x 1 9/16"	1 5/32" x 1 3/8"	1 5/32"	---
SP136RE-SP90ARA	552-9375	552-9280	4 HOLE	7 5/16"	---	5 5/8"	5 3/8"	3 3/32"	2 19/32"	2"	1 23/32"	26"	6 1/2"	2 1/2"	2 11/16"	5 1/2"	1 7/32"	1 7/32" x 1 9/16"	1 1/32" x 1 1/4"	1 1/32"	---
133RE - 132RE	552-3939		6 HOLE	7 1/16"	---	7 1/8"	---	3"	3 3/32"	2"	2"	38"	6"	3 1/2"	3 1/2"	6"	1 1/8"	1 1/8" x 1 1/2"	1 1/8" x 1 1/2"	1 1/8"	83905
133RE - 131RE	552-3909		6 HOLE	7 1/16"	---	7 1/8"	---	3"	3 3/32"	2"	2"	38"	6"	3 1/2"	2 15/16"	6 1/2"	1 1/8"	1 1/8" x 1 1/2"	1 1/8" x 1 1/2"	1 1/8"	83885
133RE - 119RE	552-3878	552-3847	6 HOLE	7 1/16"	---	6 13/16"	---	3"	2 7/8"	2"	1 13/16"	36"	6"	3 1/2"	3 1/2"	6"	1 1/8"	1 1/8" x 1 1/2"	1 1/16" x 1 13/32"	1 1/16"	83726
133RE - 115RE	552-3816	552-3786	6 HOLE	7 1/16"	---	6 5/8"	---	3"	2 7/8"	2"	1 13/16"	36"	6"	3 1/2"	3 1/2"	6"	1 1/8"	1 1/8" x 1 1/2"	1 1/16" x 1 13/32"	1 1/16"	83721
133RE - 112RE	552-3693	552-3663	6 HOLE	7 1/16"	---	6 17/32"	6 11/32"	3"	2 7/8"	2"	2"	36"	6"	3 1/2"	2 1/2"	6 1/2"	1 1/8"	1 1/8" x 1 1/2"	1 1/8" x 1 1/12"	1 1/8"	83863
133RE - 110RE	552-3632	552-3601	6 HOLE	7 1/16"	---	6 1/4"	---	3"	2 5/8"	2"	2"	36"	6"	3 1/2"	2 11/16"	5 1/2"	1 1/8"	1 1/8" x 1 1/2"	1 1/8" x 1 1/2"	1 1/8"	83824
133RE - 100RE	552-3570	552-3539	5 HOLE	7 1/16"	---	6"	---	3"	2 1/2"	2"	1 13/16"	30"	6"	3 1/2"	2 5/8"	5 1/2"	1 1/8"	1 1/8" x 1 1/2"	1 1/8" x 1 13/32"	1 1/8"	83787
133RE - 90RA	552-3509	552-3478	5 HOLE	7 1/16"	---	5 17/32"	5 11/32"	3"	2 19/32"	2"	1 23/32"	30"	6"	3 1/2"	2 5/8"	5 1/2"	1 1/8"	1 1/8" x 1/12"	1" x 1 1/4"	1"	83849
132RE - 119RE	552-3447	552-3416	6 HOLE	7 1/8"	---	6 3/4"	6 11/16"	3 3/32"	2 7/8"	2"	2"	36"	6"	3 1/2"	3 1/2"	6"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 13/32"	1 1/16"	83884
132RE - 115RE	552-3386	552-3355	6 HOLE	7 1/8"	---	6 5/8"	---	3 3/32"	2 7/8"	2"	1 13/16"	36"	6"	3 1/2"	3 1/2"	6"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 13/32"	1 1/16"	83850
119RE - 115RE	552-2678		6 HOLE	6 11/16"	6 9/16"	6 1/2"	6 3/8"	2 7/8"	2 7/8"	2"	1 7/8"	36"	6"	3 1/2"	3 1/2"	6"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 13/32"	1 1/16"	83918
115RE - 112RE	552-2401		5 HOLE	6 5/8"	---	6 17/32"	6 11/32"	2 7/8"	2 7/8"	1 7/8"	1 7/8"	30"	6"	3 1/2"	2 1/2"	6 1/2"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 13/32"	1 1/16"	83864
115RE - 100RE	552-2271	552-2267	5 HOLE	6 5/8"	6 1/2"	6"	5 13/16"	2 7/8"	2 3/4"	1 13/16"	1 13/16"	30"	6"	3 1/2"	2 1/2"	6 1/2"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 13/32"	1 1/16"	84015
115RE - 110RE	552-2370	552-2339	5 HOLE	6 5/8"	---	6 1/8"	6"	2 7/8"	2 5/8"	1 13/16"	1 13/16"	30"	6"	3 1/2"	2 29/32"	6"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 7/16"	1 1/16"	83722
115RE - 100RE	552-2309	552-2278	4 HOLE	6 5/8"	---	6"	---	2 7/8"	2 39/64"	2"	2"	26"	6 1/2"	2 1/2"	2 11/16"	5 1/2"	1 5/32"	1 1/8" x 1 3/8"	1 1/8" x 1 3/8"	1 5/32"	83881
112RE - 10035	552-1867	552-1857	4 HOLE	6 5/8"	6 5/16"	5 45/64"	5 33/64"	2 7/8"	2 5/8"	1 13/16"	1 13/16"	24"	6 1/2"	2 1/2"	2 21/32"	6"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 13/32"	1 1/16"	84003
115RE - 90RA	552-2247	552-2216	5 HOLE	6 5/8"	---	5 9/16"	5 7/16"	2 7/8"	2 37/64"	1 13/16"	1 9/16"	30"	6"	3 1/2"	2 29/32"	6"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 7/16"	1 1/16"	83723
115RE - 85MP	552-2186	552-2155	5 HOLE	6 5/8"	---	5 7/32"	---	2 7/8"	2 21/128"	1 13/16"	1 3/4"	30"	6"	3 1/2"	2 13/32"	5"	1 1/16"	1 1/16" x 1 13/32"	1 1/16" x 1 7/16"	1 1/16"	83724

NOTES:
1. SEE PAGE 1 FOR NOTES AND DETAILS.

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