

Signal	Location	DBD22	Signal	DBD22 Location	Mega	Input	Output	Type	Sort	Comments
	<b>10/10/2020</b>								1	
	<b>Lower Helix Signal</b>								2	
	Lower - Lower Helix direction (blocks if up direction)	Opto1	S38a		1	2			3	Opto from box (block if up) Opto1
S38a	Lower - Lower Helix direction - La Junta - Top				1		3	Double	4	T1 R/G
	Lower - Lower Helix direction				1		4		5	
	Lower - Lower Helix approach - DBD22	7.2	S38b		1	5			6	Occupancy
S38b	Lower - Lower Helix approach				1		6	Double	7	T1 Y
	<b>Upper Helix Signals (upper and lower)</b>								8	
	Upper - Upper Helix direction - blocks if up direction	Opto2	S39a		1	7			9	Opto from box (block if up) Opto2
S39a	Upper - Upper Helix direction - West R/G - Top of Helix				1		8	Double	10	T1 R/G
	Upper - Upper Helix direction				1		9		11	
	Upper - Upper Helix approach - DBD22	7.1	S39b		1	10			12	Occupancy
S39b	Upper - Upper Helix approach - West R/G				1		11	Double	13	T1 Y - Bottom target
									14	
	Lower - Upper Helix direction - blocks if down Direction	Opto3	S40a		1	12			15	Opto from box (block if down) Opto3
S40a	Lower - Upper Helix approach - East R/G - Bottom of Helix				1		13	Double	16	T1 R/G
	Lower - Upper Helix approach - East R/G				1		14		17	
	Lower - Upper Helix approach - DBD22	7.1	S40b		1	10			18	Occupancy
S40b	Lower - Upper Helix approach - East R/G				1		15	Double	19	T1 Y - Bottom target
	<b>Upper and Lower Helix Occupancy</b>								20	
	Upper - Upper Helix Occ - DBD22	7.1	UHX	Under La Junta	1	10			21	
UHX	Upper - Upper Helix Occ				1		16	Panel	22	T1-3/4 R/G - Panel
	Upper - Upper Helix Occ				1		17		23	
									24	
	Lower - Lower Helix Occ - DBD22	7.2	LHX		1	5			25	
LHX	Lower - Lower Helix Occ				1		18	Panel	26	T1-3/4 R/G - Panel
	Lower - Lower Helix Occ				1		19		27	
									28	
S55	Lower - Denver Exit Occupancy	10.1	S55		1	20			29	Run jumper from Mega 3 pin 22
	Lower - Exit Denver backside of tunnel				1		21		30	T1 R/G Dwarf on portal
	Lower - Exit Denver backside of tunnel				1		22		31	T1 R/G Dwarf on portal
									32	
	<b>San Bernardino Mainline Hidden Track</b>								33	
	Upper - Enter Mainline Hidden track - DBD22	2.1	S03	Above Edmier Quarry	2	2			34	
S03	Upper - Enter Mainline Hidden track				2		3	Single	35	T1 R/G
	Upper - Enter Mainline Hidden track				2		4		36	
									37	
	Upper - Exit Mainline Hidden track - DBD22	2.1	S04	Above Edmier Quarry	2	2			38	
S04	Upper - Exit Mainline Hidden track				2		5	Single	39	T1 R/G
	Upper - Exit Mainline Hidden track				2		6		40	
									41	
	<b>Around Cargill</b>								42	
	Upper - EB Cargill SB side - DBD22	3.1	S05	West side of Cajon	2	7			43	
S05	Upper - EB Cargill SB side				2		8	Single	44	T1 R/G
	Upper - EB Cargill SB side				2		9		45	
									46	
	Upper - EB Cargill Cajon side - DBD22	3.1	S06	West side of Cajon	2	7			47	
S06	Upper - EB Cargill Cajon side				2		10	Single	48	T1 R/G

	Upper - EB Cargill Cajon side				2		11		49	
									50	
	Upper - WB Cargill SB side - DBD22	3.2	S07	West side of Cajon	2	12			51	
S07	Upper - WB Cargill SB side				2		13	Single	52	T1 R/G
	Upper - WB Cargill SB side				2		14		53	
									54	
	Upper - WB Cargill Cajon side - DBD22	3.2	S08	West side of Cajon	2	12			55	
S08	Upper - WB Cargill Cajon side				2		15	Single	56	T1 R/G
	Upper - WB Cargill Cajon side				2		16		57	
									58	
	<b>Sullivan's Curve</b>								59	
	Upper - WB Sullivan's Curve - DBD22	4.1	S09	East side of Cajon	2	17			60	
S09	Upper - WB Sullivan's Curve				2		18	Single	61	T1 R/G
	Upper - WB Sullivan's Curve				2		19		62	
									63	
	Upper - WB Sullivan's Curve - DBD22	4.1	S10	East side of Cajon	2	17			64	
S10	Upper - WB Sullivan's Curve				2		20	Single	65	T1 R/G
	Upper - WB Sullivan's Curve				2		21		66	
									67	
	Upper - EB Sullivan's Curve - DBD22	4.2	S11	East side of Cajon	2	22			68	
S11	Upper - EB Sullivan's Curve				2		23	Single	69	T1 R/G
	Upper - EB Sullivan's Curve				2		24		70	
									71	
	Upper - EB leaving Summit - DBD22	4.2	S12	East side of Cajon	2	22			72	Train sign
S12	Upper - EB Sullivan's Curve				2		25	Sign	73	
	Upper - EB Sullivan's Curve				2		26		74	
									75	
	<b>San Bernardino Return Track</b>								76	
	Upper - Entry into SB return track - DBD22	2.2	S13	Above Edmier Quarry	2	27			77	
S13	Upper - Entry into SB return track				2		28	Single	78	T1 R/G
	Upper - Entry into SB return track				2		29		79	
									80	
	<b>Roundhouse Sidings</b>								81	
	Upper - Roundhouse siding 1 - DBD22	5.1	S14	Side of Roundhouse	2	30			82	
S14	Upper - Roundhouse siding 1			Signal Bridge	2		31	Head	83	T1 R/G
	Upper - Roundhouse siding 1				2		32		84	
									85	
	Upper - Roundhouse siding 1 - DBD22	5.1	S15		2	30			86	
S15	Upper - Roundhouse siding 1				2		33	Single	87	T1 R/G
	Upper - Roundhouse siding 1				2		34		88	
									89	
	Upper - Roundhouse siding 2 - DBD22	5.2	S16		2	35			90	
S16	Upper - Roundhouse siding 2			Signal Bridge	2		36	Head	91	T1 R/G
	Upper - Roundhouse siding 2				2		37		92	
									93	
S17-D1	Upper - Roundhouse Turnout Siding 2 and RL							Dwarf	94	T1-3/4 G/Y - dwarf
S17-D2	Upper - Roundhouse Turnout Siding 2 and RL							Dwarf	95	T1-3/4 R/G - dwarf
S17-D3	Upper - Roundhouse Turnout Siding 2 and RL							Dwarf	96	T1-3/4 R/G - dwarf
									97	
	Upper - Roundhouse siding 2 - DBD22	5.2	S17b		2	35			98	



	Lower - Mainline RL behind Upper Helix - DBD22	9.1	S43		3	15			149	
S43	Lower - Mainline RL behind Upper Helix				3		16	Single	150	T1 R/G
	Lower - Mainline RL behind Upper Helix				3		17		151	
									152	
	Lower - South Pueblo RL - DBD22	9.1	S44		3	15			153	
S44	Lower - South Pueblo RL				3		18	Single	154	T1 R/G
	Lower - South Pueblo RL				3		19		155	
									156	
	<b>Lower Level Around Upper Helix</b>								157	
	Lower - Clockwise approach to RL - DBD22	9.1	S71		3	15			158	
S71	Lower - Clockwise approach to RL				3		20	Single	159	T1 R/G
	Lower - Clockwise approach to RL				3		21		160	
									161	
	<b>HO leaving Denver to Castle Rock</b>								162	
	Lower - Leaving Denver - DBD22 -	10.1	S50		3	22			163	Denver exit to mid point on Hon3
S50	Lower - Leaving Denver				3		23	Single	164	T1 R/G
	Lower - Leaving Denver				3		24		165	
									166	
	Lower - Leaving Denver - DBD22	17.1	S53		3	25			167	Mid Point on Hon3 to hanging bridge
S53	Lower - Leaving Denver				3		26	Single	168	T1 R/G
	Lower - Leaving Denver				3		27		169	
									170	
	Lower - Leaving Denver - DBD22	17.2	S54		3	28			171	Hanging bridge to North Castle Rock
S54	Lower - Leaving Denver				3		29	Head	172	T1 R/G
	Lower - Leaving Denver				3		30		173	
									174	
	<b>Summit to Victorville Mainline</b>								175	
	Upper - Exit Summit to Victorville - DBD22	6.1	S30	Frost Flyover	3	34			176	
S30	Upper - Exit Summit to Victorville				3		35	Single	177	T1 R/G
	Upper - Exit Summit to Victorville				3		36		178	
									179	
	Upper - Exit Victorville to WB main - DBD22	6.2	S32		3	37			180	
S32	Upper - Exit Victorville to WB main				3		38	Single	181	T1 R/G
	Upper - Exit Victorville to WB main				3		39		182	
									183	
	Upper - Show track WB - DBD22	6.2	S33		3	37			184	
S33	Upper - Show track WB				3		40	Single	185	T1 R/G
	Upper - Show track WB				3		41		186	
									187	
	<b>Palmer Lake Mainline</b>								188	
	Lower - Dog Bone Turnout	to56	S56		3	42			189	turnout
	Lower - Palmer Lake North - DBD22	12.1	S56		3	43			190	Occ or turnout (to56 = LOW)
S56	Lower - Palmer Lake North				3		44	Single	191	T1 R/G
	Lower - Palmer Lake North				3		45		192	
									193	
	Lower - Dog Bone Turnout	to56	S57		3	42			194	Occ or turnout - (to56 = HIGH)
	Lower - Palmer Lake South	12.1	S57		3	43			195	
S57	Lower - Palmer Lake South				3		46	Single	196	T1 R/G
	Lower - Palmer Lake South				3		47		197	

									198	
	<b>Pueblo NB</b>								199	
S62a	Lower - Pueblo North Turnout							Triple	200	T1 G/Y
									201	
	Lower - Pueblo SB Siding - DBD22	15.2	S62b		3	48			202	
S62b	Lower - Pueblo SB Siding				3		49	Triple	203	T1 R/G
	Lower - Pueblo SB Siding				3		50		204	
									205	
	Lower - Pueblo SB Mainline - DBD22	15.1	S62c		3	51			206	
S62c	Lower - Pueblo SB Mainline				3		52	Triple	207	T1 R/G
	Lower - Pueblo SB Mainline				3		53		208	
									209	
Switch	Lower - Dual Turnout control of Dog Bone in CR and CS								210	Complete
Switch	Lower - Dual Turnout control of Show track P & D								211	Complete
									212	
	<b>Castle Rock SB Mainline and Siding</b>								213	
S72	Lower - Entry into North End Castle Rock - SB							Dwarf	214	T1-3/4 G/Y dwarf
									215	
	Lower - Entry into North Castle Rock Mainline - DBD22	16.1	S73		4	2			216	
S73	Lower - Entry into North Castle Rock Mainline - Dwarf				4		3	Dwarf	217	T1-3/4 R/G dwarf
	Lower - Entry into North Castle Rock Mainline - Dwarf				4		4		218	
									219	
	Lower - Entry into North End Castle Rock siding - DBD22	16.2	S74		4	5			220	
S74	Lower - Entry into North End Castle Rock siding - Dwarf				4		6	Dwarf	221	T1-3/4 R/G dwarf
	Lower - Entry into North End Castle Rock siding - Dwarf				4		7		222	
									223	
	Lower - Colorado Springs SB Mainline	12.2	S58		4	47			224	In North Colorado Springs
S58	Lower - Colorado Springs SB Mainline				4		8	Single	225	T1 R/G
	Lower - Colorado Springs SB Mainline				4		9		226	
									228	
	<b>Castle Rock NB Exit</b>								229	
	Lower - Exit Castle Rock - DBD22	11.1	S51		4	10			230	
S51	Lower - Exit Castle Rock				4		11	Single	231	T1 R/G
	Lower - Exit Castle Rock				4		12		232	
									233	
	<b>Colorado Springs North End</b>								234	
T1	Lower - Colorado Springs North - Turnout - T1-t	to1	S63a	inputs	4	13			235	From Tortoise
T2	Lower - Colorado Springs North - Turnout - T2-t	to2	S63a	inputs	4	14			236	From Tortoise
S63a	Lower - Colorado Springs North - Turnout -G/Y				4		15	Double	237	T1 G/Y
	Lower - Colorado Springs North - Turnout -G/Y				4		16		238	If T1=t or T2=t = Signal is yellow
									239	
	Lower - Colorado Springs - Mainline Yard Occ - DBD22	11.2	S63b		4	17			240	
S63b	Lower - Colorado Springs North - Mainline Yard Occ				4		18	Double	241	T1 R/G
	Lower - Colorado Springs North - Mainline Yard Occ				4		19		242	
									243	
	Lower - Colorado Springs SB - Siding 1 Occ - DBD22	18.1	S64		4	20			244	
S64	Lower - Colorado Springs SB - Siding 1 Occ -G/R				4		21	Dwarf	245	T1-3/4 R/G dwarf
	Lower - Colorado Springs SB - Siding 1 Occ -G/R				4		22		246	
									247	
	Lower - Colorado Springs SB - Siding 2 Occ - DBD22	18.2	S65		4	23			248	

S65	Lower - Colorado Springs SB - Siding 2 Occ -G/R				4		24	Dwarf	249	T1-3/4 R/G dwarf
	Lower - Colorado Springs SB - Siding 2 Occ -G/R				4		25		250	
									251	
	<b>Colorado Springs South End</b>								252	
T3	Lower - Colorado Springs South - Turnout - T3-t	to3	S66a	inputs	4	26			253	From Tortoise
T4	Lower - Colorado Springs South - Turnout - T4-t	to4	S66a	inputs	4	27			254	From Tortoise
S66a	Lower - Colorado Springs South - Turnout -G/Y				4		28	Double	255	T1 G/Y
	Lower - Colorado Springs South - Turnout -G/Y				4		29		256	If T3=t or T4=t = Signal is yellow
									257	
	Lower - Colorado Springs - Mainline Yard Occ - DBD22	11.2	S66b		4	17			258	
S66b	Lower - Colorado Springs South - Mainline Yard Occ				4		30	Double	259	T1 R/G
	Lower - Colorado Springs South - Mainline Yard Occ				4		31		260	
									261	
	Lower - Colorado Springs NB - Sinding 1 Occ - DBD22	19.1	S67		4	32			262	
S67	Lower - Colorado Springs NB - Sinding 1 Occ -G/R				4		33	Dwarf	263	T1-3/4 R/G dwarf
	Lower - Colorado Springs NB - Sinding 1 Occ -G/R				4		34		264	
									265	
	Lower - Colorado Springs NB - Sinding 2 Occ - DBD22	19.2	S68		4	35			266	
S68	Lower - Colorado Springs NB - Sinding 2 Occ -G/R				4		36	Dwarf	267	T1-3/4 R/G dwarf
	Lower - Colorado Springs NB - Sinding 2 Occ -G/R				4		37		268	
									269	
	<b>Colorado Springs &lt; &gt; Pueblo</b>								270	
S60a	Lower - Turnout to RI Colorado Springs side - G/Y			Not mega				Double	271	T 1 - G/Y
									272	
	Lower - Turnout to RI Colorado Springs - Tie to Occ	toris	S60b		4	38			273	From Tortoise to Mega input - or
	Lower - Turnout from RI to Pueblo - Tie to Occ	torin	S60b		4	39			274	From Tortoise to Mega input - or
	Lower - SB leaving Colorado Springs - DBD22 - CS	14.1	S60b		4	40			275	
S60b	Lower - SB leaving Colorado Springs				4		41	Double	276	T1 - R/G
	Lower - SB leaving Colorado Springs				4		42		277	
									278	
S69a	Lower - Dog Bone Turnout Approach - R/G			Not mega				Double	279	T1 - R/G
									280	
	Lower - Turnout to RI Colorado Springs - Tie to Occ	toris	S60b		4	38			281	From Tortoise to Mega input - or
	Lower - Turnout from RI to Pueblo - Tie to Occ	torin	S60b		4	39			282	From Tortoise to Mega input - or
	Lower - SB leaving Colorado Springs - DBD22 - CS	14.1	S69b		4	40			283	
S69b	Lower - Rear Track leaving Pueblo				4		43	Double	284	T1 - R/G
	Lower - Rear Track leaving Pueblo				4		44		285	
									286	
S70a	Lower - Dog Bone Turnout Approach - R/G			Not mega				Double	287	T1 - R/G
									288	
	Lower - Turnout to RI Colorado Springs - Tie to Occ	toris	S60b		4	38			289	From Tortoise to Mega input - or
	Lower - Turnout from RI to Pueblo - Tie to Occ	torin	S60b		4	39			290	From Tortoise to Mega input - or
	Lower - SB leaving Colorado Springs - DBD22 - CS	14.1	S70b		4	40			291	
S70b	Lower - Front Track leaving Pueblo				4		45	Double	292	T1 - R/G
	Lower - Front Track leaving Pueblo				4		46		293	
							47		294	In use for S58
	<b>Pueblo/Denver Show Track</b>								295	
S61a	Lower - Pueblo/Denver Show Track Turnout - G/Y			Not mega				Double	296	
									297	
	Lower - Pueblo/Denver Show Track - DBD22	14.2	S61b	2  3  8	5	2			298	Pueblo/Denver Show Track Occ

	Lower - Denver mainline	20.1		2  3  8	5	3			299	Denver Mainline Occ
	Lower - Denver Dogbone Reversing Loop	10.2		2  3  8	5	8			300	Denver Reversing Loop Occ
S61b	Lower - Pueblo/Denver Show Track				5		4	Double	301	T1 - R/G
	Lower - Pueblo/Denver Show Track				5		5		302	
									303	
	Lower - Pueblo > Denver Show Track - DBD22	14.2	S75		5	2			304	
S75	Lower - Pueblo > Denver Show Track						6	Single	305	
	Lower - Pueblo > Denver Show Track						7		306	
									307	
	<b>Denver Dog Bone Reversing Loop</b>								308	
	Lower - Enter Denver reverse loop - DBD22	10.2	S49		5	8			309	
S49	Lower - Exit Denver reverse loop				5		10	Single	310	T1 R/G
	Lower - Exit Denver reverse loop				5		11		311	
									312	
	Lower - Enter Denver reverse loop - DBD22	10.2	S52	8  9	5	8			313	
	Lower - Show loop turnout - Red if c	toshow		8  9	5	9			314	
S52	Lower - Enter Denver reverse loop				5		12	Single	315	T1 R/G
	Lower - Enter Denver reverse loop				5		13		316	
									317	
	<b>Denver North Turnout Show and Reversing Loop</b>								318	
	Lower - Denver North Mainline/Show turnout								319	Dual Kill track sections - Yellow LED's
D1	Lower - Denver North Mainline/Show turnout - dwarf	TO		Move RL back				Dwarf	320	T1-3/4 Y
D2	Lower - Denver North Mainline/Show turnout - dwarf	TO		Move RL back				Dwarf	321	T1-3/4 Y
									322	
<b>10/11/2019</b>	<b>Controls for three triple turnouts</b>								323	
<b>Resource</b>	<b>Legend</b>			<b>Electronics location</b>					324	
SW1up	Lower Level RI - Wye Triple - right			Sullivan's Curve	1	24			325	Mega connections
Gnd	Lower Level RI - Wye Triple - (center both high)			Sullivan's Curve	1	Gnd			326	Mega connections
SW1down	Lower Level RI - Wye Triple - left			Sullivan's Curve	1	25			327	Mega connections
Relay1.1	Lower Level RI - Wye Triple - relay board 1.1 c/t relay - front			Sullivan's Curve	1		26		328	Mega connections
T1.1	Tortoise 1.1								329	Relay Board to tortoise
T1.1	Tortoise 1.1								330	Relay Board to tortoise
Relay1.2	Lower Level RI - Wye Triple - relay board 1.2 - c/t - rear			Sullivan's Curve	1		27		331	Mega connections
T1.2	Tortoise 1.2								332	Relay Board to tortoise
T1.2	Tortoise 1.2								333	Relay Board to tortoise
Right-LED	Lower Level RI - Wye Triple			Sullivan's Curve	1		28		334	Mega connections
Right-LED	Lower Level RI - Wye Triple			Sullivan's Curve	1		29		335	Mega connections
Center-LED	Lower Level RI - Wye Triple			Sullivan's Curve	1		30		336	Mega connections
Center-LED	Lower Level RI - Wye Triple			Sullivan's Curve	1		31		337	Mega connections
Left-LED	Lower Level RI - Wye Triple			Sullivan's Curve	1		32		338	Mega connections
Left-LED	Lower Level RI - Wye Triple			Sullivan's Curve	1		33		339	Mega connections
									340	
SW2up	Lower Level RI - Sidings Triple - right			Sullivan's Curve	1	34			341	Mega connections
Gnd	Lower Level RI - Sidings Triple - (center both high)			Sullivan's Curve					342	Mega connections
SW2down	Lower Level RI - Sidings Triple - left			Sullivan's Curve	1	35			343	Mega connections
Relay2.1	Lower Level RI - Sidings Triple - relay board 2.1 c/t relay - Sidings			Sullivan's Curve	1		36		344	Mega connections
T2.1	Tortoise 2.1								345	Relay Board to tortoise
T2.1	Tortoise 2.1								346	Relay Board to tortoise
Relay2.2	Lower Level RI - Sidings Triple - relay board 2.2 c/t relay - rear			Sullivan's Curve	1		37		347	Mega connections
T2.2	Tortoise 2.2								348	Relay Board to tortoise

