



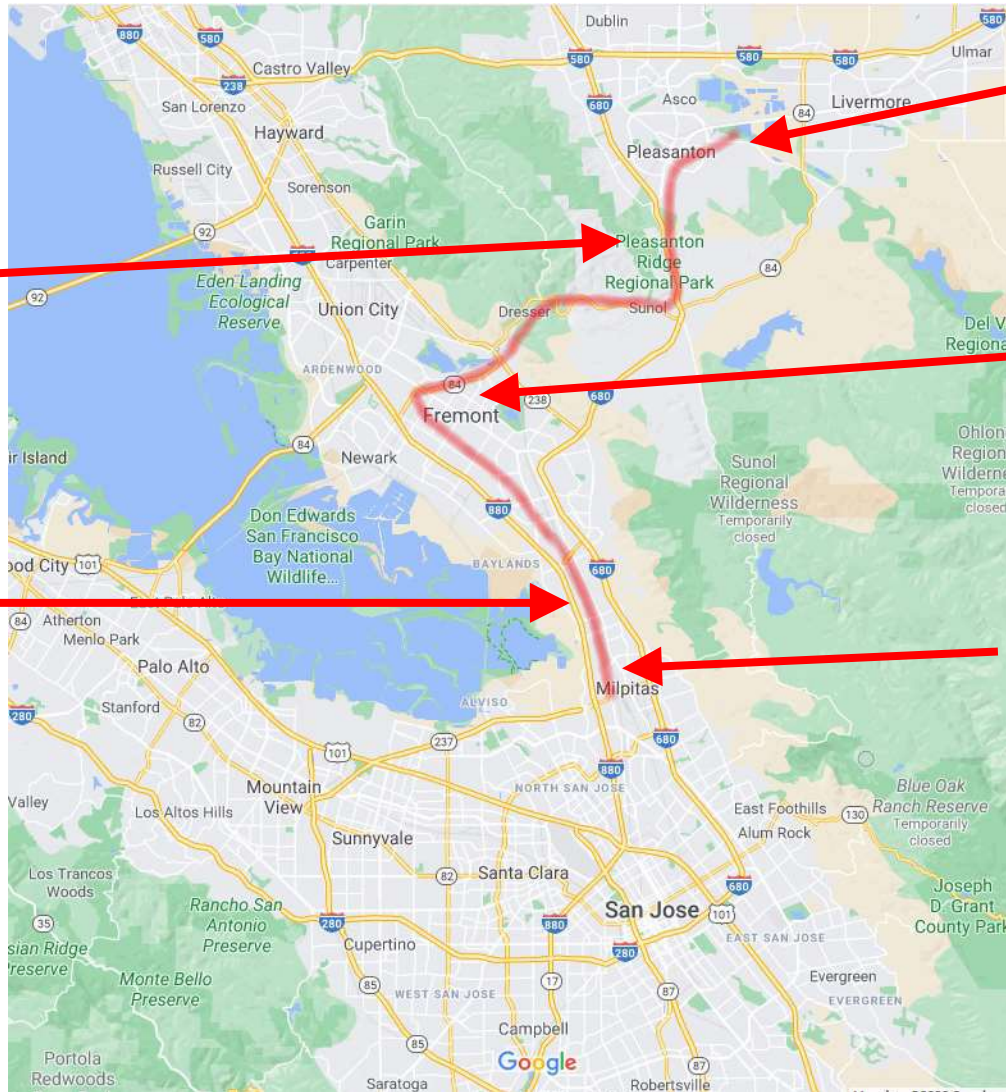
# UP Oakland Sub



10/11/2020



# Area Map



Radum

Hearst

Niles

NUMMI

Milpitas

10/11/2020



## UP Oakland Sub

- I "Discovered" Niles Canyon while in college in 1970
- Unique Western prototype:
  - 2 railroads within 100 yards for 20 miles
  - Many interesting bridges
- Mainline action
- Interesting tourist railroad (NCRY)
- Close to home, easy to research

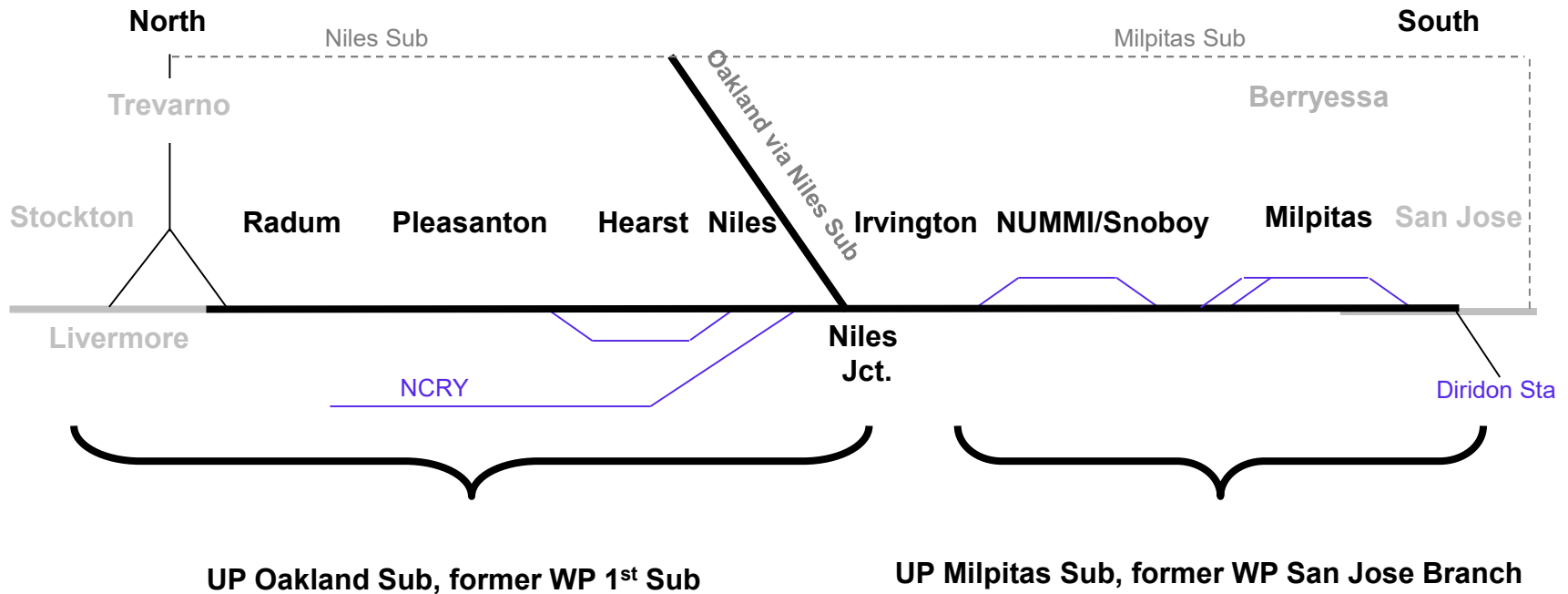


# Limited Space and Resources

- Constraints:
  - Purpose-built room (1998) is 14 X 34
  - Need to keep one wall clear to access office
  - I needed to work at the time (limited time)
  - I am operations oriented
- Solution (with guidance from Byron Henderson)
  - Single deck, simplified construction
  - Limited number of scenes
  - Concentrate on a few large industries



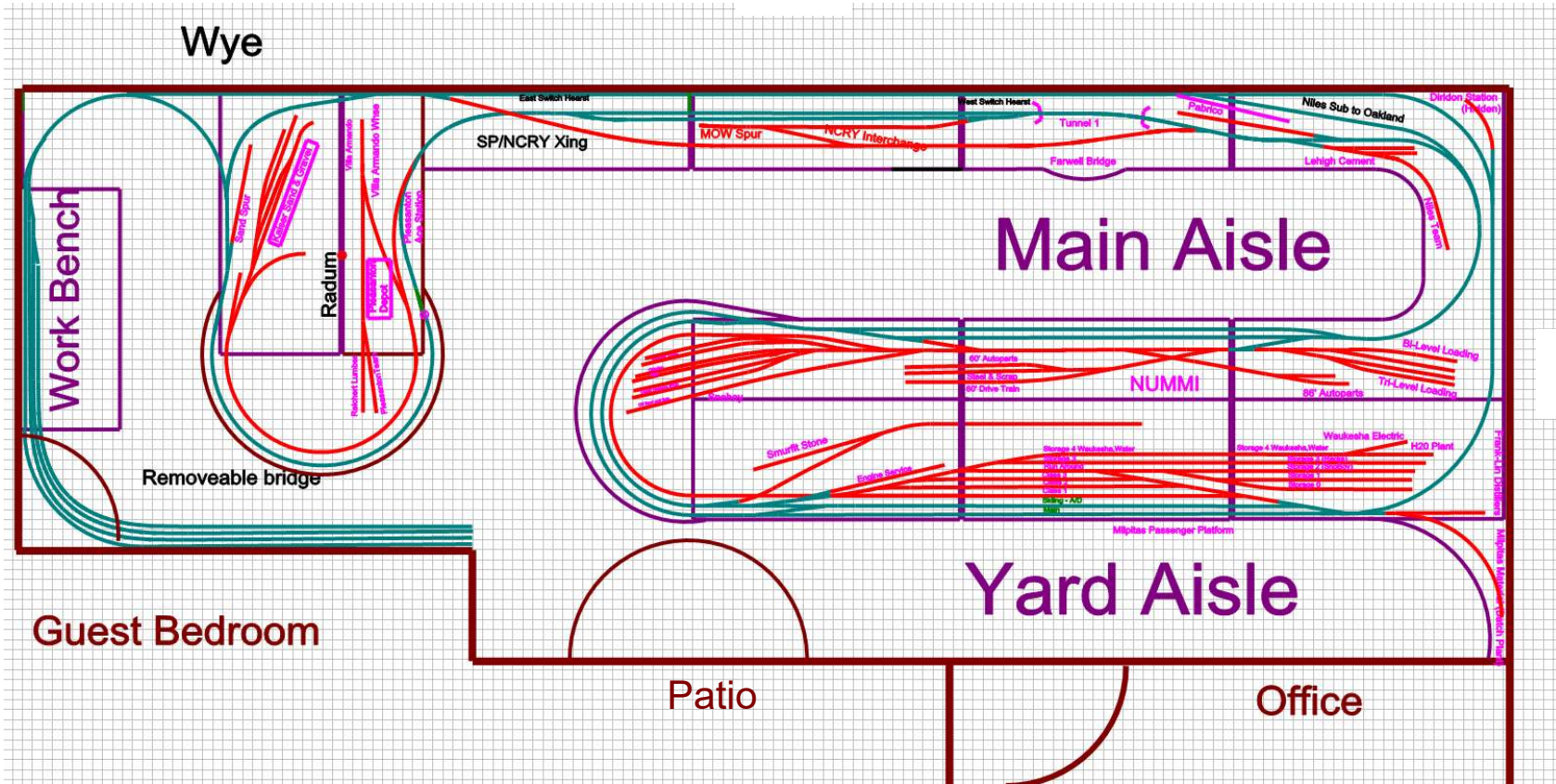
# Layout Schematic

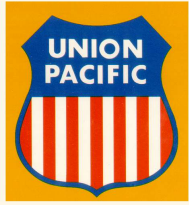




# Track Plan

34'





# Jobs

Operations is modeling the jobs of the railroad. I wanted to model:

- Local Crews
  - 54 Local (Pleasanton Turn)
  - NUMMI Job
  - BNSF Trackage Rights Local
  - Mission Bay Local (and industrial switching "critters")
- Dispatcher
- Yardmaster - but then I learned that Milpitas didn't have a Yardmaster or dedicated switch job. It has a Clerk - more work for the crews!
- Transfers, through trains, ACE Commuter




## Let's Follow the 54 Local

- Starts in Milpitas as a "turn" working only trailing point switches
- Works its way Railroad North (ugh!) to Radum (E. Pleasanton)
- Turns on Wye and returns, working trailing points
- Covers the visible layout





# Crews work from Switch lists

 **Switchlist**

Switchlist: \_\_\_\_\_ Date: \_\_\_\_\_  
 Train: \_\_\_\_\_ Engines: \_\_\_\_\_

	Road	Number	Type	From	To
1	CSXT	497080	G		
2	UNSP	527258	F1		
3	MP	643234	GB		
4	SP	358693	GG		
5	UTLX	125134	IA		
6	HQPK	1263	T		
7	TTZX	87963	FH		
8	UP	40061	H		
9	HOKX	11674	T		
10	SHFX	270870	T		
11	UTLX	802668	T		
12	CLLX	11265	T		
13	UTLX	80035	T		
14	PHDX	205219	XM		
15	PLCX	149	LO		
16	SP	180250	LO		
17	CNVV	175201	LO		
18	CVSR	136385	X		
19	UP	909447	FT		
20	ETCX	4325	RBL		
21	UP	105331	RBL		
22	CDP	1050	XM		

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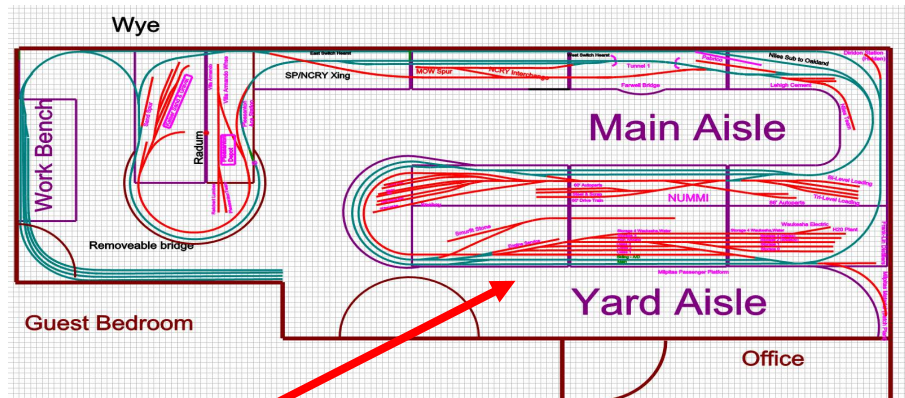
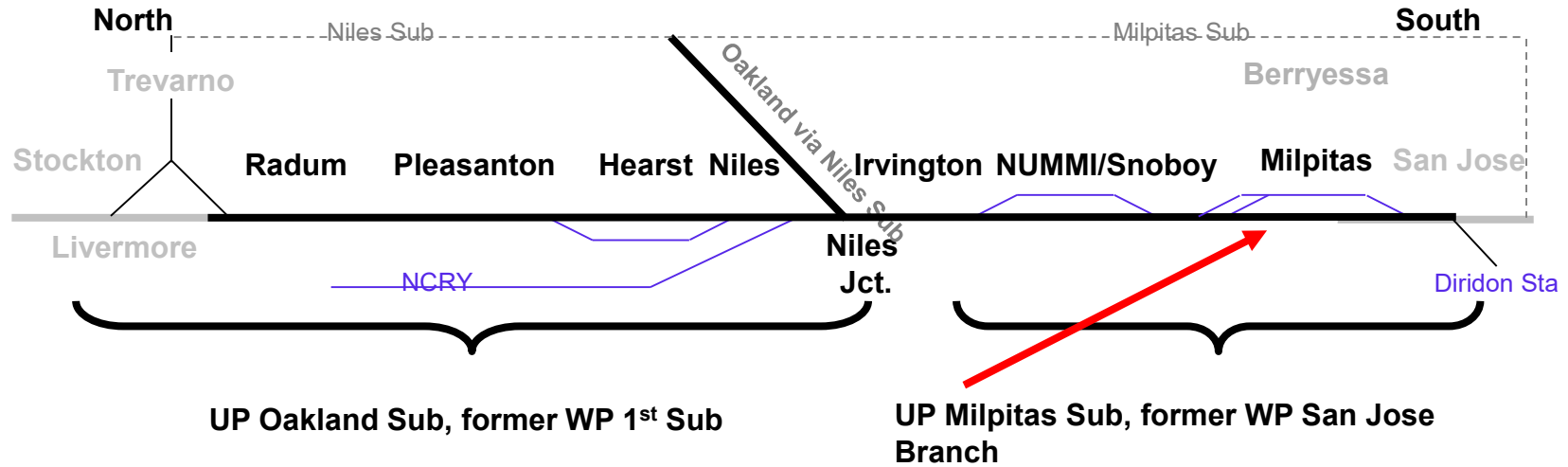
RFID system gives you:

- Road Name
- Road Number
- Car type

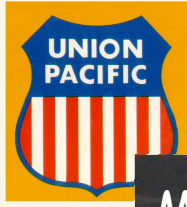
The Clerk fills in the location and destination



# Milpitas

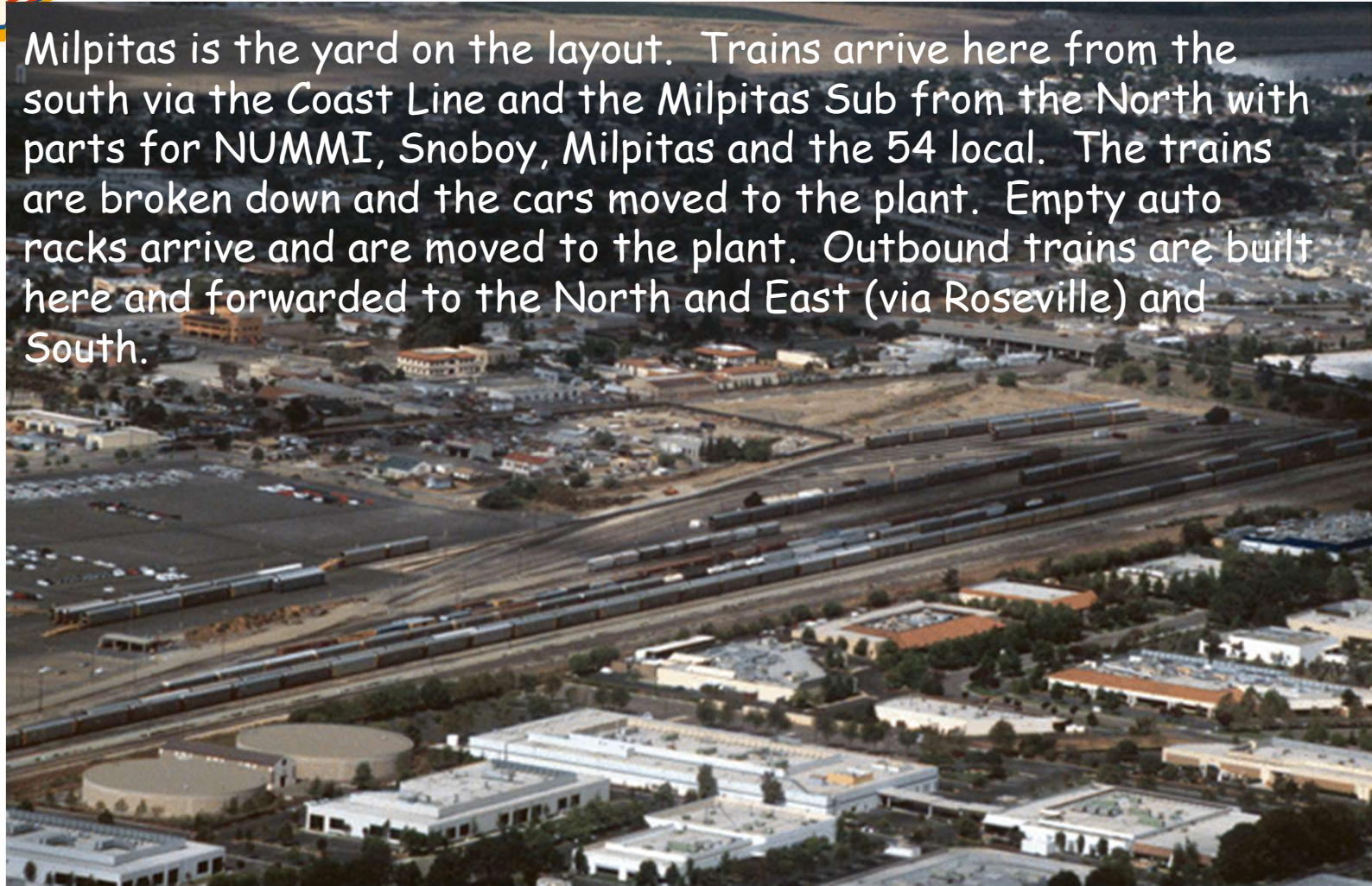


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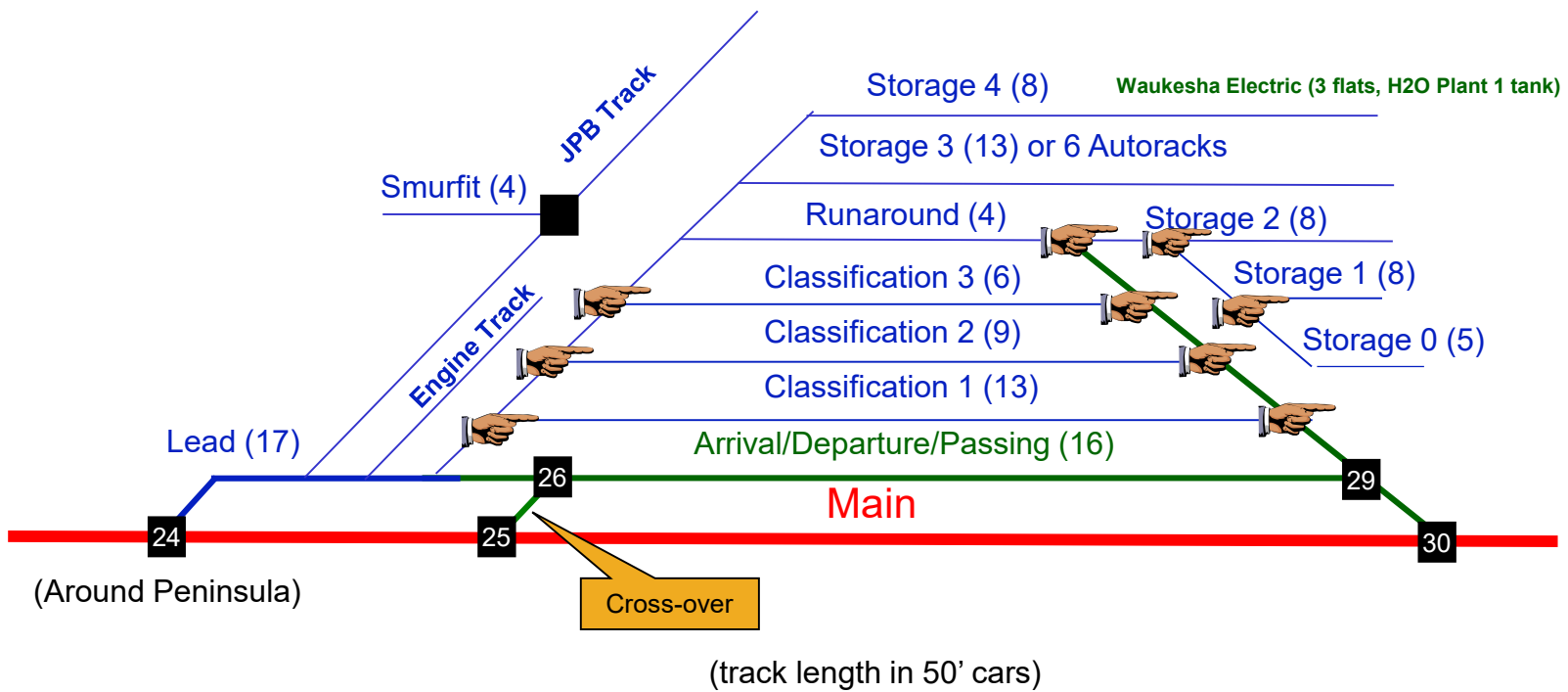
# Milpitas Yard

Milpitas is the yard on the layout. Trains arrive here from the south via the Coast Line and the Milpitas Sub from the North with parts for NUMMI, Snoboy, Milpitas and the 54 local. The trains are broken down and the cars moved to the plant. Empty auto racks arrive and are moved to the plant. Outbound trains are built here and forwarded to the North and East (via Roseville) and South.





# Milpitas Yard



- Electric Control on panel
- 👉 Push Switch

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# Milpitas Yard



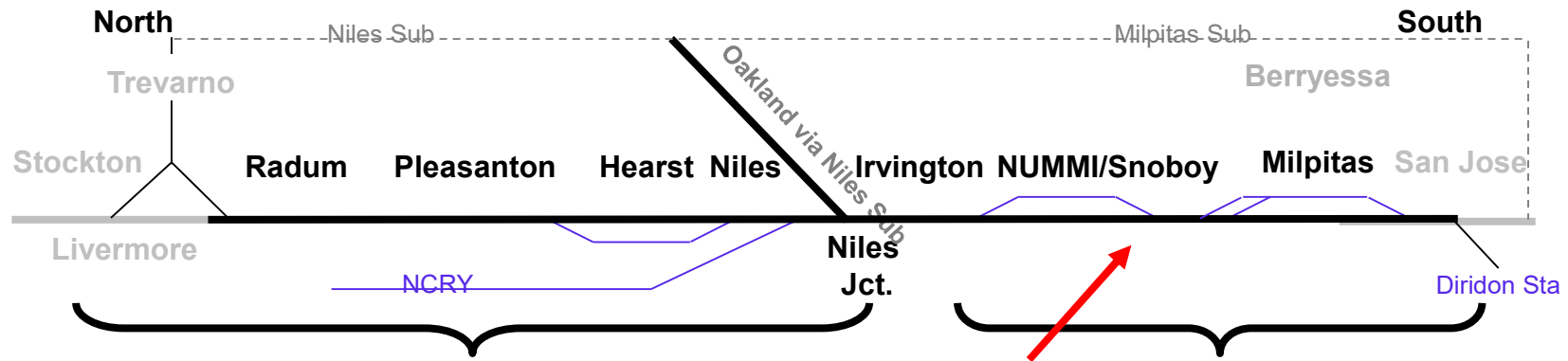
Fueling complete, the clerk arrives on his ATV with work orders.

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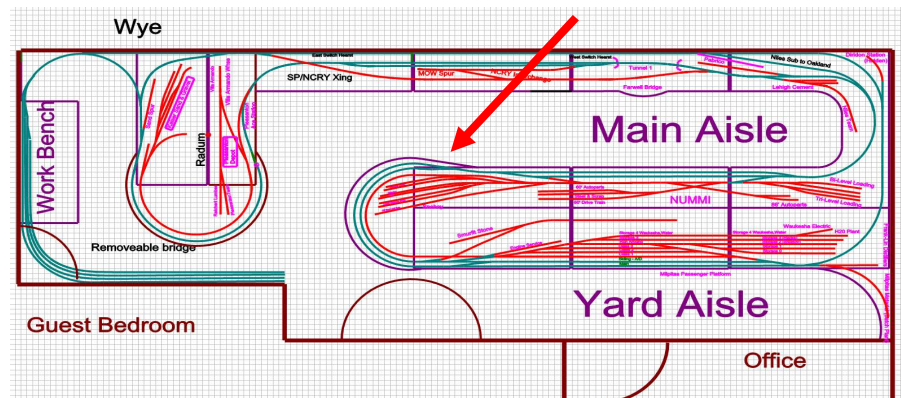


# With the train assembled, 54 heads North, passing Snoboy



UP Oakland Sub, former WP 1<sup>st</sup> Sub

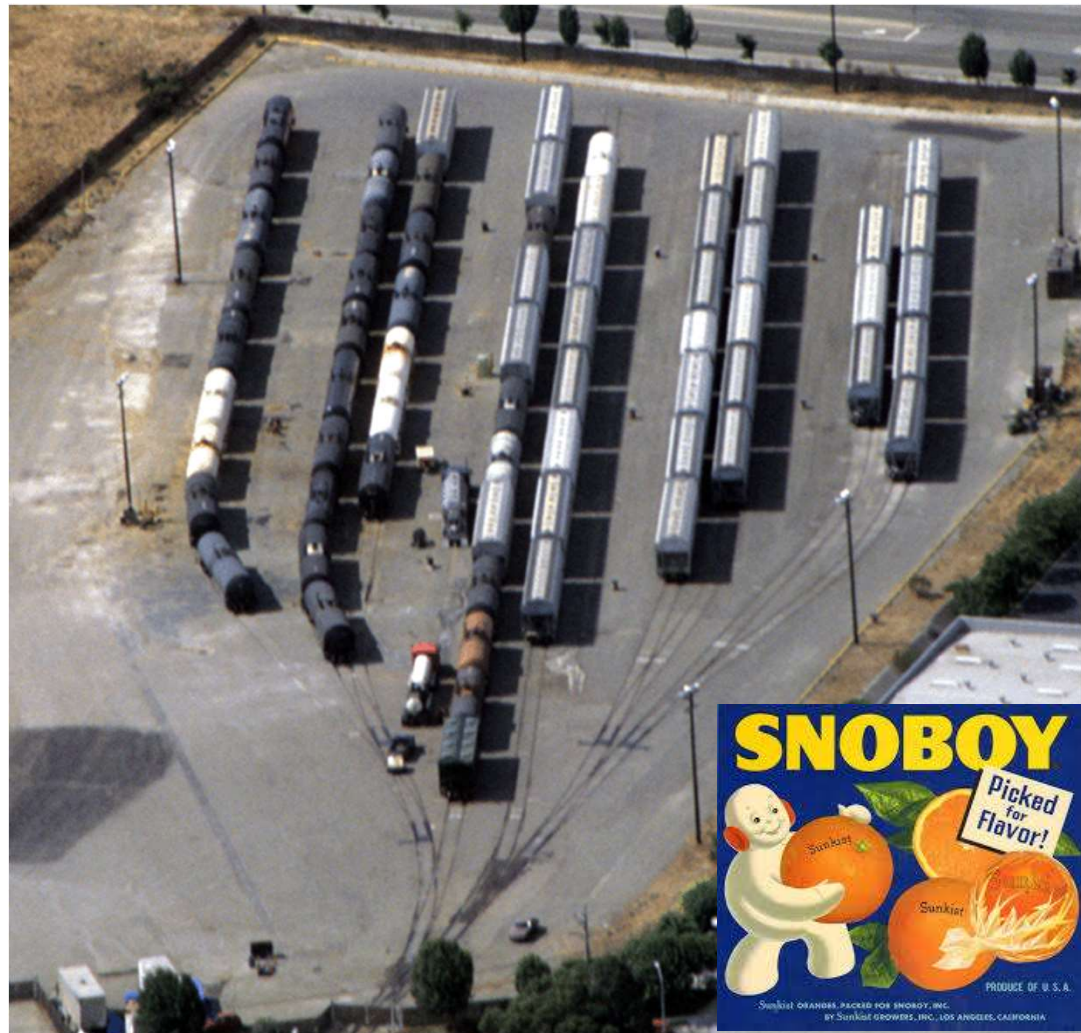
UP Milpitas Sub, former WP San Jose Branch

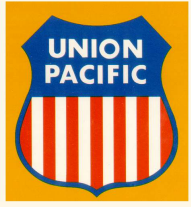




# Snoboy

Named for the site of a frozen food plant, Snoboy now serves as a bulk transfer facility, a 9-track team track that can be modeled with minimal compression!





# Snoboy

Just for orientation:  
the 54 local  
doesn't work  
Snoboy, it's  
handled by  
the NUMMI  
job and  
BNSF

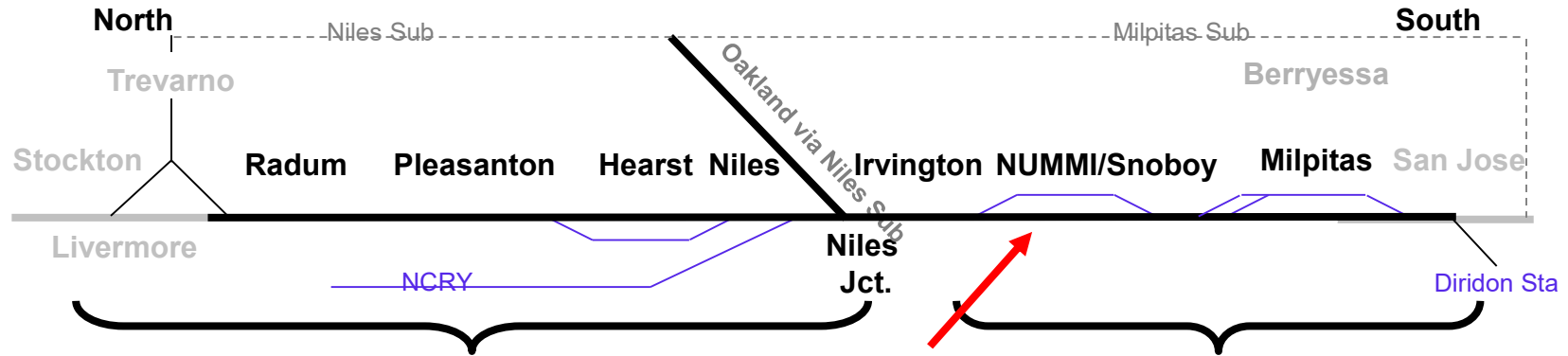


10/11/2020



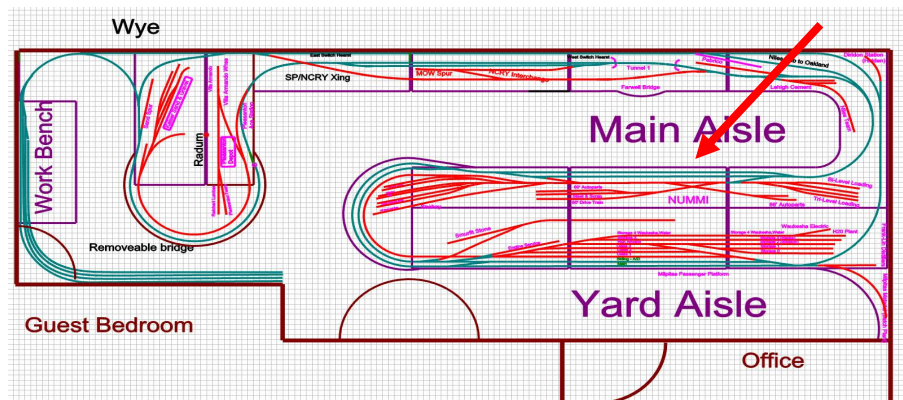


# NUMMI



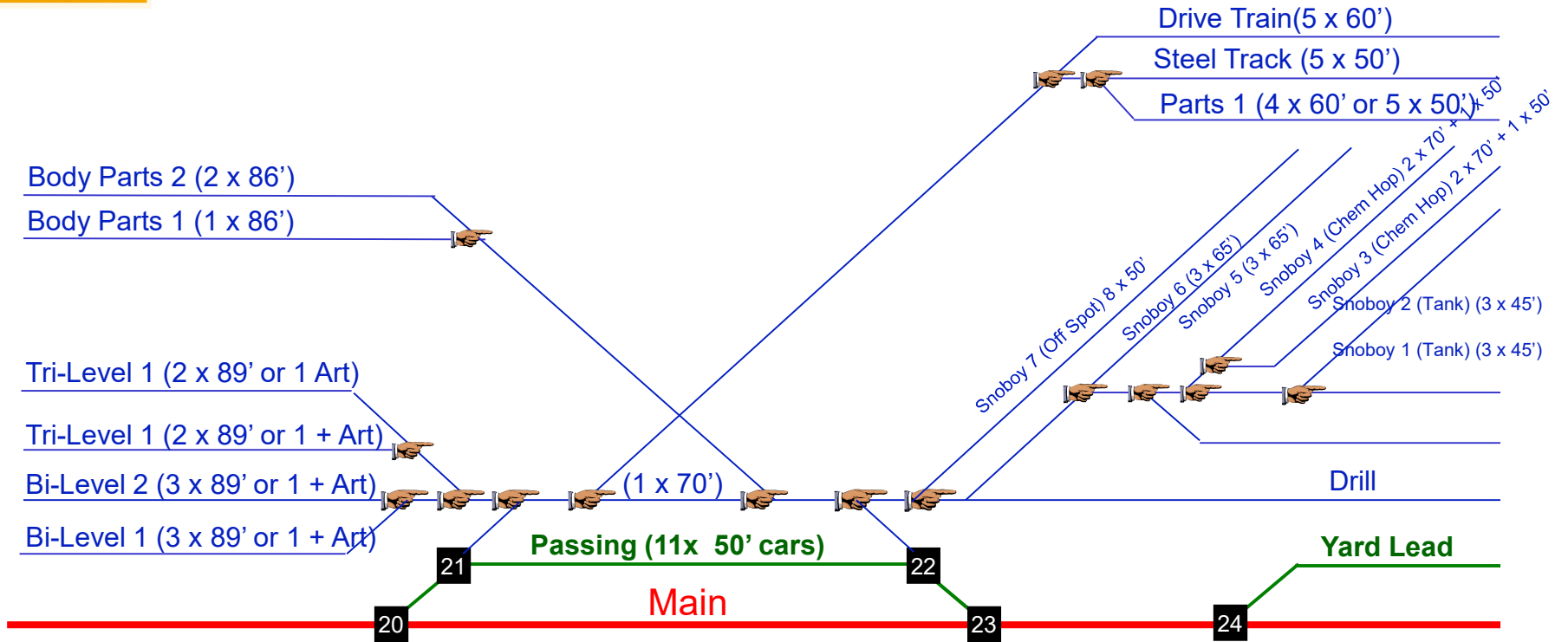
UP Oakland Sub, former WP 1<sup>st</sup> Sub

UP Milpitas Sub, former WP San Jose Branch

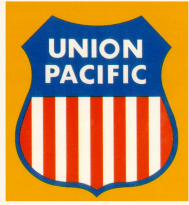




# NUMMI and Snoboy



- Electric Control on panel
- 👉 Push Switch



# NUMMI Plant - Warm Springs

New United Motor Manufacturing Inc, was a joint venture between GM and Toyota. NUMMI made Geo Prisms (Corollas with a Chevy badge) and Tacoma trucks. NUMMI is the major industry on the line. The NUMMI job switches the plant and runs back to the yard, with an occasional trip to SnoBoy.



Rack loading



# NUMMI: The Model



The 54 local doesn't work here but we see the NUMMI Job pulling a Body Parts Box past the Drive Train and Steel Tracks. NUMMI Drive Train Building by Ed Loizeaux.

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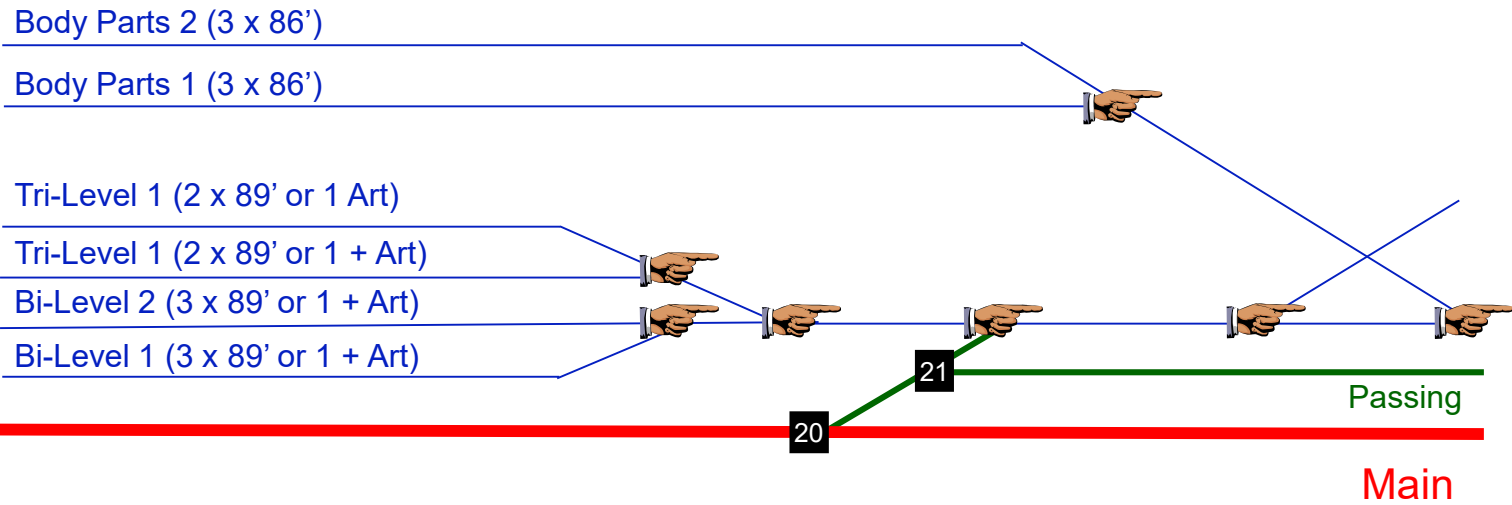
# NUMMI Body Parts Boxes





GM plants used 4 door boxes.  
Containers were trucked down from Oakland.



# NUMMI East Track Plan



-  Electric Control on panel
-  Push Switch



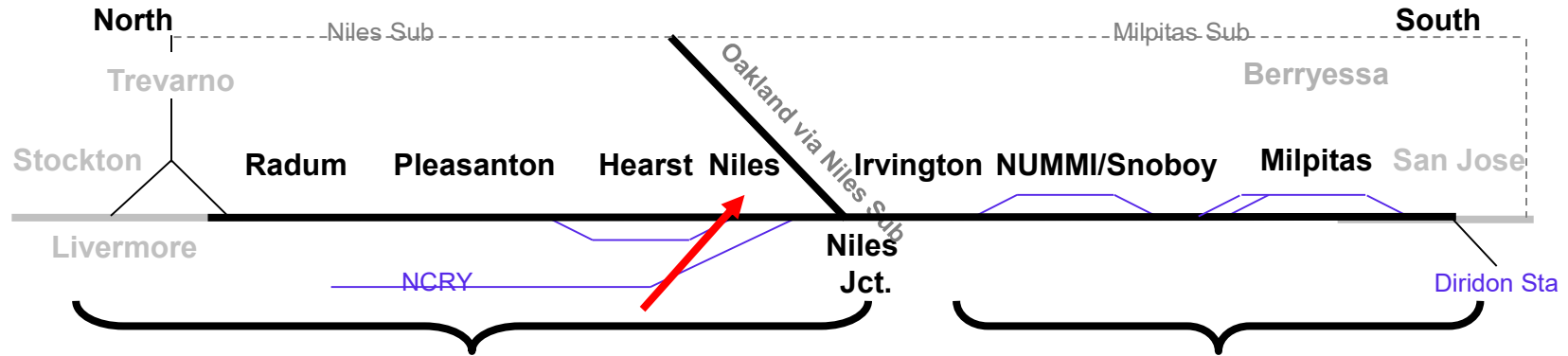
# NUMMI Rack Loaders



Steve Williams assembled these beautiful but incredibly fiddly TrainCat etched Brass loading ramps!

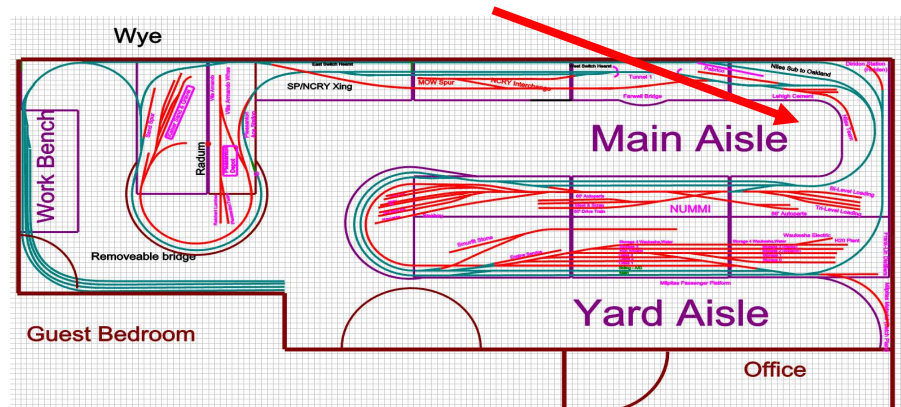


# 54 Finally gets to work at Niles!



UP Oakland Sub, former WP 1st Sub

UP Milpitas Sub, former WP San Jose Branch







# Lehigh Cement and Niles



The Hayward Fault has done some strange things and moved parts of Union City 10 miles to the South! (Lehigh Structures by Earl Girbovan)

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## Working the Niles Team Track



The Lehigh Trackmobile is placing the set outs  
As 54 spots a reefer at the Niles Team Track



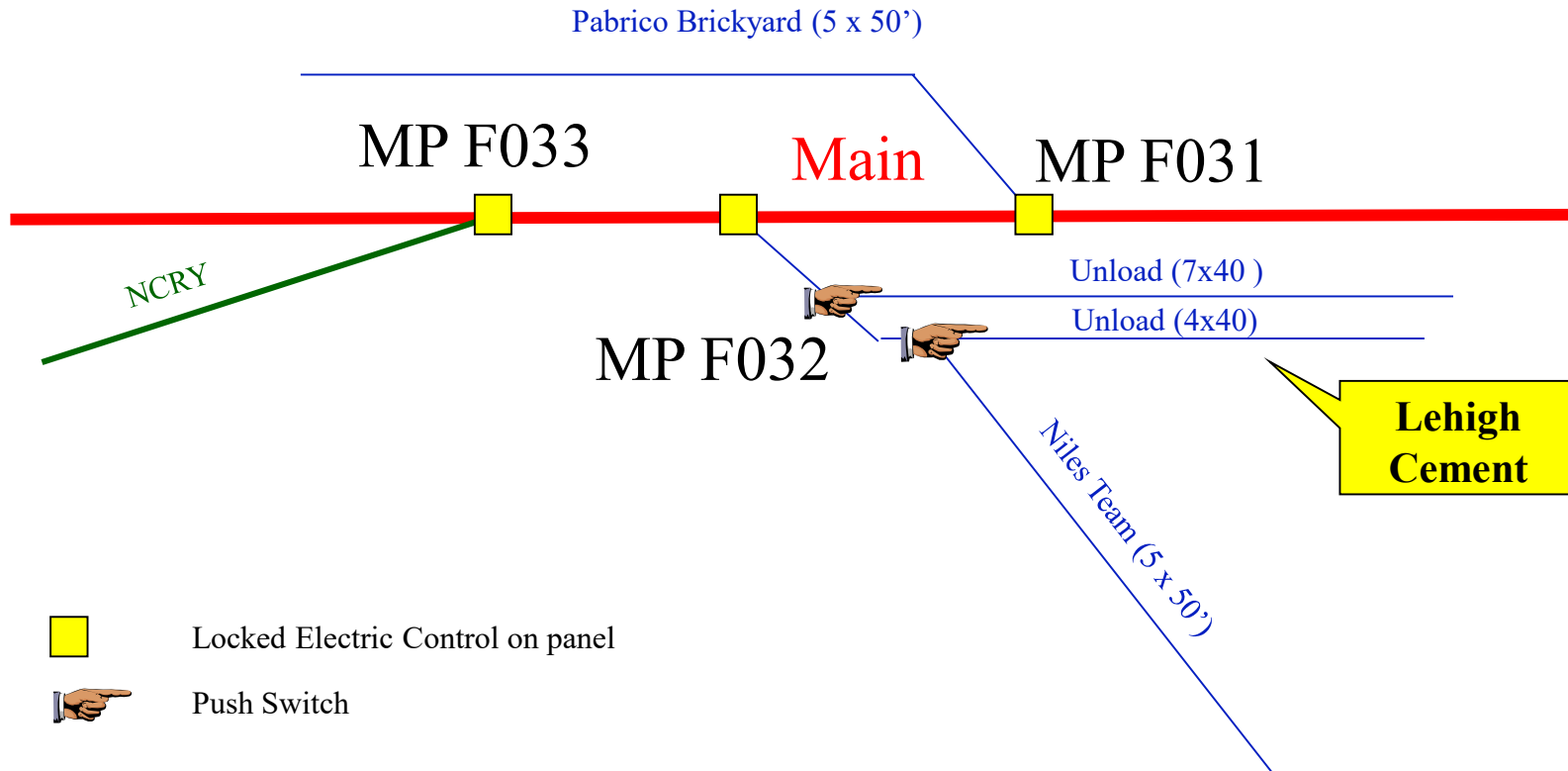
# Niles Team Track





Looks like the consignee was waiting for the reefer!



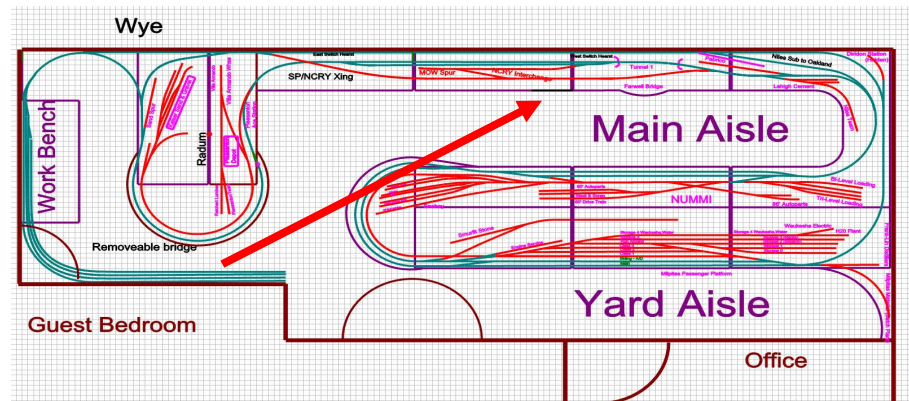
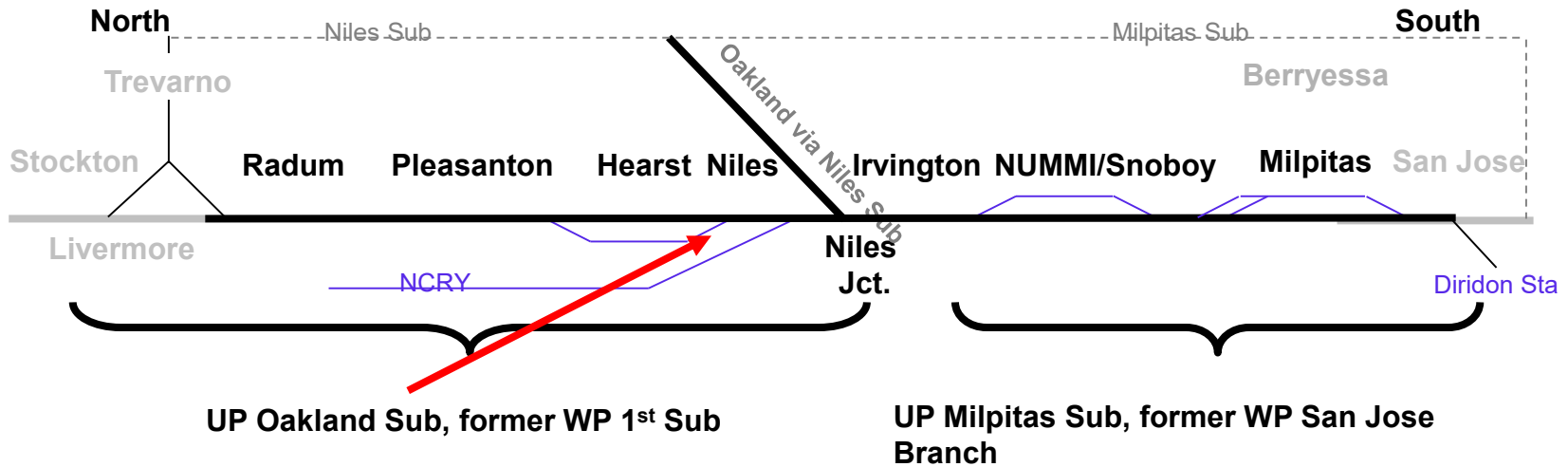
# Niles Track Plan



-  Locked Electric Control on panel
-  Push Switch



# Niles Canyon





## Tunnel 1 and Brickyard at Niles

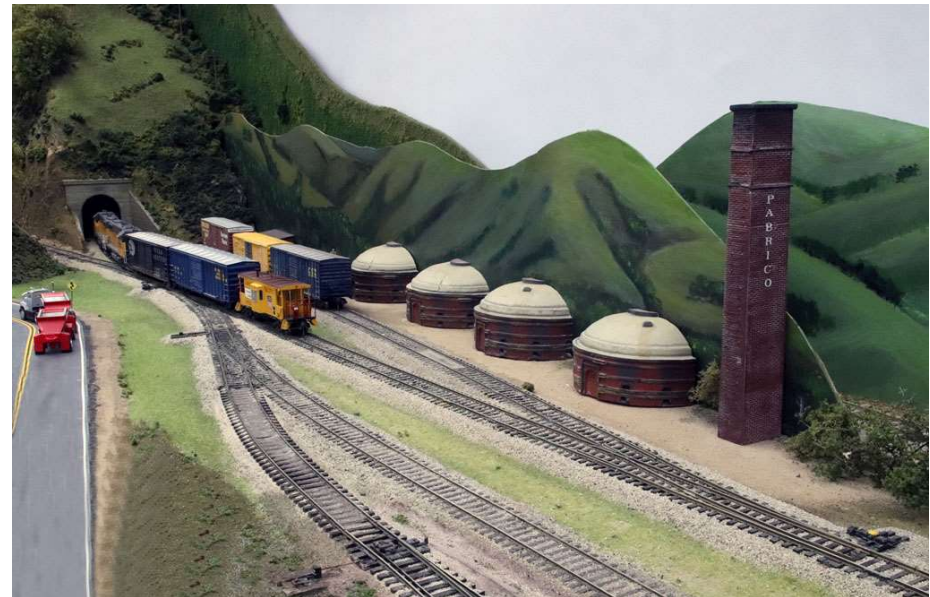
Since the Brickyard spur is facing point, 54 will work it on the way back.

The brickyard is visible in the photo next to the entrance to Tunnel 1, it ships boxcars full of bricks. The prototype closed in the 80s and was served from the SP side





# West Portal & PaBriCo Brickyard



54 only works trailing point Spurs, so we'll get PaBriCo on the way home!

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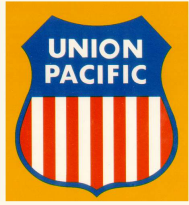
# Farwell (on Niles Canyon Railway)



10/11/2020 Skewed Pin-Connected Bridge Kitbash by David Parks







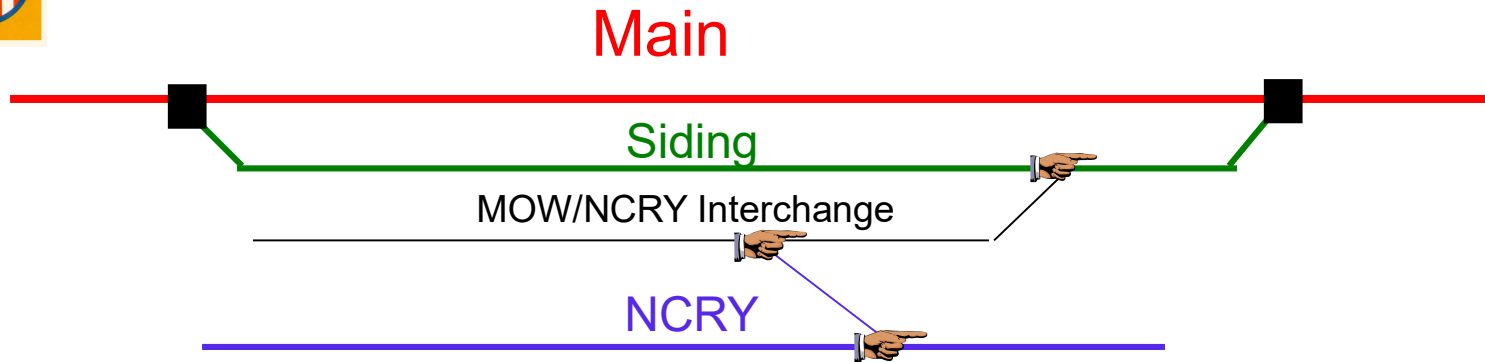
## Hearst Siding and NCRY Connection

Hearst is the siding you see off 680 just south of Pleasanton. There is also a single-ended spur that is used to set out bad equipment and to store track maintenance equipment. In 2003 UP and the NCRY installed a connection between the short siding and NCRY for movement of historic railroad equipment to the NCRY





# Hearst Siding



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Trailing Point: Work on the Return

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# Bridge at Verona Road



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# Pleasanton

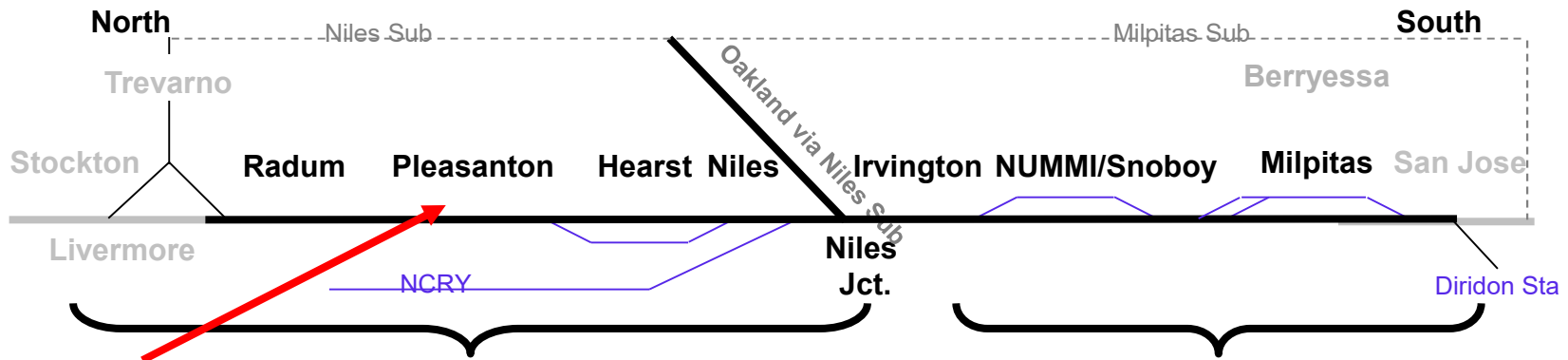
We are building a "laser-bashed" version of the SP type 22 Depot in Pleasanton, in it's Senro Sushi/RPM Mortgage configuration. We also model Richerts' Lumber, a team track, Villa Armando Winery and the ACE Station.



Site of Villa Armando

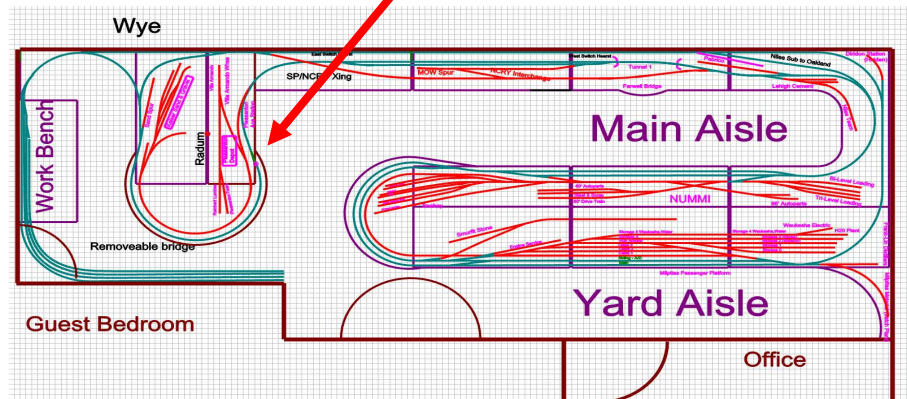


# Pleasanton



UP Oakland Sub, former WP 1st Sub

UP Milpitas Sub, former WP San Jose Branch





## SP Type 22 Depot



David Parks kit-bashed this from the AMB kit. It is accurate but too big for the space. We are "laser Bashing" new sides for an LH version with the standard freight room which will fit better. It will feature lighting and animation.



# Pleasanton Track Plan

Richert Lumber (1 x 60') Villa Armando Winery (2 x 60')

(Around Peninsula) Team (1 x 72')

Radum Lead

**Former SP Depot**



The ACE stops at Pleasanton and Milpitas before tying up at Diridon Station. 54 works the Team Track on its return. BNSF works Richert lumber. Note Restored Depot site at upper left.

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# Villa Armando



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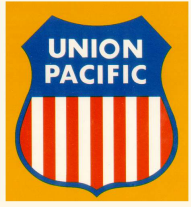


# Villa Armando



Sam Romerstein kitbashed this from a Walthers Co-Op kit, lights and new dock added later. The mockup is for a laser cut building with interior, tanks and a small picnic area for tasters. 54 works Villa Armando on its outbound trip.

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# Radum



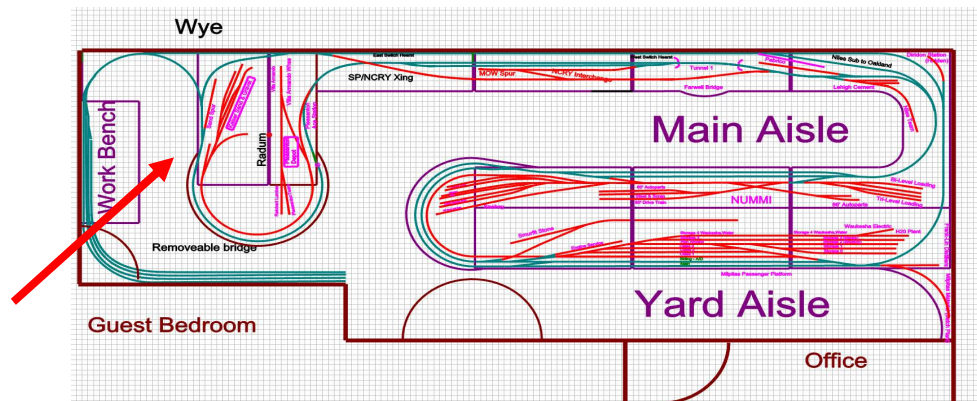
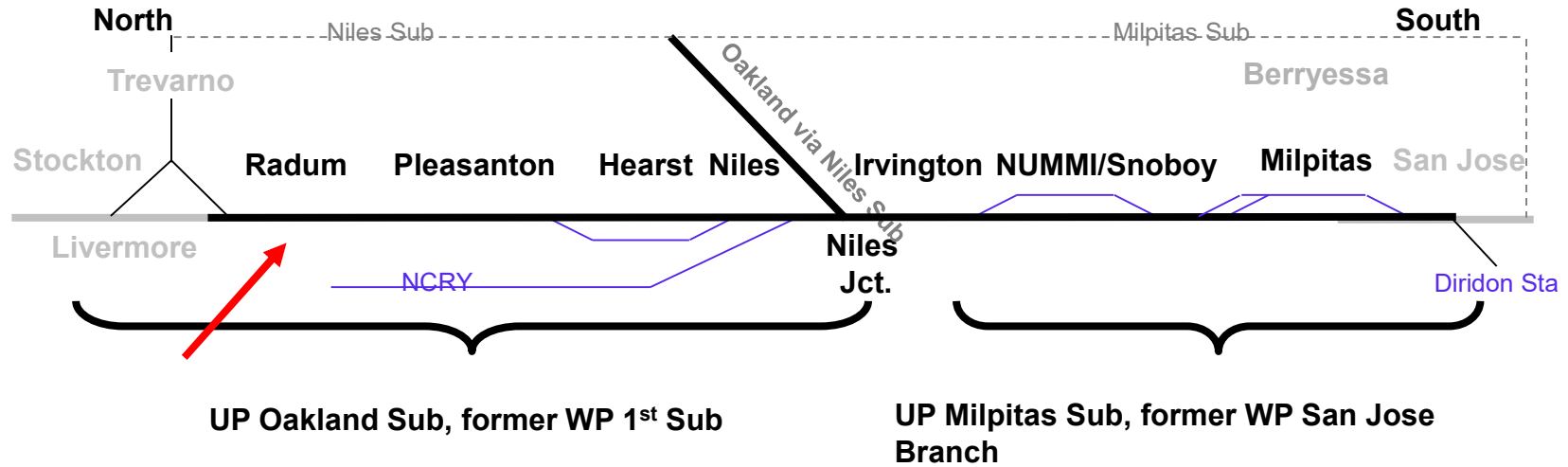
Radum is just a station sign on the UP now, but while the SP San Ramon Branch was in use, the WP crossed the SP Wye. We use the wye as the entrance to staging and to turn the 54 local after switching Villa Armando and before Kaiser Sand & Gravel.

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# Radum





# Kaiser Sand & Gravel pits Stanley Blvd.

Kaiser has its own "critter" (industrial switch locomotive). This job shuffles groups of empty hoppers under the gravel tipples and move loaded hoppers out. The 54 local exchanges empties for loads after turning on the wye and backing down the Pleasanton Lead.

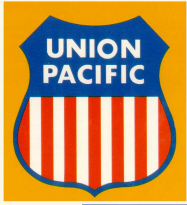




# 54 Local at Radium



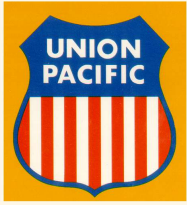
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# Kaiser Sand & Gravel - Radum



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# Kaiser Sand & Gravel - Radum



21°50'54.42" N

108°50'54.42" W

elev 367 ft

© 2008 Tele Atlas





# Verona Road/NCRY Xing



54 prepares to work Hearst

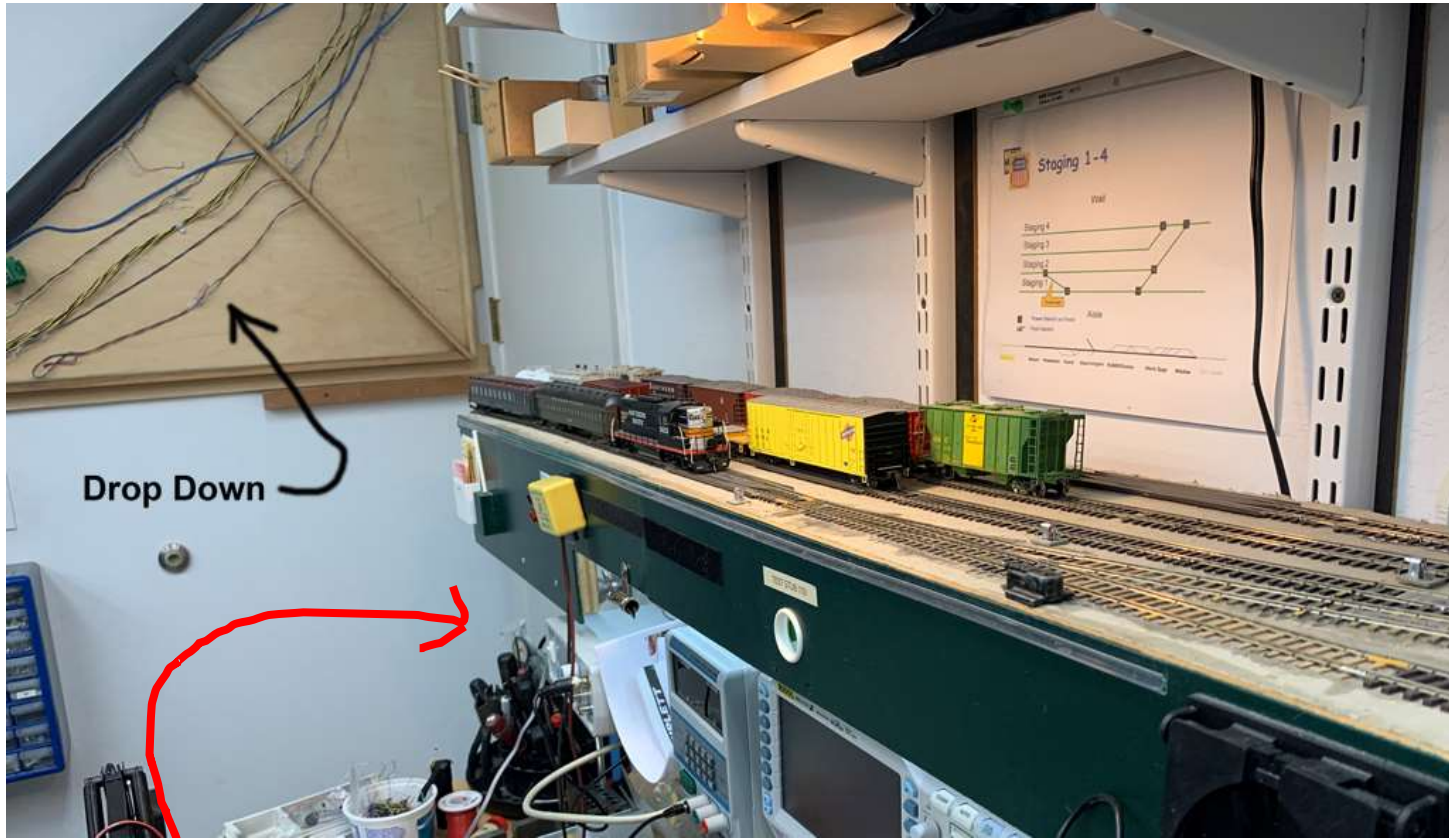
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# Staging

4 track throat, curved drop down



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Model Railroad Control Systems Global  
Research & Development Campus

50



# Back Staging



~ 8 x 8' trains

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# Typical Work Area

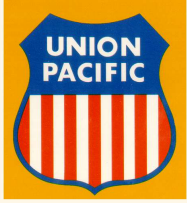


Note Smurfit-Stone Paper box warehouse at Milpitas



# Operations Plan

- Industry Jobs:
  - NUMMI job (all session - 5 pulls, usually switch after lunch)
  - Mission Bay local includes the "Crittter" which works Kaiser Gravel Pit, Lehigh Cement and NCRY, also works the yard under direction of the Clerk
- Locals:
  - UP (54) local out of Milpitas - "AM" job
  - BNSF trackage rights local out of Stockton (Not Richmond) - "PM" job
- Trains swapping blocks at Milpitas
  - MOAWC Oakland - West Colton Manifest
  - MSJRV/MRVSJ Roseville-Milpitas manifest
  - AOAMIR-(1&2) Oakland-Milpitas MT Racks, returns as AMIOA-(1&2)
- ACE (commuter)
- Overhead traffic - run as needed

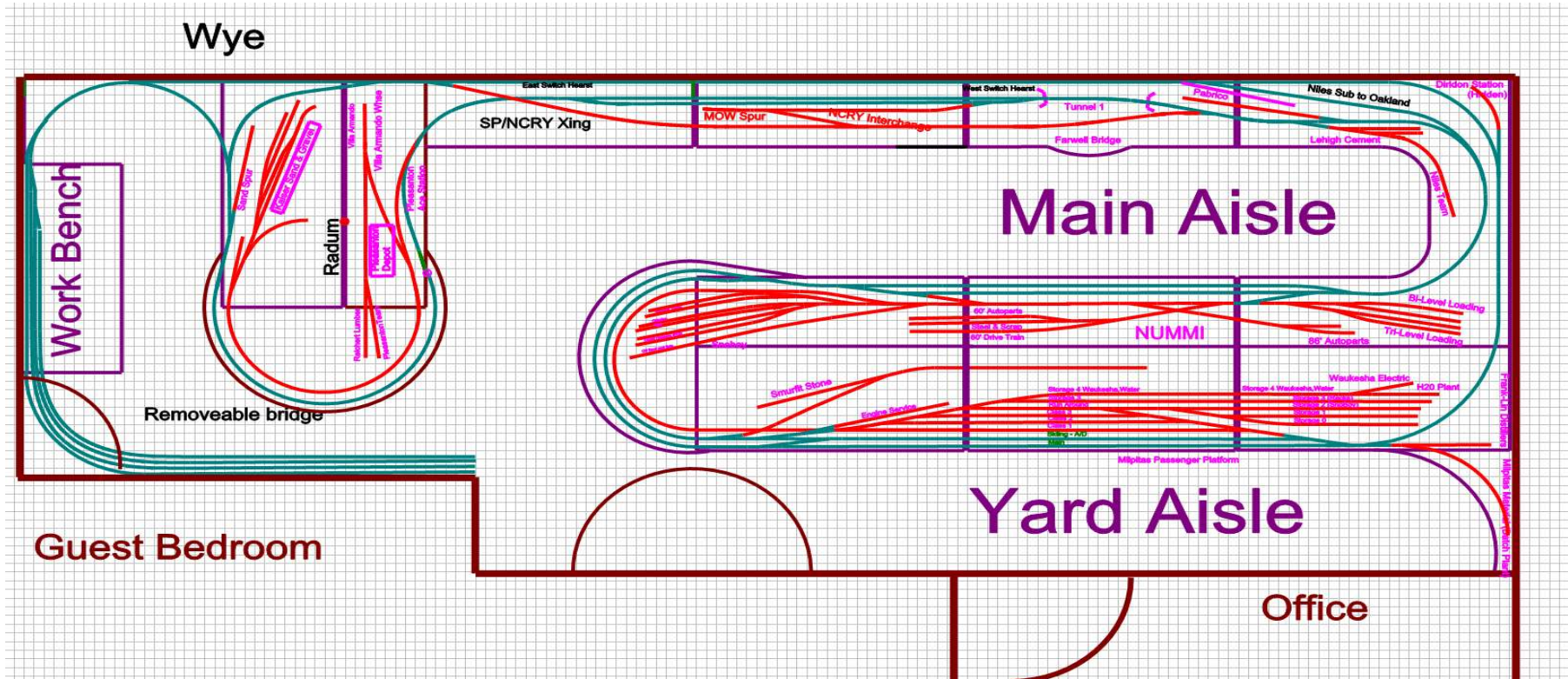


# Typical Call Board

Time	Location	Train	Crew
7:45	JPB Track	Mission Bay Local - UP 2413	
8:00	Staging 1	ACE 5 - ACE 3102	
8:00	NUMMI	NUMMI 1 - UP 559	
8:30	Lehigh/Kaiser/Sunol	Critter Wrangler (uses power at industries)	
8:00	A/D	LRV54 - UP 2312 on Engine Track	
10:00	Staging 5	MOAWC - UP 6288 /UP6145	
11:00	Staging 2	AOASP- UP 1742/SP 7122	
11:30	Staging 6	MRVSJ - UP 1983/SP 9824	
12:00	Staging 7	BNSF Local	
1:30	Staging 8	MOACI - SP 8100/UP 9442	
3:00	Diridon Station	ACE 4	
		Dispatcher -	
		Clerk -	

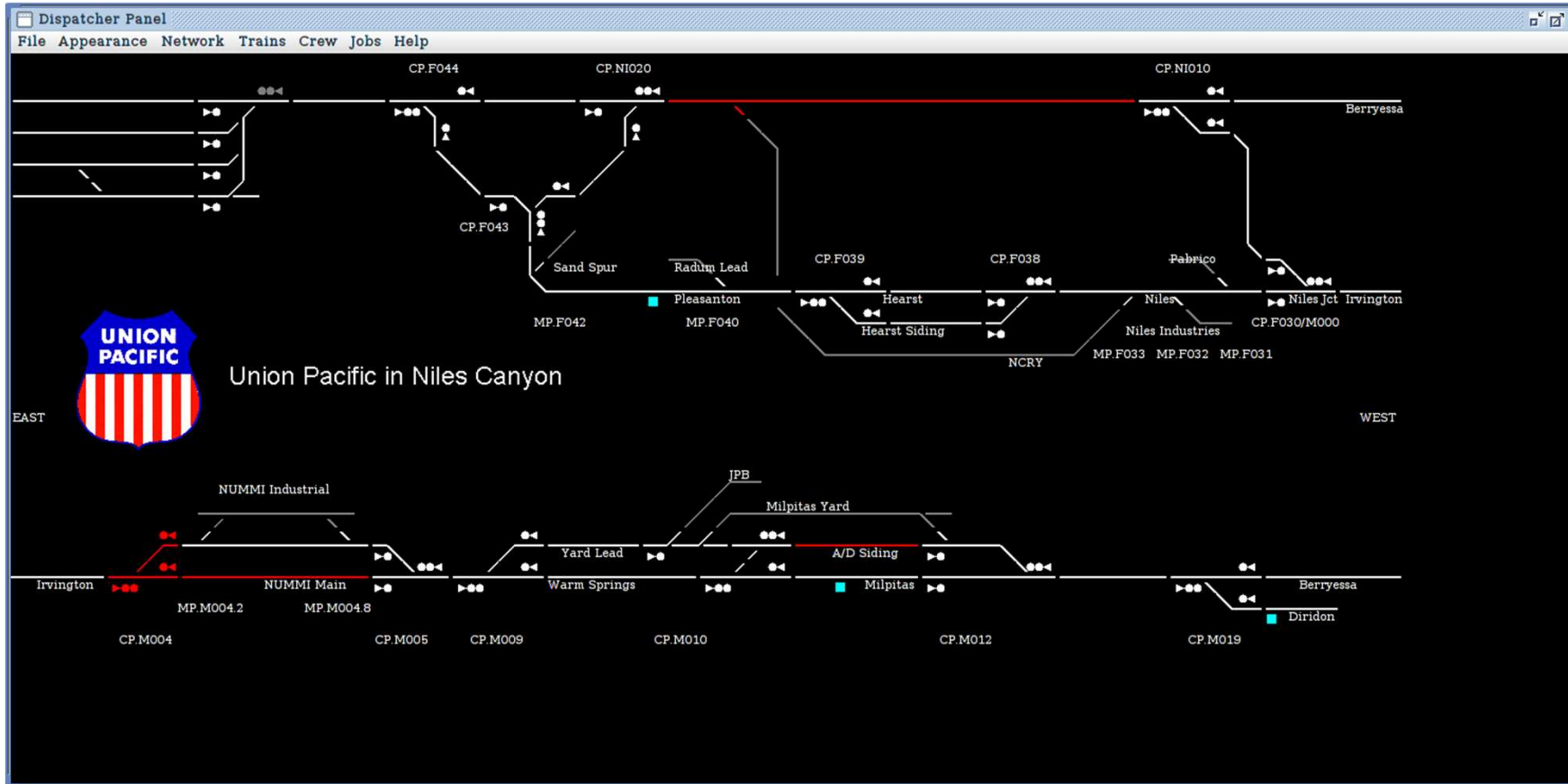


# Dispatching and Car Forwarding





# Dispatcher Panel CATS/JMRI/CMRI



Running on a PC under Ubuntu Linux, moving to Raspberry Pi

10/11/2020





# Clerk in Action




Pat LaTorres Manages the PICL Rack



# Car Forwarding

- Car Card and Waybill car forwarding in Clerk's Office only, only switchlists on layout
- RFID system generates Wheel Reports with spaces for Clerk to complete Switch lists

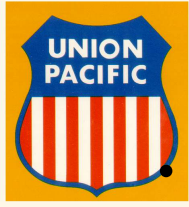
 **Switchlist**

Stations: \_\_\_\_\_ Date: \_\_\_\_\_

Trains: \_\_\_\_\_ Engines: \_\_\_\_\_

	Road	Number	Type	From	To
1	CSXT	497080	G		
2	BNSF	527254	F1		
3	MTW	643234	GB		
4	GP	358693	GS		
5	UTLX	12534	1A		
6	HOPX	1253	T		
7	TTLX	87963	TH		
8	UP	40051	II		
9	HOKX	111074	T		
10	WHPX	770870	T		
11	UTLX	802668	T		
12	CLLX	11255	T		
13	UTLX	80035	T		
14	FHDX	505219	XM		
15	PLCX	149	LD		
16	SP	181250	LD		
17	CNVV	175201	LD		
18	GMOR	136325	X		
19	UP	900447	IT		
20	ETCX	4325	RBL		
21	UP	105331	RBL		
22	CDP	1050	XM		

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# Electrical and Controls

## NCE wireless DCC

- 4 Dogbone cabs, 3 knobblies
- 2 5A boosters
- TTX power shields and auto-reversers
- WiThrottle Server and 1 hard WiFi UT4 equivalent
- C/MRI for TCS/CTC signaling
  - Mix of cpOD-MS and DCC-ODs for detection
  - 4 SMINI nodes, 2 cpNodes
- Turnouts and controls
  - Mix of hand built (because of geometry), Peco and Fast Tracks
  - Tortoise, MP1s for dispatcher controlled and electric locks
  - Slide switches elsewhere
- Code 83 rail and switches on main, 70/75 elsewhere



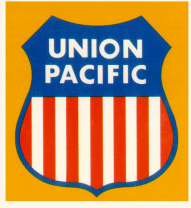
## Lessons Learned so Far -1

- Double slot bracket and 24" doors (no larger!)
  - Light and easy for 1 person
  - Inflexible and need a lot of shimming
  - Consider 2x2s and plywood brackets
- Blue (Pink) Foam for scenery
  - OK for scenic contours but messy and smelly to cut
  - Use plywood cookie cutter or spline for sub roadbed
- Lighting - 5000K (LEDs now) and lots of it!
  - A big win, dimmable LEDs available if you want night effects
- Bench work - Westcott tables, go heavy
  - Go 1" higher on L girder dimensions
  - Anchor peninsulas to walls



## Lessons Learned so Far -2

- Aluminum Backdrop
  - Big win, no seams!
  - Use thin nap on roller
- Fascia - makes whole structure Stiffer
  - Main fascia is  $\frac{1}{4}$ "
  - 1.5" lip of  $\frac{1}{8}$ " to hold velcro for skirts
  - Supports every 2'
  - Holds all of the controls and miscellaneous operating stuff - do it as soon as you start to operate!
- Modulate scene detail to draw attention to switching areas and create the illusion of more distance



## Contact Info

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- 415-602-1510
- Work Nite is Monday 7:00 - 10:00 PM