

California Rail News

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Metrolink's Plans for Increased Service and Partial Electrification

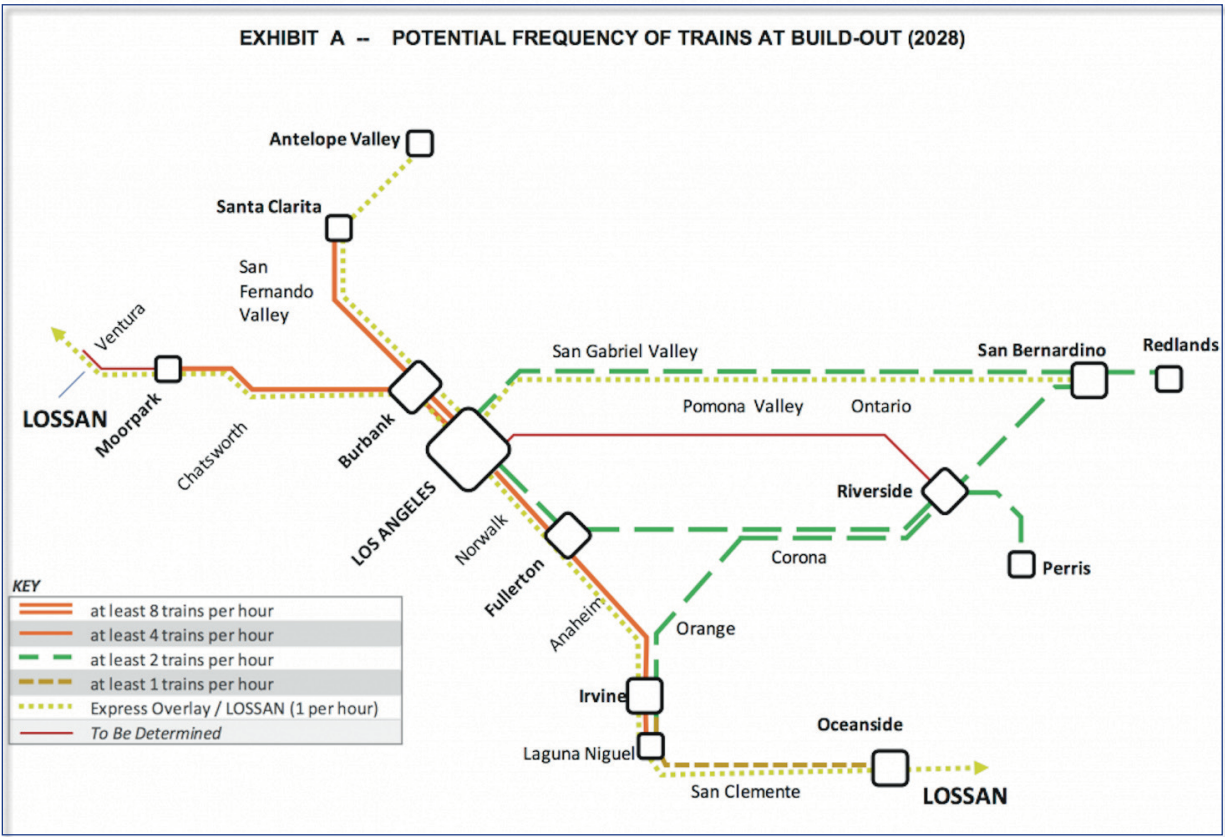
Regional rail agency plans for growth over the next 10 years

By Alon Levy, November 2018
Special to California Rail News

With more than 500 miles of track, yet just 40,000 weekday riders, Metrolink is a large but underutilized commuter rail network. In Chicago, a smaller city with a slightly smaller commuter rail network, the equivalent ridership is 300,000; in Paris, it approaches 3 million.

So what can be done to make Metrolink more useful? The agency – which operates across five Southern California counties - is looking at a modernization program, announced earlier this month in a report entitled Integrated Service and Capital Plan (with Discussion on Electrification). It proposes far-reaching service improvements, including wiring some lines for electric operations, increasing frequency, and coordinating service planning with inter-city rail as well as local buses. What Metrolink is seeking mirrors what some of the most forward-thinking foreign regional rail net-works have achieved, such as those of Switzerland. And yet, some elements in the plan remain lacking.

Metrolink's announcement is in line with the calls of some area transit advocates. Paul Dyson, president of RailPAC, has long called for electrification of Metrolink, putting forth a scheme in 2014 that he dubbed Electrolink. Two years ago, Clem Tillier, a Bay Area-based rail advocate, predicted that this must happen. He looked at the plans for electrification and compatibility with high-speed



Metrolink's plans for a Southern California network radiating from L.A. Union Station.

rail on the San Francisco Peninsula, and said, "Metrolink will become Electrolink, from Anaheim to Burbank and possibly even up the hill to Palmdale. They just don't know it yet."

In 2015, Metrolink issued its 10-Year Strategic Plan, laying out some management goals for growth, but stopping short of making specific policy recommendations. Notably absent from the document was any mention of electrification. Perhaps the most important factor in this change of direction since 2015 is the continued progress of California High-Speed Rail, which is now closer to reality and has forced Metrolink to plan based on what would make it easiest to share tracks

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OPTIMIZING SANTA CRUZ RAIL PASSENGER SERVICE

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SB 1029 Would “Rail Bank” Eel River Tracks, Abolish NCRA

New Passenger Rail Service Possible, Along With Costly Eel River Trail

By Michael D. Setty
Editor, California Rail News

In March 2018, State Senator Mark McGuire introduced SB 1029, a bill that would abolish the North Coast Rail Authority (NCRA). The bill would transfer control of the existing railroad owned by NCRA to a new “Great Redwood Trail Authority,” which would control the right-of-way between Humboldt County and Willits in Mendocino County.

Ownership and administration of existing tracks between Cloverdale and Willits would be transferred from NCRA to the Sonoma-Marín Rail Transit District (e.g., SMART), which currently operates Santa Rosa to San Rafael commuter rail service.

In Humboldt County, SB 1029 would retain existing tracks between Samoa, Arcata, and Eureka for proposed excursion trains, but contains the poison pill “...except

that the service shall not interfere with or harm the agency’s trail.” Between Eureka and Willits, the 142 miles of railroad would be “rail banked.” That is, rails, stranded rolling stock and other infrastructure would be removed, to be replaced by a proposed trail, with a remote long-term possibility of restoring rail service if ever economically justified.

TRAC opposes SB 1029 unless amended to preserve the rail segment from Eureka to Alderpoint. We agree with the NCRA that this section has commercial potential, and that it is critical to the economic future of the County. (See related article on Page 5.)

According to the NCRA’s January 2018 Strategic Plan, retaining and upgrading the 46.5 miles tracks from milepost 237.7 (South Fork) to milepost 284.0 (downtown Eureka) would cost \$47 million, including track and grade crossing repairs, fixing bridges and repairs for three tunnels. For the 16.5 miles of line between Eureka, Arcata and Samoa, estimated repairs are \$15 million including fixing track, timber bridges and other infrastructure repairs needed to reopen the line. Funding for track restoration is not addressed by SB 1029.

The extraordinary cost of mitigating numerous massive landslides including possibly miles of new viaducts and environmental mitigations makes the reopening of the main Eel River Canyon between Dos Rios and Alderpoint infeasible. Recent estimates for reopening the entire rail line between Samoa, Eureka and Willits are at least \$600 million and possibly up to \$1 billion.

No cost estimate currently exists for converting the rail alignment to a trail. However, much of the work required to restore the railroad, e.g., regrading, improving drainage, removing train wreck debris from the river channel, and cleaning up other environmental damage and toxic wastes, would also be needed for a trail. It is clear that rail banking and building an Eel River trail would cost hundreds of millions of dollars, a large portion of which would be spent in the main stretch of the Eel River Canyon.

TRAC strongly opposes diversion of any funds meant for rail service or public transit to a trail project. We note that compensation to adjacent land owners may be required if portions of the line have rails removed and are “rail banked.” (See Santa Cruz article on this topic on page 7).

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Several times per year, the Timber Heritage Association of Humboldt County operates rail transit of a sort, and hopes to graduate to bigger trains soon.

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TRAC's Response to High Speed Rails's Latest Business Plan

**By David Schonbrunn
TRAC Vice President for Policy**

The Capital Costs and Funding chapter of the California High-Speed Rail Authority's draft 2018 Business Plan provides a health assessment of the HSR project for those who can see through the obfuscation: The project has actually been dead for years, but refuses to lie down to be decently buried. In the 2016 Business Plan, the Authority tacitly admitted it could not fund a rail connection to Southern California. The new draft plan admits outright it can't build a rail connection to San Jose. Without the ability to deliver an operating HSR segment, the project as it is currently conceived has no reason to exist.

Instead of addressing this fundamental reality, the plan deflects attention to possible "interim" uses, whereby the Authority's Central Valley tracks are used for Amtrak service, while Caltrain tracks offer somewhat higher-speed travel. While that plan generously spreads the state's funds for Northern California local service, it is not an HSR system: It doesn't connect the Central Valley to Silicon Valley, much less connect the Bay Area and Sacramento to Southern California.

The Business Plan discloses that the Authority has no feasible way to fund the missing piece connecting the Central Valley to the Bay Area—the tunnels under Pacheco Pass—other than to wait for up to \$18 billion to fall from the sky, delivered by some mythical private sector entity. The lack of any private investment to-date is the definitive test of the project's economics, which had been compromised away in CHSRA's early days. At the same time, TRAC is aware of private sector interest in building other, different, HSR routes. Clearly the economics of those routes are, by contrast, quite favorable.

Cap and Trade

CHSRA is also not going to get any free money during a Trump presidency. While it's possible CHSRA could qualify for low-cost debt, it has no investment-grade funding stream to service that debt. The Business Plan's Hail Mary move is to ask the Legislature to double down on HSR at this pivotal moment, locking in a commitment of Cap and Trade funding through 2050.

Not only would this put the State Treasury on the hook for any failure of Cap and Trade, it would prevent future Legislatures from pulling the plug on the funding to the project, no matter how badly things go. For a project so vulnerable to huge cost increases, that is the last thing a responsible legislature would do. Financing HSR with Cap and Trade is also illegal, since paying interest on

debt does not reduce GHGs, which Cap & Trade funds are required to do.

Without this extreme ask, CHSRA cannot even pretend to have a viable project. The Authority claims that building out more of the project will draw in private capital or the federal government (hah!). Given the non-viability of the project, it would be highly inappropriate to invest further public dollars in such a speculative gamble.

CHSRA is obviously trying to get the State to commit so deeply that it won't be able to abandon its investment. When the private sector and the feds refuse to invest, CHSRA will predictably put their hand out again, and ask the State to pick up the entire cost.

When the extension of Cap and Trade is taken off the table, the only option left for CHSRA is to plan an orderly shutdown. TRAC believes that the time is now to bite the bullet, before more billions of dollars are wasted on construction that will never lead to HSR operations.

Proposition 1A Bonds

Because this draft Business Plan is unable to show HSR to be a viable business, it puts a brave face on the fact that CHSRA has no way forward without a huge political lift. Eventually, it has to run out of money. Proposition 1A, the HSR Bond Act, foresaw that possibility and created provisions to prevent bond money from being wasted on unfinished segments.

Those provisions, termed "a financial straitjacket" by a Court of Appeal, require that all needed funding be in place before funds could be disbursed for construction. While, obviously, all needed funding is not in place, that same Court of Appeal allowed CHSRA to go forward.

One of those conditions, that "the segment be suitable and ready for high-speed train operation" was later modified by the Legislature, enabling the expenditure of bond funding for HSR construction in the Central Valley and for the Caltrain electrification project. A coalition of public entities and non-profits is in court challenging that law, AB 1889, as facially unconstitutional, because it amended a key provision of a voter-approved bond measure.

CHSRA has spent over \$4 billion, and has nothing to show for it in the way of new train service. Worse yet, there is now a strong likelihood that CHSRA will never be able to deliver actual service. For any other transit project, that would be absolutely scandalous. The time will come when California recognizes HSR as the massive scandal TRAC sees it to be.

Coast Observations

IT SEEMS THAT THE SAN JOSE SHARKS hockey team doesn't get transit. Despite the fact that the SAP Center is directly across the street from where most major Silicon Valley transit lines converge, the team expects 80% of fans to drive to games 20 years hence. They sued VTA, claiming the proposed BART extension to downtown San Jose will drive away business... WE HAVE TO SIDE WITH S.F. MUNI on this one: No, the new Muni logo is NOT "Dodger Blue." It is "UC Berkeley Blue" e.g., like the Blue & Gold Fleet ferries... AS CRN READERS ALREADY KNOW, ROBOCARS are not what they're cracked up to be, according to some recent critical articles in the mainstream press... THOMAS ELIAS, COLUMNIST who writes on California issues, suggests that a new look be taken at routing High-Speed Rail via I-5, you know, as TRAC has suggested for years. It has yet to be seriously studied... DR. GRAHAM CURRIE OF MONASH UNIVERSITY, AUSTRALIA has a new article in the Journal of Public Transportation: "Lies, Damned Lies, AVs, Shared Mobility, and Urban Transit Futures." Its money quote: "It seems to me there is a gigantic lot of nonsense discussed about the future of transport and the future of public transport in particular..." CANDIDATES FOR GOVERNOR express their views on High-Speed Rail... Democrats want to keep it, but 3 of 4 seem to want to also fix it. Republican Travis Allen wants to kill it; John Cox promises to stop construction, but also seems willing to consider re-routing HSR down the I-5 corridor, presumably if the private sector took over from the state... THE STORY SEEMS TO BE THE SAME EVERYWHERE, WHEN HYPED LOOP comes to town. This time in France, where impoverished cities vie for Hyped Loop's favor... SPEAKING OF HYPE, MORE ARE GETTING WISE TO ROBOCARS, this time an article that points out that robocars would cause more congestion, particularly when their average occupancy will be less than 1.0 person... WITH CALIFORNIA'S INCREASING HOUSING CRISIS, more and more workers are becoming "super commuters" traveling 90 minutes+ to work. Many ACE and Metrolink riders fall into this category, but most super commuters drive... RECOGNIZING THE GROWING HOUSING CRISIS, a new report suggests using vacant San Diego Trolley parking lots for people, not cars. There is sufficient room for 8,000 housing units according to the report... OAKLAND A'S & L.A. DODGERS LIKE GONDOLAS; they suggest constructing gondolas connecting BART to a new waterfront stadium in Oakland and Union Station to Chavez Ravine, respectively... But will they pay for them?

Metrolink Capital Plan

(continued from Page One)

between Los Angeles Union Station and Burbank, as Tillier predicted.

However, the upcoming state rail plan may have also played a role. The state is proposed concrete goals, including a policy for evaluating multimodal lifecycle costs in decision making. This policy heavily favors electrification: a Dutch benchmarking study from ten years ago found that electric trains cost about half as much as diesel trains to procure and maintain. Moreover, electrification is the most useful on short-range rail lines with high service frequency, such as Metrolink following the integrated service report's proposed increases in service.

If anything, Metrolink's proposal for electrification is too timid. The report talks about wiring the Antelope Valley Line up to Santa Clarita, the Ventura County Line up to Moorpark, and the Orange County Line down to Laguna Niguel. While the northern terminals make sense, since there is very little demand for service beyond them, the southern terminal is located nearly halfway from Union Station to San Diego. With hourly Pacific Surfliner Amtrak service, there is an argument for electrifying the entire corridor to San Diego, in collaboration with SANDAG.

Electrification to San Diego is especially useful as part of a blended plan with high-speed trains. In most countries with a high-speed rail network, high-speed trains run not only on dedicated high-speed lines but also on legacy lines at lower speed. Fast trains from Northern California could run to Los Angeles and then continue beyond on the LOSSAN corridor to San Diego, doing the trip between Los Angeles and San Diego in two hours or somewhat less.

But Metrolink's new plan is not just about electrification. Several other steps are included, aimed at the modernization of Metrolink service based on best industry practices. Electrification is the most visible capital infrastructure item, but there are crucial elements involving operations and scheduling.

The furthest-reaching timetable change is known as the pulse, proposed in Goal 1 of the state rail plan. This is common in some small American cities on bus systems, but rare in larger ones. In a pulse, several transit vehicles converge at one point, such as one bus transfer point in a small city, or a train station in a larger one, at a fixed interval, typically once

an hour on buses. This means that transit is scheduled to arrive at the transfer point, called the pulse point, a few minutes before the hour, every hour, and to leave just after the hour, allowing people to transfer between any two routes with little wait time. On buses, it is difficult to maintain frequent pulse schedules, but on trains, separated from road traffic, it is easy. Switzerland's intercity rail network has half-hourly pulses, and some individual stations have quarter-hourly pulses.

The pulse is not just about Metrolink itself, but also about the entire transit system within Metrolink's range. Buses in suburbs served by Metrolink could be re-arranged to meet the trains. This is feasible even in relatively close-in suburban areas, such as the Valley, but is especially useful in suburbs where buses have little else to go but Metrolink, creating a local bus pulse together with the train.

The problem with this plan is that it assumes middling frequency. The integrated plan report calls for a train every 15 minutes on the core Orange County, Ventura County, and Antelope Valley Lines, but hourly off-peak frequencies elsewhere. This includes the San Bernardino Line, currently the system's busiest. There are no plans to electrify it (whereas Dyson's Electrolink plan does cover it), probably because it is disconnected from any future high-speed rail plans. But it serves relatively dense suburbs in eastern Los Angeles County with no access to other rail transit and has no freight traffic to interfere with frequent passenger rail operations.

Metrolink is proposing investment in the San Bernardino Line—but the kind that makes service worse rather than better. It is calling for constructing an express bypass track, exactly the opposite of what the system needs. Metrolink's stop spacing is extremely wide; I wrote about this earlier this year, calling for infill stops in the Valley, at inter-sections with frequent buses. The same prescription is true on the San Bernardino Line, whose first four stops out of Union Stations take riders 23 miles out, about twice as far as those on Caltrain out of San Francisco or the Long Island Railroad out of New York Penn Station, and three times as far as the commuter lines out of Central Paris.

Metrolink already provides express service. What it needs is to use electrification to speed it up further, and open many urban infill stops using the high acceleration capability of electric trains to limit the time cost of the extra stops. This is especially true off-peak, when the system has to get urban ridership and not just suburban peak-hour commuters. With the proposed timed transfers with buses,

infill stops at the intersections with the main buses are crucial on all lines: on the three lines to be electrified, but also on the remaining lines, especially San Bernardino, with its high ridership.

The other missing element is fare integration. The Metrolink plan says nothing about offering urban riders, within reach of Metro's bus system, a rail trip for the same price as a bus or subway fare. This is especially important in the working-class areas served by the Antelope Valley, San Bernardino, and Ventura County Lines. If there is a commuter train charging \$3.75 from Burbank to Union Station where the local bus and Metrorail network charges \$1.75, most riders will opt for the cheaper option, even if the train arrives every 7.5 minutes as Metrolink plans.

Metrolink is making steps in the right direction, but it's still missing some critical components of regional rail modernization. The proposed pulse timetable in the state rail plan should lead to substantial increase in ridership—provided there is good service to connect to. Metrolink is right to plan for electrification and high all-day frequency, but it needs to do so on more than just the lines directly tied to high-speed rail—after all, these investments abroad are typically not about compatibility with intercity trains.

The plan suffers from excessive conservatism and caution, and needs to be bigger. Tillier talked about integration with high-speed trains between Anaheim and San Francisco but by the same token Metrolink needs to integrate its services with intercity trains to San Diego, and integrate its fares with local public transit throughout Los Angeles County. Without such integration, many people would continue to face difficult choices between an expensive car and a slow bus. Metrolink holds the promise of providing public transit faster than driving on the freeways, but only if it engages in additional investments to ensure it is available for everyone, on all lines.

Alon Levy grew up in Tel Aviv and Singapore. He has blogged at Pedestrian Observations since 2011, covering public transit, urbanism, and development. Now based in Paris, he writes for a variety of publications, including New York YIMBY, Streetsblog, Voice of San Diego, Railway Gazette, the Bay City Beacon, the DC Policy Center, and Urbanize LA. You can find him on Twitter @alon_levy.

Editor's Note: TRAC suspects that the future of electrification in California will involve battery-electric and fuel cell-electric trains and not catenary systems.

This article reprinted with permission. Original post with links is located at: <http://urbanize.la/post/metrolink-plans-increased-service-and-partial-electrification>

Excursion Trains & “Very Light Rail” Seem Plausible in Humboldt Co.

By Michael D. Setty
Editor, California Rail News

In and around Eureka, restoring existing tracks would enable operation of tourist trains. Currently, an estimated 1.2 million annual visitors are attracted to Humboldt County. Attractions include Redwood National Park and area state parks and museums focusing on the history of the local timber industry. Tourist trains would help increase tourism by attracting more bus tours by Chinese and other international visitors, and enticing some visitors to spend an extra day in Humboldt County.

This, of course, brings up the issues being addressed by SB 1029: whether rail should operate in the more stable portions of the Eel River watershed. The North Coast Railroad Authority was created by the State to improve the future economy of the North Coast. TRAC believes rail tourism to be a critical element of Humboldt’s economic future.

Toward that end, TRAC strongly objects to SB 1029’s penny-wise and pound-foolish proposal to tear up the existing rails to put a trail in their place. TRAC proposes a low-cost rail implementation in Humboldt, using existing rails, with a trail alongside. To put rails back “later” would be much more expensive, and would require the trail to be moved. TRAC urges the Legislature to leave the tracks in place, and submitted proposed amendments. While SB 1029 makes provision for rail operations between Samoa and Eureka, we believe that the rail line from Eureka to Alderpoint also needs to be saved.

While prognostication of potential tourist railroad ridership is more art than science, there are guideposts. Reat Younger (who unfortunately died in 1993), a tourist railroad consultant, was able to plan a large number of financially successful tourist railroads in the 1980s and early 1990s. Based on Younger’s empirical observations, about 10% to 11% of the local population within 50 miles of the attraction can be expected to take a ride on a suitable line. In Humboldt’s case, that is about 15,000 rides per year.

Another rule of thumb was that 29% of destination overnight visitors in remote rural locations such as Humboldt County could be expected to ride an attractive excursion train, e.g., situations like Fort Bragg. Recent tourism data from Cairns, Australia is consistent with Younger’s estimates, e.g., 28% of overseas visitors (mostly from Asia) rode the local scenic train vs. 15%-16% of domestic visitors, who are mostly repeat visitors. This schema is consistent with mature tourist areas, such as the Skunk Train.

These figures suggest a potential of somewhere between 150,000 and 250,000 annual visitor riders, given the current 1,000,000+/- overnight visitors in Humboldt County, with the potential



to stimulate many more overnight visits. Starting in Eureka, visitors could ride through near-coast dairy farms and other farmland and forests, and stop at the Scotia’s museum and mill complex. There is also potential for “cannabis tours” since Humboldt County is known world-wide for the quality of its cannabis crop, though how many visitors would be attracted by this now-legal industry is a wild guess.

A longer ride through the Redwoods would be like the Durango and Silverton or the Grand Canyon train in Williams, AZ. Both are major attractions to very scenic areas, and virtually all riders are also overnights, who have a much higher positive economic impact.

Riding along the Eel River to South Fork or Alderpoint would provide direct access to Humboldt Redwoods State Park. This would be substantially different from the Skunk Train experience, with more inland second growth, a view of the large groves on the west side of the river and the transition to the drier, warmer climate along the river.

Future Transit?

In the longer run, advancing technology for driverless transit

vehicles and GPS-based Positive Train Control may make “very light rail” economically feasible on the 30-mile rail line between Rio Dell, Fortuna, Eureka, Arcata, and Humboldt State University (HSU), e.g., the most heavily populated portions of Humboldt County. Preliminary analysis indicates that fixed infrastructure costs are likely to be less than \$50 million for an upgrade to Class III standards, e.g., allowing 60 mph for passenger trains, constructing new stations and passing tracks, with less than \$5 million needed for an entire GPS-based PTC system available soon from European vendors.

The author’s preliminary analysis shows that potential ridership on such a rail line between Rio Dell and HSU is 6,000-7,000 daily one-way trips not including tourists, assuming 30 minute frequencies end-to-end and more concentrated service between College of the Redwoods, downtown Eureka, downtown Arcata and Humboldt State University.

Ridership would also be enhanced by coordinated bus connections between Rio Dell/Fortuna and Garberville in South Humboldt County, as well as frequent connecting buses between Arcata, McKinleyville and the California Redwood Coast/Humboldt County Airport.

State Awards \$2.7 Billion in Rail, Transit Grants

In late April 2018, the California State Transportation Agency (CalSTA) awarded \$2.65 billion to 28 local agencies from the Transit and Intercity Rail Capital Program, including new funding from Senate Bill 1, the 2017 increase in gasoline and other taxes. This article summarizes the rail awards by agency, amount, and short project descriptions from CalSTA.

4. Bay Area Rapid Transit (BART) Transbay Corridor Core Capacity Program, \$144,490,000

Project Total: \$3,409,000,000

Deploys 272 new rail vehicles and completes a communication-based train control system (CBTC), allowing an increase in train frequency to 30 trains per hour through the Transbay tunnel as well as an increase in train length to 10 car trains during peak hours to alleviate crowding. Allows for over 200,000 new riders per day to ride BART.

5. Capitol Corridor Joint Powers Authority (CCJPA) Northern California Corridor Enhancement Program, \$80,340,000

Project Total: \$275,041,000

Rail projects to increase ridership by moving Capitol Corridor trains to a faster Oakland to San Jose corridor, saving 10-15 minutes compared to 2018 travel times. Also funds statewide service and ticket integration, providing opportunities for riders on at least 10 rail and transit systems to plan travel and purchase tickets in a single, seamless transaction.

10. Los Angeles County Metropolitan Transportation Authority (LA Metro) Los Angeles Region Transit System Integration and Modernization Program of Projects, \$330,200,000

Project Total: \$5,767,700,000

Capital improvements that will broaden and modernize transit connectivity in Los Angeles County and the Southern California region by advancing new transit corridors simultaneously: Gold Line Light Rail Extension to Montclair, East San Fernando Valley Transit Corridor, West Santa Ana Light Rail Transit Corridor, Green Line Light Rail Extension to Torrance, and the Orange/Red Line to Gold Line Bus Rapid Transit Connector (North Hollywood to Pasadena). Includes support for the development of a Vermont Transit Corridor Project and regional network integration with Metrolink, Amtrak, and additional transit services. Projects will add over 120,000 additional riders per day by 2028.

11. Los Angeles-San Diego-San Luis Obispo Rail Corridor Agency (LOSSAN) All Aboard 2018: Transforming SoCal Rail Travel, \$40,412,000

Project Total: \$65,570,000

Improve on-time performance and rail corridor capacity for Pacific Surfliner and Coaster trains by investing in signal optimization, a more robust capital maintenance program and new right of way fencing. These projects prepare the corridor for higher frequency services on the Pacific Surfliner and COASTER. Includes study of San Diego maintenance/layover facility relocation.

12. Los Angeles-San Diego-San Luis Obispo Rail Corridor Agency (LOSSAN) Building Up: LOSSAN North Improvement Program, \$147,930,000

Project Total: \$201,669,000

Investments that increase Pacific Surfliner service to Santa Barbara from five to six

round trips, and to San Luis Obispo from two to three round trips, and also improves travel time, reliability and safety for both Metrolink and the Pacific Surfliner in the Los Angeles to San Luis Obispo corridor.

13. Peninsular Corridor Joint Powers Board (PCJPB) (Caltrain) Peninsula Corridor Electrification Expansion Project, \$123,182,000

Project Total: \$203,638,000

Supports all-electric passenger service on the Caltrain system and increases the ridership capacity by expanding electric multiple units (EMUs) rail cars under procurement. Lengthens platforms to accommodate longer trains. Additional funding also improves wayside bicycle facilities and expands onboard Wi-Fi.

14. Sacramento Regional Transit (SacRT) Accelerating Rail Modernization and Expansion in the Capital Region, \$40,345,000

Project Total: \$144,350,000

Expanded service to Folsom. Combines with previous TIRCP award to allow for 15 min service during weekdays, plus 3 peak express trains in the peak hour direction. Begins initial effort to replace the existing fleet with low-floor rail vehicles (LRVs). Includes funding 20 expansion and replacement vehicles and an investment in the highest priority platform conversions to allow efficient and accessible boarding to the new vehicles.

15. San Bernardino County Transportation Authority (SBCTA) Diesel Multiple Unit Vehicle to Zero- or Low-Emission Vehicle Conversion and West Valley Connector Bus Rapid Transit, \$30,000,000

Project Total: \$306,240,000

Pilot effort to develop a Zero Emission Multiple Unit (ZEMU) train set that would operate on the Redlands Passenger Rail Corridor, along with conversion of Diesel Multiple Unit (DMU) rail vehicles used in the Redlands Passenger Rail service, creating the zero emission fleet operations. This conversion includes statewide testing that could impact future equipment acquisition for other rail services, like Metrolink, statewide.

17. San Diego Metropolitan Transit System (MTS) Blue Line Rail Corridor Transit Enhancements \$40,098,000

Project Total: \$50,200,000

Increased ridership through investments allowing Blue Line trolley frequency increases and the addition of a new Rapid Bus service connecting Imperial Beach and the Otay Mesa International Border Crossing for 15-min frequency to the Blue Line Trolley, also includes supplemental funding to acquire eleven, 60-foot articulated zero-emission buses, as well as station improvements.

18. San Francisco Municipal Transportation Agency (SFMTA) Transit Capacity Expansion Program, \$26,867,000

Project Total: \$287,309,000

Increases ridership and reduces greenhouse gas emissions by funding an additional 8 zero-emissions expansion vehicles for the Muni light rail system, bringing the total expansion fleet to 50 vehicles. These vehicles provide for more frequent and longer trains, reducing crowding.

19. San Joaquins Joint Powers Authority (SJJPA) & San Joaquin Regional Rail Commission (SJRRC) Valley Rail, \$426,700,000

Project Total: \$904,600,000

Creates new round trips between Fresno, Merced and Sacramento on the Amtrak San Joaquin line, initiates phased service expansion on the Altamont Corridor Express (ACE) train service beginning with 1 train originating in Sacramento and connecting to San Jose during the peak period. Creates new ACE service out of Ceres with zero-emission feeder bus connections to Merced that will connect with San Jose and Sacramento. These services will connect Merced, Ceres, Modesto, Stockton and Sacramento, as well as between Fresno and Sacramento and allow for ridership growth. Includes numerous new stations, and improved connectivity to Bay Area and Bakersfield services.

22. Santa Barbara County Association of Governments (SBCAG) Goleta Train Depot, \$13,009,000

Project Total: \$19,709,000

Improves transit facility for bus, train, bicycle and pedestrians by constructing a modern, multi-modal train station that provides a safe, functional and inviting facility that accommodates improved bus transit service and shuttles from Santa Barbara Airport and the University of California Santa Barbara.

23. Santa Clara Valley Transportation Authority (SCVTA) VTA's Silicon Valley BART Extension, Phase II, \$238,360,000

Project Total: \$4,779,935,000

Extends BART into downtown San Jose and out to Santa Clara, creating 4 new stations. Will serve over 52,000 new riders per day in 2035 and more than 100,000 by 2075 while increasing connectivity to Caltrain, Amtrak, and transit services at San Jose Diridon station.

26. Sonoma Marin Area Rail Transit District (SMART) SMART Larkspur to Windsor Corridor, \$21,000,000

Project Total: \$144,100,000

Completes critical rail segments extending rail service to Larkspur with its regional ferry service and northward to Windsor. Also provides for project development efforts related to the extension of service to Healdsburg and Cloverdale.

27. Southern California Regional Rail Authority (SCRRA - Metrolink) Southern California Optimized Rail Expansion (SCORE), \$763,712,000

Project Total: \$2,049,700,000

Delivers more frequent, more reliable rail services throughout Southern California, with station reconfiguration with run-through tracks for Metrolink and Pacific Surfliner trains at Los Angeles Union Station to improve train movement through the station, and 30-min services on multiple Metrolink corridors in the LA Basin. Includes significant investments to improve the frequency and performance of rail services to Moorpark, Santa Clarita, San Bernardino, Riverside, and Orange County. Part of high-performance long-range vision.

28. Transportation Agency for Monterey County (TAMC) Rail Extension to Monterey County, \$10,148,000

Project Total: \$81,519,000

Extension of 2 round trip passenger rail services from Gilroy to Salinas, including a layover facility and positive train control. Adds 95,000 new riders in the first year, connecting Salinas to the Silicon Valley.

Santa Cruz: No Rails, “Trail Only” Legal Can of Worms?

By Michael D. Setty
Editor, California Rail News

In November 2016, Santa Cruz County voters approved Measure D, a one-half cent county-wide sales tax for transportation. Measure D included an 8% set-aside for maintaining the tracks in the County’s 31.48-mile rail corridor. Portions of a pedestrian and bicycle trail parallel to the tracks between Davenport, Santa Cruz and Watsonville are currently under construction.

Four years earlier, the Santa Cruz County Regional Transportation Commission (SCCRTC) purchased the rail corridor from the Union Pacific Railroad.

SCCRTC is conducting a “Unified Corridor Investment Study” scheduled for completion in fall of 2018. This study is examining various transportation options along the three main transportation corridors between Watsonville and Santa Cruz (Highway 1, Soquel Ave / Freedom Blvd and the rail corridor). Options being studied include: Bus Rapid Transit (BRT) along all three corridors; passenger rail in the existing rail corridor (along with improved pedestrian and bicycle facilities); and HOV and/or auxiliary lanes along Highway 1.

While adding a freeway lane in each direction on Highway 1 is the most controversial transportation project being considered in Santa Cruz County, proposed rail service on the rail corridor is second. Two outspoken and apparently very well-financed groups, “Trail Now” and “Greenway Santa Cruz,” are attempting to convince SCCRTC to abandon the current “rail and trail” plan in favor of a “Trail Only” option that would remove existing tracks.

Support for these groups appears to be coming primarily from residents with property adjacent to the rail corridor, who are opposed to rail transit in Santa Cruz. The Trail Only idea proposes to convert the current rail alignment and embankment to a combination bicycle-pedestrian trail. These anti-rail groups claim that in addition to conventional bicycles, electric-assisted bicycles and scooters would be adequate substitutes for transit (thus ignoring longer-distance commuting between Watsonville and Santa Cruz).

The “Trail Only” idea put forward by rail opponents has major shortcomings and a potentially fatal oversight.

First, the anti-rail faction claims

that the existing rail corridor can be “rail-banked.” That is, existing tracks and ties can be removed now, in favor of using the corridor for a bicycle/pedestrian trail, and then reinstalled at some future date when rail service is determined to be “feasible.”

However, we are unaware of any rail service that has been reestablished in a publicly owned “rail-banked” corridor after the tracks were replaced by a trail. In the few cases where service reestablishment was attempted, trail users and adjacent property owners united and stopped implementation by influencing agency Board members. In short, the call for rail-banking seeks to eliminate the only remaining serious option to prevent Santa Cruz County’s descent into total gridlock.

Second, rail opponents claim likely rail ridership would be too low. Given the rapidly growing congestion in the Highway 1 corridor, this claim cannot be taken seriously. In SCCRTC’s 2015 Passenger Rail Feasibility Report, consultants estimated that the highest ridership option would carry from 6,150 to 6,800 daily riders under projected 2035 conditions. The study assumed no service to downtown Santa Cruz or Cabrillo College. In the accompanying article, we show how extending service to those destinations would double the projected ridership.

Third, rail opponents overlook another major problem, which is probably fatal to their Trail-Only proposal. A series of Federal Court rulings regarding the conversion of railroad rights-of-way to trail usage suggest that removing the tracks will spark years of litigation.

SCCRTC has established outright ownership of only 31% (93.09 acres) of the total land used for the railroad right-of-way. The remaining 208.53 acres consist of 10 rail only easements that legally revert to adjacent landowners after abandonment of rail usage, and dozens of other parcels for which no clear title could be established. The status of parcels not apparently owned outright by SCCRTC is ambiguous at best. Should railroad usage be abandoned by removing current tracks in favor of a trail only, it is clear that



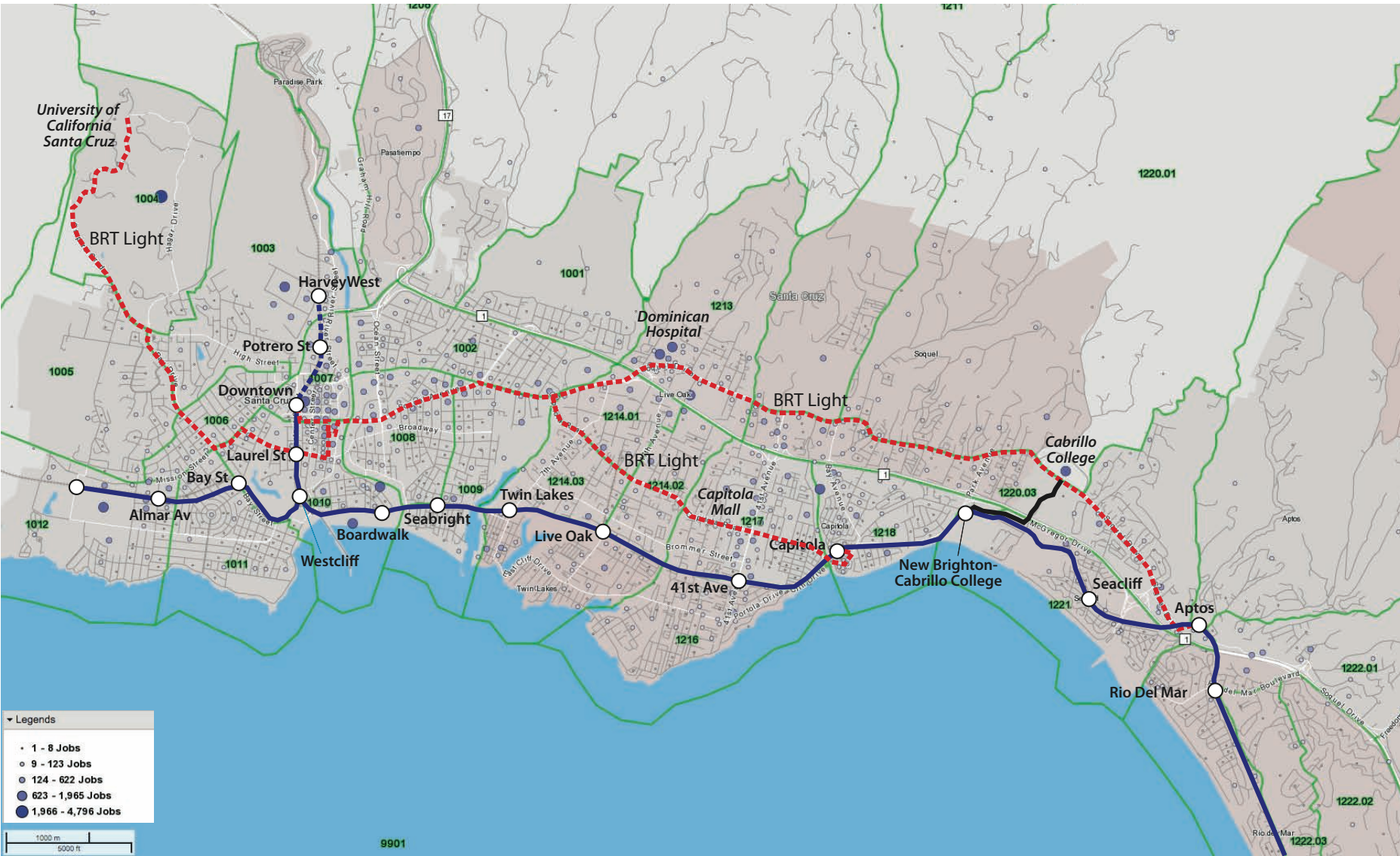
“Daisy the Streetcar” operated on the Santa Cruz Branch Line until recently. Daisy proves that rail may be technically and economically feasible, even with smaller than standard railcars.

constructing a trail would require purchasing the parcels with reversion clauses. In addition, the dozens of additional parcels that have unclear titles are likely to lead to years of litigation to determine ownership and compensation to adjacent property owners.

A key United States Supreme Court ruling on a railroad right-of-way reversion dispute in Wyoming after abandonment was favorable to property owners. In the Marvin M. Brandt Revocable Trust v. United States case, the Court ruled that property ownership granted outright to a now abandoned railroad in Wyoming by the Federal government must revert to an adjacent property owner, despite the fact that their property was granted by the government a significant time after the railroad was granted full ownership through an earlier land grant. This suggests that the current Supreme Court – and the rest of the Federal judiciary – is likely to be favorable to adjacent property owners, particularly where clear reversion clauses exist, or in ambiguous cases such as in Santa Cruz County.

The proposal by Trail Now and Greenway Santa Cruz to rip out existing Santa Cruz Branch Line tracks, replaced by only a trail, would open up SCCRTC and taxpayers to great uncertainty and years of litigation. In addition to the cost of removing tracks, this author’s educated guess is that purchasing expanded rights for existing easements originally granted for railroad use could cost \$80-\$100 million. Retaining the existing tracks is the least costly and most prudent action for SCCRTC, whether rail is implemented within the next few years or later in the 21st Century.

This article is based on a longer white paper available online at www.calrailnews.org



Optimizing Rail Passenger Service in Santa Cruz County

By Michael D. Setty
Editor, California Rail News

Partly out of curiosity, I followed up on Santa Cruz County’s 2015 Passenger Rail Feasibility Report to see if I could increase ridership by optimizing the service pattern. I generated my own ridership projections, applying recent census employment and population data to the direct demand forecasting model. In that model, population and employment located within 0.5 miles of proposed station stops are the most important factors in projecting rail ridership, followed by the number of bus arrivals and departures at a given station.

To test out the model, I applied it to new SMART rail service in Marin and Sonoma Counties that began in September 2017. SMART ridership has been averaging around 3,000 weekday one-way passenger trips during non-holiday periods since beginning revenue service last September. This compares to the 3,200+/- daily one-way trips projected by the model. A 10% +/- 10% result like this is indicative of a very respectable model.

The direct demand model was applied to the Santa Cruz County rail corridor plan, modified to increase ridership beyond the highest ridership scenarios studied in the 2015 Passenger Rail Feasibility Report:

- Service was extended 0.7 miles north from the Santa Cruz depot, to

two additional stations at Chestnut & Laurel and Chestnut & Locust Streets in Downtown Santa Cruz. The Laurel Street stop would connect directly to the Laurel Street buses to/from UCSC that operate every 7.5 minutes in each direction during the school year. The proposed Locust Street station is less than a block from Santa Cruz City Hall, and is about 0.25 mile from the downtown core.

- A new station at the entrance to New Brighton State Beach. This stop would connect to Cabrillo College across Highway 1 with a transit lane on McGregor Drive, and then across a new pedestrian/bicycle bridge that includes a dedicated path for small, low axle-weight automated minibuses. The automated minibus would operate from the rail station through the heart of the Cabrillo College campus to the Metro bus stops on Soquel Drive.
- There would be 2-3 local stations not evaluated in the 2015 rail study, in addition to the downtown, Cabrillo College and Pajaro stations.
- In Watsonville, all local buses would be extended beyond the existing downtown transit center to the West Watsonville rail station. This maximizes coordination and provides a choice of more than one route to transit patrons.

Two service scenarios were examined. These were:

- Operate 30-minute frequencies all-day over the line between Downtown Santa Cruz and Pajaro.

- On top of the 30-minute frequencies all-day, overlay additional service every 30-minutes during the morning (6:00 a.m.-9:00 a.m.) and afternoon (3:30 p.m.-6:30 p.m.) peak periods between Downtown and Rio Del Mar, staggered to achieve 15-minute service between those points.

For the 30-minute all-day frequency scenario, projected ridership was 11,156 daily riders, of which about 4,500 came from downtown, Cabrillo College, and the Pajaro extension.

For the 15-minute peak, 30-minute frequency at other times scenario, total projected ridership was 13,737 daily riders. These compare to the Feasibility Report’s 5,500 to 5,800 daily riders for current conditions.

Again, most of the difference was due to two new stations in Downtown Santa Cruz, a new stop serving Cabrillo College with a direct pedestrian, bicycle and automated minibus connection, as well as a connection to Pajaro and train service to/from the Bay Area.

My projections had about 3,000 daily riders to and from Watsonville, versus less than 1,000 projected by the 2015 and earlier studies. The reasons for these low ridership projections are not obvious, but may reflect differing travel times compared to bus, as well as more bus connections.

This article is based on a longer white paper available online at www.calrailnews.org