

What Is PAWS - and Will It Solve Leucadia's Noise Problem?

Understanding the Pedestrian Audible Warning System the City has proposed as a noise solution for the Grandview and Phoebe Street at-grade crossings.

WHAT THE CITY HAS SAID

The City of Encinitas has stated that the new at-grade pedestrian rail crossings at Grandview and Phoebe Streets will be equipped with a wayside horn system - ideally a **Pedestrian Audible Warning System (PAWS)** like San Clemente's, which would require a federal waiver, or if that is not approved, a standard wayside horn like the one at the Del Mar crossing. The information below is drawn from official FRA records and published San Clemente city documents.

SECTION 1 - UNDERSTANDING THE OPTIONS: WHAT WILL LEUCADIA ACTUALLY HAVE?

There are five possible outcomes for train horn noise at Leucadia's proposed crossings. The gold standard is grade separation, which eliminates the question entirely. If the City proceeds with at-grade crossings, four scenarios apply, ranging from a quiet zone (not currently achievable) to no approval at all.

THE GOLD STANDARD - ELIMINATES THE QUESTION ENTIRELY

Grade Separation - Bridge or Underpass

A bridge or underpass physically separates pedestrians from the rail corridor. **No train horn is required at all - not under California law, not under federal law.** Permanent from day one with no waiver, no renewal, no Carlsbad dependency, and no regulatory uncertainty. El Portal Street in southern Leucadia is an example of a pedestrian rail undercrossing on this same LOSSAN corridor. The City's own 2020 Cross-Connect Implementation Plan designed both Grandview and Phoebe as pedestrian overpasses. Federal funding programs - including the FRA Railroad Crossing Elimination Program - exist specifically to fund this type of project.

If the City proceeds with at-grade crossings, the following four options apply:

AT-GRADE OPTION 1 - NOT CURRENTLY ACHIEVABLE

Quiet Zone

A quiet zone designates a segment of corridor where trains do not routinely sound locomotive horns. **Trains pass through in complete silence.** Chesterfield Drive crossing in Cardiff (Encinitas) is an example on this same corridor. However, a quiet zone north of Leucadia Boulevard requires the City of Carlsbad to install safety measures at its Cannon Road crossing. Encinitas cannot establish one independently. **This option is not currently available for the Grandview and Phoebe locations without Carlsbad's cooperation.**

AT-GRADE OPTION 2 - CITY'S FALLBACK PLAN Standard Wayside Horn

A standard wayside horn substitutes a localized horn for the locomotive horn at a minimum of 92 dB at a 100 from the crossing. It must sound for at least 15 seconds, using the same pattern of 4 blasts as is required for a train horn. The Del Mar crossing is the example the City frequently cites. **Quieter than a locomotive horn (92 dB vs. 96-110 dB) but significantly louder than PAWS.**

AT-GRADE OPTION 3 - CITY'S PRIMARY GOAL PAWS Federal Waiver

Cities may apply to the FRA for a special waiver allowing a PAWS system - localized speakers producing a minimum of 80 dB - to substitute for the locomotive horn. The locomotive horn is silenced while the waiver is active. Quieter than a standard wayside horn (80 dB vs. 92 dB minimum) at 100 feet from the tracks. **Requires a formal FRA application filed jointly with NCTD, approval by the FRA Safety Board, and renewal every 3 years.** Can be denied or rescinded for noncompliance at any time. San Clemente's 7 pedestrian beach crossings reflect this scenario.

AT-GRADE OPTION 4 - LEUCADIA FROM OPENING DAY UNTIL ANY APPROVAL

No Approval - Full Locomotive Horns

California law requires trains to sound horns at pedestrian crossings. Until any CPUC or FRA approval is in place authorizing a wayside horn or PAWS system as a substitute, trains must sound locomotive horns at 96-110 dB at every crossing approach - **a pattern of 2 long, 1 short, 1 long blasts continuing until the locomotive occupies the crossing, for every train, day and night.** The wayside horns the City plans to install do not substitute for the locomotive horn until an appropriate approval is in place. NCTD has confirmed approximately 54 trains per day on this corridor on weekdays, which will increase to 100 y.

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Estimated daily locomotive horn sequences at 96-110 dB from opening day until any approval is granted (54 trains x 4-blast pattern x 3 crossings including Leucadia Blvd)

80 dB

PAWS minimum sound level at 100 feet from the crossing- only achievable once FRA waiver is granted.

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Known active PAWS installation in the United States - San Clemente, CA, based on available public records.

Sources: FRA Locomotive Horn Sounding and Quiet Zone Fact Sheet (February 2013); FRA Approval Letter, Docket FRA-2020-0038 (Karl Alexy, April 2, 2021); 49 CFR § 222.27; NCTD public records.

SECTION 2 - THE SAN CLEMENTE EXPERIENCE: THE ONLY PRECEDENT

San Clemente is the only known U.S. city with an active FRA-waivered PAWS system. Its history is instructive - and sobering.

2008 - CROSSINGS OPEN

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San Clemente opens seven new pedestrian rail crossings along its beach trail. Trains immediately begin sounding locomotive horns at every crossing. **1,400 horn blasts per day** from approximately 50 trains become the new reality for nearby residents. The city begins its campaign to obtain a waiver.

2015 - FIRST WAIVER GRANTED, AFTER 7-8 YEARS OF HORN NOISE

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After a 10-year regulatory campaign, the FRA grants San Clemente its first PAWS waiver. **Residents endured 8 years of 1,400 daily horn blasts** while the process played out. The waiver is valid for 5 years and requires ongoing fencing, signage, maintenance, and sound level compliance. Total implementation cost: \$4.8 million.

NOVEMBER 2020 - FIRST RENEWAL DENIED

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FRA denies renewal for three reasons, per the official FRA approval letter (Docket FRA-2020-0038): (1) the petition lacked joint filing with Metrolink as required by 49 CFR § 222.15(a); (2) noncompliance during inspections including PAWS units below 80 dB, deteriorated signage, and emergency swing gates in disrepair; and (3) **evidence of well-worn footpaths indicating trespassing was prevalent** - a direct parallel to conditions in Leucadia today. Locomotive horns resume immediately.

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APRIL 2021 - RENEWAL APPROVED, 3-YEAR TERM

After remedying compliance failures and with active support from Congressman Mike Levin, San Clemente secures a new 3-year waiver. New computerized maintenance systems and record-keeping procedures are implemented.

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2024 ONWARD - RENEWAL DUE, STATUS UNCERTAIN

San Clemente's PAWS appears currently active. A renewal was due approximately 2024, now under the current federal administration. The outcome has not been definitively confirmed in public records reviewed. **The system requires renewal every 3 years in perpetuity.**

Key facts from the official FRA record: San Clemente's 2020 renewal was denied partly because the petition was submitted after the waiver had already expired and it then took the FRA 7 months to issue its formal denial. The FRA approval letter requires renewal requests to be filed at least 6 months before expiration. There is a 60-day public comment period after any Notice of Intent is published.

SECTION 3 - THE CHALLENGES PAWS PRESENTS FOR LEUCADIA

Full 96-110 dB locomotive horn sequences until any approval is granted (Option 4).

Per the FRA Fact Sheet, standard horn-sounding requirements apply to all at-grade crossings without an active waiver or authorization - a pattern of 2 long, 1 short, 1 long blasts continuing until the locomotive occupies the crossing. The FRA waiver process takes months to complete and can take years based on San Clemente's experience.

PAWS requires an FRA waiver - approval is not guaranteed and trespassing evidence can trigger denial.

The FRA approval letter for San Clemente specifically identified "evidence of well-worn footpaths along and across the right-of-way, indicating that trespassing on and along the tracks was prevalent" as a factor in the prior denial. Leucadia's corridor fencing is routinely cut and damaged due to ongoing trespassing - a pre-existing condition that FRA has treated as a denial factor.

The petition must be filed jointly with NCTD.

The FRA denied San Clemente's first renewal specifically because it lacked joint filing with Metrolink as required by 49 CFR § 222.15(a). Encinitas cannot file alone. NCTD must cooperate. If NCTD declines or delays, the waiver cannot proceed.

Three ongoing compliance conditions must be maintained indefinitely.

Per the FRA approval letter, the waiver requires: (1) all signage, striping, and emergency exit swing gates maintained in compliance with 49 CFR, CPUC General Orders, and California MUTCD; (2) all fencing maintained and effective; and (3) annual joint testing by the City and NCTD to verify PAWS sound levels. Any failure can trigger denial or mid-term rescission.

FRA can rescind the waiver at any time - not just at renewal.

The FRA approval letter states: "FRA reserves the right to modify or rescind this waiver upon receipt of information pertaining to the safety of railroad operations or in the event of noncompliance with any condition of this waiver." The waiver is not protected for its full term.

Renewal must be filed at least 6 months before expiration.

San Clemente's first renewal was denied partly because it was submitted after the waiver had already expired. Missing the 6-month advance deadline means locomotive horns resume while a new petition is processed.

PAWS still sounds for every train regardless of pedestrian presence.

Field observations at San Clemente confirmed PAWS activates on every train approach whether or not a pedestrian is at the crossing - meaning up to 54 daily activations currently, rising if train frequency increases.

A quiet zone north of Leucadia Blvd. is not currently achievable independently by Encinitas.

A quiet zone (Option 1) requires coordination with the City of Carlsbad regarding the Cannon Road crossing. Without that cooperation, PAWS or a standard wayside horn is the only available noise mitigation route for the proposed crossings.

SECTION 4 - WHAT WE DON'T KNOW: AND WHY THAT MATTERS

Based on official FRA records and San Clemente's documented experience, important questions remain unresolved:

Will FRA approve a new PAWS application for Leucadia?

San Clemente took 7-8 years of horn noise and a 10-year regulatory campaign to secure its first waiver. The existing trespassing and fencing conditions in Leucadia mirror the conditions that contributed to San Clemente's 2020 denial. No official estimate of approval likelihood has been provided for a new Encinitas application under the current federal administration.

How long will Option 4 - full locomotive horns - last?

The FRA waiver process takes months to complete at minimum. Based on San Clemente's experience it can take years - and the FRA may take 7 months simply to issue a denial. During the entire gap period, full 96-110 dB locomotive horn sequences will sound at both crossings for every train in the pattern of 2 long, 1 short, 1 long blasts.

Could the waiver be rescinded mid-term?

Yes. The FRA approval letter states FRA "reserves the right to modify or rescind this waiver upon receipt of information pertaining to the safety of railroad operations or in the event of noncompliance with any condition." There is no guaranteed protection for the full waiver term.

Will the waiver be renewed when it expires?

Every 3 years, the arrangement must be re-justified to FRA with at least 6 months advance notice. San Clemente's first renewal was denied. There is no guarantee Leucadia's waiver would be renewed, particularly as administrations change.

By contrast, **grade-separated crossings** - a bridge or underpass - eliminate the horn requirement entirely and permanently. No FRA waiver. No renewal. No fencing conditions. No Carlsbad dependency. El Portal Street in southern Leucadia demonstrates this is achievable on this same corridor. It is the only solution that resolves the noise problem from day one regardless of what happens at the federal or state level.

