



CITY MANAGER'S WEEKLY ADMINISTRATIVE REPORT

OCTOBER 23, 2024 (REPORT NO. 24-43)

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CITY MANAGER'S OFFICE

Land Movement Updates



Federal and State Legislators Tour Landslide Area

On October 22, Councilmember Dave Bradley, Councilmember Paul Seo, and City Manager Ara Mihranian led a tour of the landslide area for federal, state, and local legislators. The group included Rep. Ted Lieu, Rep. Adam Schiff, State Sen. Ben Allen, Assemblymember Al Muratsuchi, representatives from the offices of Sen. Laphonza Butler and L.A. County Supervisor Janice Hahn, and Rolling Hills Mayor Pro Tem Jeff Peiper, Councilmember Patrick Wilson, and City Manager Karina Bañales.

The lawmakers and staff got an up-close look at damage to neighborhoods in the landslide area and learned about the City's efforts to slow the landslide with dewatering wells removing millions of gallons of deep groundwater per week to reduce water pressure that is fueling the slide.

The tour came after the City last week submitted an appropriations request to Rep. Lieu seeking \$20 million for continued landslide stabilization and winterization efforts. This includes fissure filling to prevent rain runoff from recharging the groundwater table,



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constructing surface drains to properly convey rain runoff to the ocean or storm drains, and installing additional dewatering wells.

The City thanks our legislators for their continued attention to the landslide crisis and for their collaboration in identifying assistance for impacted residents and the City's remediation efforts.

Federal Legislators Sign Joint Letter Urging FEMA to Provide Support to Residents Impacted by Palos Verdes Peninsula Land Movement

On October 21, Rep. Lieu led a joint letter with Sen. Alex Padilla, Sen. Butler, and Rep. Adam Schiff urging the Federal Emergency Management Agency (FEMA) to identify any assistance and funding that can be made available to residents impacted by land movement in Rancho Palos Verdes and on the Palos Verdes Peninsula. In the letter, the Members called on Administrator Deanne Criswell to consider ways in which FEMA can help impacted communities in conjunction with other local, state and federal efforts to mitigate the dangerous ground movements and provide relief for impacted homeowners.

A copy of the [letter \(PDF\)](#) is available on Rep. Lieu's website and is attached to this report.

RPV Urges SCE and SoCalGas to Restore Service in Neighborhoods with No New Land Movement

According to the most recent set of GPS monitoring data from the landslide area taken earlier this month, [no new land movement](#) was recorded in the Seaview and Portuguese Bend Beach Club neighborhoods. The continued slowing trend is believed to be the result of a combination of highly productive dewatering wells by both the City and the Klondike Landslide Abatement District (KCLAD) and the dry summer months.

Because of the lack of new movement, last week, Mayor Cruikshank signed letters to [Southern California Edison \(SCE\)](#) and [SoCalGas](#) urging the utilities to commit to providing timelines for restoring service in, at a minimum, the Seaview and PBBC neighborhoods.

In [response](#), SoCalGas Senior Vice President and Chief Infrastructure Officer Rodger Schwecke wrote that "given the dynamic nature of the land movement and the significant safety risks posed by broken gas lines, the safety of the community dictates

that a determination to restore gas service be based on a careful evaluation of the totality of the data obtained over a sustained period of time.” SCE responded requesting more time to analyze the data in comparison with their data, but notified the City that 16 properties in the Portuguese Bend Community Association on Fruit tree Rd., Plumtree Rd., and the western portion of Narcissa Dr. will be re-energized this week.

RPV Attends Cal Cities Conference

Last week, Mayor John Cruikshank, Councilmember Dave Bradley, and City Staff attended the Cal Cities Annual Conference and Expo in Long Beach.



Established in 1898, Cal Cities is a nonprofit statewide association that advocates for cities with state and federal governments and provides education and training services to elected and appointed city officials. Cal Cities' mission is to expand and protect local control for cities through education and advocacy to enhance the quality of life for all Californians.

Staff attended informative sessions on disaster preparedness, housing and land use, artificial intelligence, and fire insurance, among other topics. Mayor Cruikshank cast the City's vote on behalf of the City Council in the General Assembly, which shapes Cal Cities policy. This year, the General Assembly considered one resolution from the City of Glendora aiming to ensure equitable governance by applying regulations imposed on local officials equally to state officials. Before the conference, the City Council approved taking a position of support to promote fairness and transparency at all levels of government. Although the General Assembly passed the resolution, due to lack of quorum, the vote was advisory only for the Cal Cities Board of Directors, which will consider adopting the resolution as policy in the future.

Caltrans Western Avenue Work Will Run Through End of 2024 in San Pedro

The California Department of Transportation (Caltrans) advises motorists that traffic on SR-213 / Western Avenue between 25th Street and Carson Street will be impacted during ongoing construction. The project is upgrading ADA ramps, sidewalks, pedestrian signal access, and lighting. It is also adding a bike lane.

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One left-turn pocket along the northbound lanes is closed to traffic, and channelizers have been placed at 1st Street to enhance traffic flow. A change in striping has been implemented to allow crews to safely work in the median.

Once the median is complete, new striping will be added that includes one left-turn pocket, two thru lanes, a 4-ft. bike lane, and one right-turn pocket.

The project began April 2024. Completion is estimated by the end of 2024. Caltrans reminds motorists to “Be Work Zone Alert” and “Slow for the Cone Zone.”

November 6 Regular City Council Meeting

Due to the November 5 election, the City Council will hold its next regular meeting on Wednesday, November 6 at 7 p.m. in McTaggart Hall at Hesse Park, rather than on Tuesday. The meeting agenda will be available on the City website at rpvca.gov/agendas.



City Hall Vote-By-Mail Drop Box Available

The Vote-by-Mail Drop Box outside RPV City Hall is available for use.

Voters can drop off their vote-by-mail ballots in the drop box near the flagpole until 8 p.m. on Election Day, November 5. City Hall is located at 30940 Hawthorne Boulevard.



Before you drop off your vote-by-mail ballot, make sure to:

- Place your voted ballot card(s) inside the official return envelope.
- Securely seal the official return envelope.

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- Sign and date the back of the official return envelope.

Ballots will be securely collected by L.A. County Registrar-Recorder staff members.

Voters can track their vote-by-mail ballot every step of the way. Subscribe to receive real-time tracking notifications by text, email or voicemail at wheresmyballot.sos.ca.gov.

For more information on voting in L.A. County, visit lavote.gov.

One-Day Early Voting on October 29

The City of Rancho Palos Verdes has partnered with the Los Angeles County Registrar-Recorder's Office to offer two one-day early voting centers for the November 5 election on October 29 at the Ladera Linda Community Center and Ken Dyda Civic Center.

October 29

9 a.m. to 6 p.m.

Ladera Linda Community Center
32201 Forrestal Dr.

October 29

9 a.m. to 4 p.m.

Ken Dyda Civic Center (Parking Lot)
30940 Hawthorne Blvd.



All other vote centers on the Peninsula will open as early as October 26. For hours and locations, visit locator.lavote.gov.

If you have questions about one-day early voting, please contact the City Clerk's Office at 310-544-5217 or cityclerk@rpvca.gov. For more information on voting in Los Angeles County, visit lavote.gov.

Veterans Day Breakfast

The City will honor our community's veterans at the first Veterans Day breakfast on Saturday, November 9 at 9 AM at the Ken Dyda Civic Center. Attendees will enjoy a hot breakfast and ceremony with participation from community dignitaries and youth organizations.

Breakfast is complimentary for veterans who reside in Rancho Palos Verdes and \$10 for all other guests. RSVPS are requested by Wednesday, November 6. RSVP at [Veterans Day Breakfast RSVP](https://forms.office.com/g/f5ipBgEp3q) (<https://forms.office.com/g/f5ipBgEp3q>)



RPVtv News Update – Mend the Bend

RPVtv host Liz Brown Swanson reports from the Ladera Linda Community Center, where the community and City officials come together in a collective effort to support residents impacted by the ongoing landslide crisis. Watch on Cox 33/Frontier FiOS 38 or RPVtv's [YouTube channel](#).



RPVtv News Update – Great ShakeOut Earthquake Drill

In this RPVtv news update, host Liz Brown Swanson joins City staff as they participate in the worldwide Great ShakeOut earthquake drill. Watch on Cox 33/Frontier FiOS 38 or RPVtv's [YouTube channel](#).

A graphic illustration on the left side of the advertisement. It shows a person with green hair and a yellow shirt filling a large orange rain barrel with water from a blue downspout. The background features a light blue sky with small white clouds and some green plants at the base of the barrel.

**FREE
RAIN BARREL
EVENTS**

westbasin.org/rain-barrels

Register Today to Get a Free West Basin Rain Barrel

Catch the rain and save water with a free rain barrel from the West Basin Municipal Water District!

West Basin is hosting six drive-through rain barrel pick-up events on various Saturdays between **November 16, 2024 – January 25, 2025** at locations throughout the service area. The District will give away a total of 1,500 barrels this fall to help residents save water and money.

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Potential program participants must live in the service area and register at westbasin.org/rain-barrels to qualify for up to two free 50-gallon rain barrels valued at approximately \$80 each.

Learn more at: westbasin.org/rain-barrels

City Manager Ara Mihranian Speaks at the October 23 Bohannon Lecture Series

The guest speaker at the October 23 Bohannon Lecture Series was City Manager Ara Mihranian who was invited to provide more than 60 members of the Peninsula Seniors with an update on City matters including the latest on the Portuese Bend Landslide.



Peninsula Seniors Bohannon Lecture Series October 2024

Join Peninsula Seniors for the Bohannon Lecture Series on Wednesdays this month, from 10:30-11:30 a.m. at the Scriba Family Center in Rolling Hills Estates. A Coffee Social will be available to all attendees starting at 10:15 a.m. The Series is open to the community. Space is limited.



Peninsula Seniors

October 30: “All Hallows Eve”

Ann and Lee Strong, our music appreciation instructors, present a special holiday lecture to celebrate evil. This Halloween talk about creepy music from the 17th to 20th centuries is guaranteed to put us in the Halloween “spirit.”

Call Renee Reymond, Program Coordinator, at 310-377-3003 for details.



Palos Verdes Peninsula Village

Opportunities To Connect, Learn & Thrive

Palos Verdes Peninsula Village Information Session, November 13

The Palos Verdes Peninsula Village is a dynamic organization of older adults who have joined together to help one another navigate the challenges and opportunities of aging. Meet PVP Village members and volunteers and learn about the PVP Village, its enriching social and intellectual activities and volunteer support on November 13 at 11 a.m. in the Purcell Room of the Peninsula Center Library. Please call 310-991-3324, email peninsulavillagepvp@gmail.com for more information or visit peninsulavillage.net.



Preparing for Earthquakes

What to do in an earthquake

NO MATTER WHERE YOU ARE

WHEN SHAKING STARTS

1. **STOP** WHERE NOTHING CAN FALL ON OR UNDER YOU
2. **DROP** TO THE FLOOR **OR** **LOCK** YOUR WALKER/WHEELCHAIR
3. **COVER** YOUR NECK AND HEAD
4. **HOLD ON** UNTIL SHAKING STOPS

AFTER THE SHAKING STOPS

5. **PROCEED WITH CAUTION**
EXIT DAMAGED BUILDINGS BUT
DON'T RUN OR USE THE ELEVATOR
6. **PREPARE FOR AFTERSHOCKS,**
FIRES, TSUNAMIS, BROKEN GLASS, SPILLS,
BUILDING DAMAGE & OTHER HAZARDS

The Great Shakeout Drill was last Thursday. Did you participate? Participating in drills is a great way to mentally prepare yourself for earthquakes. Read below for 3 more easy ways to make sure you stay safe the next time the ground shakes!

Download the MyShake App:<https://myshake.berkeley.edu/>

MyShake is a free earthquake early warning app for the West Coast that sends alerts to users' smartphones when an earthquake is detected. It can provide an alert a few seconds before major shaking occurs, which could give you time to get out of harm's way. Download the app today on the Google Play store or Apple App store. The app is available in multiple languages including English, Spanish, Chinese, Vietnamese, Korean, and Filipino.

1. Make an emergency plan that considers:

- How will you communicate with loved ones in an emergency?
- Where will you meet if you are separated from loved ones?
- Who may you need to communicate with during an emergency? *Have a written list of numbers/addresses in the event cell service is unavailable.*
- Where will you go if you must evacuate? How will you get there?
- What supplies will you need if you must evacuate?
- What would you need if you had to shelter in place?
- What special considerations or needs does your family have (ex. Additional medical considerations, pets, large animals, etc.)

For more emergency planning information, visit: www.ready.gov/plan

2. Make a Go Bag that includes:

- Water
- Nonperishable food
- First Aid Kit
- Flashlight or light sticks
- Change of clothes and sturdy shoes
- Cell phone charger
- Important hygiene items (toothbrush, feminine products, deodorant, etc)
- Extra medicine and medical equipment (ex. Glasses)



- Important documents (ex. ID, insurance) – save these online, share them with a trusted out of area person, and/or put them on a password protected USB in your go bag.
- Your emergency plan
- Anything else you would need if an emergency occurred, and you had to evacuate and could not return home.

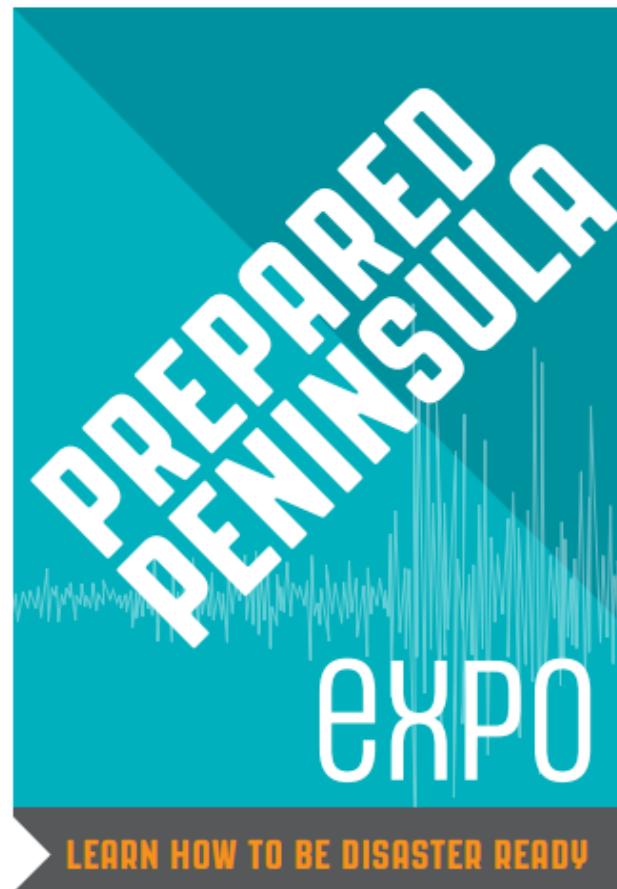
The Annual Prepared Peninsula Expo

October 27th 10am – 1pm

The four cities of the Palos Verdes Peninsula are once again teaming up to educate residents and the broader community on emergency preparedness at the 10th Annual Prepared Peninsula Expo on Sunday, October 27, from 10am to 1pm at the Palos Verdes Peninsula High School, 27118 Silver Spur Rd, in Rolling Hills Estates in partnership with the PV Farmers Market.

The Prepared Peninsula Expo is an annual event the Peninsula Cities produce to help the Palos Verdes Peninsula residents learn to mitigate, prepare, respond, and recover should a disaster strike. This free event will teach you how to protect yourselves, your family, and your pets in a disaster.

This information-filled expo will provide life-saving information, demonstrations, e-bike education, active shooter preparedness presentations, and emergency survival gear to the public, along with trick or treating for the kids (wear costumes) and free food!



Sunday, October 27, 10am-1pm

**PENINSULA HIGH SCHOOL
& PV FARMER'S MARKET**

27118 Silver Spur Road, Rolling Hills Estates



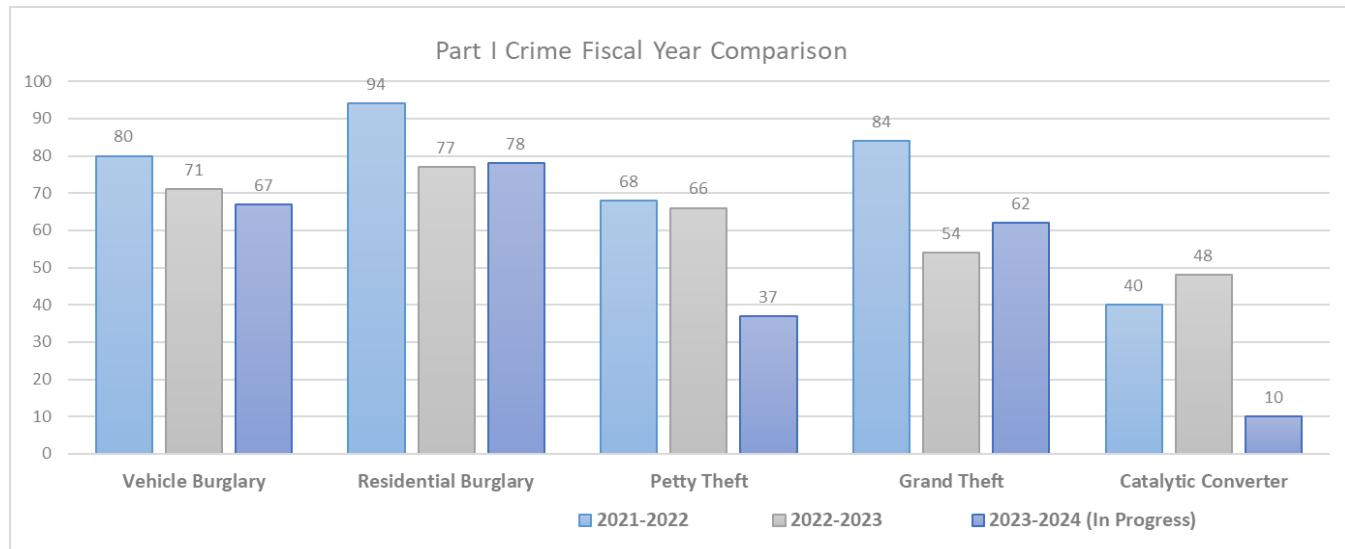
Weekly Crime Report Summaries

The Lomita Sheriff's Station produces a weekly crime report summary that includes information about reported crimes and arrests for the areas served by the Lomita Sheriff's Station, including the City of Rancho Palos Verdes.

View the latest report at the following link:

- [October 6, 2024 \(PDF\)](#)

Explore an archive of weekly crime reports and an interactive map on the City website at rpvca.gov/crimereports. If you need any assistance accessing the weekly crime reports or navigating the interactive mapping feature on the City's website, feel free to reach out to us at 310-544-5305 or via email at publicsafety@rpvca.gov.



Please note that the information contained in these reports is subject to the Los Angeles County Sheriff's Department's reporting protocols. As a result, details related to ongoing investigations may not be included. For a complete list of all crimes, you may visit LASD's [Transparency page](#).

Apply for a Public Safety Reimbursement from the City

The City of Rancho Palos Verdes offers reimbursements for half the cost of a new doorbell or neighborhood camera system, up to \$2,000 for neighborhoods/HOAs, and up to \$100 for individuals. The City aims to encourage the use of cameras and other public safety tools to strengthen neighborhood vigilance and security.

Learn more about the application process at: ow.ly/Etum50SBFG4



Attachments:

October 17 letter to SCE – Page 51

October 17 letter to SoCalGas – Page 79

October 18 response letter from SoCalGas – Page 107

October 21 Joint Congressional letter to FEMA – Page 109

FINANCE DEPARTMENT

California Sales Tax Returns – 2nd Quarter 2024

California's local one-cent sales and use tax receipts for the months of April through June 2024 were 0.6% lower than the same quarter one year ago. Traditionally marking the beginning of summer, the second quarter saw flat returns compared to 2023. The largest sector decline came from auto and transportation receipts, which fell 6.2%. While inventory levels for many dealerships have rebounded, sustained high interest rates and increased cost of insurance have negatively impacted returns.

Although the price of lumber and materials have reportedly dropped and summer weather usually encourages building and construction, new projects have largely been sidelined by developers until financing and mortgage costs drop.

Some sectors experienced mild growth including allocations from the countywide use tax pool and the business and industrial group. Online shopping saw growth with retail services. Fuel and service stations also saw modest growth as travelers continue to choose driving to their destinations. At the local level, fuel and service stations saw a growth of 1.5% compared to the state average of 1.2%.

Chart 1. 2Q 2024 Retail Sales Regional Date – Southern California

Region	2nd Quarter 2024	2nd Quarter 2023	% Change
Southern California			
Autos and Transportation	201,031,426	215,384,489	-6.7%
Building and Construction	101,650,336	102,051,347	-0.4%
Business and Industry	193,943,327	190,403,127	1.9%
Food and Drugs	58,950,118	59,898,262	-1.6%
Fuel and Service Stations	102,584,864	101,040,409	1.5%
General Consumer Goods	213,742,652	219,273,729	-2.5%
Restaurants and Hotels	180,989,207	179,979,467	0.6%
Transfers & Unidentified	2,077,823	1,412,342	47.1%
County & State Pools	217,898,997	208,986,105	4.3%
Total	1,272,868,751	1,278,429,277	-0.4%

Source: HdL Companies

Financial Assistance Grant Program – Update

On October 9th and 16th, The City of Rancho Palos Verdes Finance team hosted the Grant Support Center from 1:00pm to 7:00pm on both dates at the Ladera Linda Community Center. The team assisted residents with inquiries, questions and the application process. 17 applications were received in person on October 9th and 8 applications were received in person on October 16th.

Eligible property owners are encouraged to apply online by visiting the City's website at <https://www.rpvca.gov/1781/22797/Financial-Assistance-Grant-Program>. Other options are also available for residents:

- By mail
- Visiting City Hall during normal business hours, 7:30am – 5:30pm, Monday through Thursday and 7:30am – 4:30pm on Fridays. The Finance team will be available to answer questions, respond to inquiries, and assist with the application process.

As of October 23, 2024, the City has received approximately 180 applications and has begun to disburse payments for over 100 completed and verified applications.

PUBLIC WORKS DEPARTMENT

PUBLIC WORKS PROJECTS

Portuguese Bend Landslide Emergency Stabilization Project Update

In response to unprecedented movement of the deep slide plane in the Greater Portuguese Bend-Ancient Altamira Landslide Complex (Landslide Complex), the City has been installing vertical deep de-watering wells to penetrate the deep slide plane and relieve water pressure.

Additionally, the City has been performing emergency winterization measures in the form of filling fissures and lining canyons including Altamira, Kelvin, Portuguese, Ishibashi, Paintbrush, and Klondike Canyons. Additionally, the City will be lining the graben at the intersection of Exultant Drive and Dauntless Drive, and filling the fissures on Exultant Drive, Admirable Drive, and Palos Verdes Drive South Service Road.

The following work has been complete to date:

Deep Dewatering Wells

- 16 instrumented vertical test boreholes to characterize subsurface conditions and support the execution of dewatering operations have been installed.
- Six deep dewatering wells (DDWs) have been installed west of the Portuguese Bend Beach Club community and are currently discharging water at a combined rate of 560 gallons per minute (GPM). Data from three nearby monitoring wells shows that there continue to be reductions in water pressure.
- Two DDWs have been installed near Palos Verdes Drive South- one east of Peppertree Drive and one near the entrance to the South Bay Archery Range, with a combined discharge rate of 100 GPM.
- Installation a ninth and tenth DDW along the coast of Abalone Cove has started

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and is expected to be completed by the end of this week.

- Drilling of an eleventh DDW is expected to start by the end of this week or early next week.
- Deceleration of land movement in the areas of the installed DDWs continues to be observed, based on a sampling of points from GPS monitoring data.
- Environmental and cultural monitoring is being conducted in conjunction with construction activities.

Winterization

- Fissure filling of Altamira Canyon is ongoing and is expected to be completed within the next two to four weeks. Pond liner has been procured and will be installed at the conclusion of fissure filling.
- Mobilization for fissure filling and lining of Portuguese, Ishibashi, and Paintbrush canyons is expected to start next week.
- Mobilization for fissure filling and lining of Klondike Canyon is expected to start next week.
- Crews have mobilized to start lining the graben at the intersection of Exultant Drive and Dauntless Drive. The work is expected to be completed within approximately two weeks.
- Crews are expected to mobilize to fill the fissure on Exultant Drive by the end of this week or early next week. The work is expected to be completed within approximately two weeks.



*Development of Access Path to DDW-11 at Abalone Cove Beach (Left)
and Fissure-Filling Work West of Altamira Canyon (Right)*

Next Paper Shredding Event, November 2

Mark your calendars! Our next paper/document shredding event will be on November 2 from 8-11 a.m. The event will be held at Ken Dyda Civic Center overflow parking lot and will be free to all Rancho Palos Verdes residents. During the event, electronic waste will be collected for recycling, and mulch will be available to residents.



Prepare for the Citywide Brush Clearing

The fall season brush-clearing event begins on Saturday, October 5, and will continue for four consecutive Saturdays. Each week a different area of RPV is serviced. The goal of the event is to assist homeowners' dispose (free of charge) excess brush, shrubs, hedges, tree branches, and bushes to comply with the Los Angeles County Fire Department's fire safety guidelines. This is a great opportunity to help prevent local brush fires! For more information, you may contact the City's waste collection contractor, EDCO, at 310-540-2977 or <https://rancho-palos-verdes.edcodisposal.com/events/rpv-brush-clearing-event/>



Infrastructure Management Advisory Committee (IMAC) Meeting

The Infrastructure Management Advisory Committee (IMAC) met on October 21 at 6 p.m. in the Community Room at City Hall. Staff provided an update on the landslide stabilization and winterization efforts.

MAINTENANCE ACTIVITIES

In addition to regularly scheduled maintenance and repairs, Public Works performed the following work:

PARK MAINTENANCE

- Weekly landscape maintenance at all City parks.
- Installed a new water fountain near the baseball field at Hesse Park



STREET LANDSCAPING

- Weed removal, brush clearance, and debris removal continued throughout the City at medians and various right of way locations.
 - Calle Entradero from Palos Verdes Drive East to Floweridge Drive.
 - Palos Verdes Drive South from La Rotonda Drive to Schooner Drive.
 - Montemalaga Drive from Silver Spur Road to northern City limits.



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- Use the link below to watch our virtual landscape maintenance:

<https://www.relive.cc/view/vPOp1oNDyE6>



- Repaired and backfilled the broken sections of sidewalk with asphalt on Beechfield Drive.
- Grinded down several sidewalk deviations, filled in cracks with epoxy crack filler, and patched damaged sections of the curb and gutter with concrete on Ravenspur Drive.



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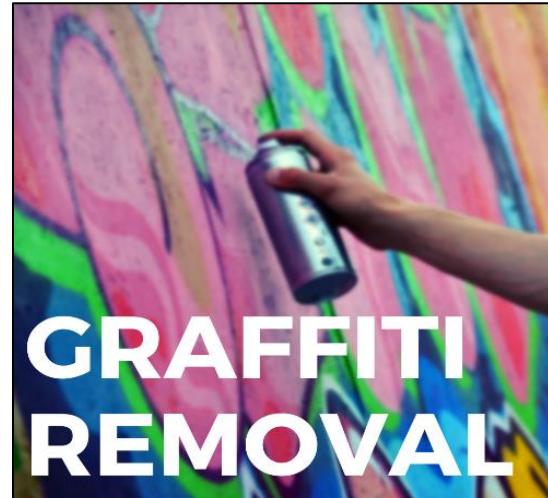
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Graffiti Removal

- **24** graffiti incidents were reported and removed this week.
- Residents can help keep RPV looking great by downloading the **RPV Clean** app to report graffiti to City staff.



- In collaboration with the Recreation and Parks Department, the Public Works Department completed the preparations to set up mobile showers and laundry stations at Ladera Linda Community for residents who were affected by the SCE power shut off.

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- An emergency call was received regarding a sewer leak at 3 Thyme Place. A camera inspection revealed a dislocated joint in the pump ejector line. Repairs were made, the line was tested, and the lift station was restored to full operation.



COMMUNITY DEVELOPMENT DEPARTMENT

Status of SB 330 Preliminary Applications for 6320 Via Colinita

On March 21 and 27 as well as on April 1, five separate preliminary applications for new housing developments were submitted to the City's Planning Division under SB 330 provisions, commonly known as "Builders' Remedy", for the vacant property located at 6320 Via Colinita (APN 7561-011-004). The Builder's Remedy allows for housing development projects that do not conform to the city's general plan and zoning ordinance while a city's Housing Element is not yet substantially compliant. One of the preliminary applications was for what is commonly known as an SB 35 project, a housing development that includes affordable housing, and which, if all the statutory requirements are met, must be approved ministerially. SB 330 preliminary applications "freeze" the zoning and development standards in effect at the time the preliminary application is submitted.

A project applicant must submit an application for the project within 180 days of submitting their preliminary application in order to secure their zoning and development standard rights. The 180-day submittal deadlines passed on the preliminary applications submitted for 6320 Via Colinita on September 17, 23 and 28, 2024, with no applications submitted. Also, the City also now has a certified housing element. This means that the applicant has lost their right to build a project on the site that is not compliant with the city's laws, and any future applications for development on this property will need to meet the requirements of the City's Municipal Code, including but not limited to, density, height, and parking. For questions, please contact Senior Planner, Amy Seeraty at (310) 544-5231 or via email at amys@rpvca.gov.

Applicant Files an Appeal of the Planning Commission's Decision on 5323 Ironwood

On October 21, the project applicant filed an appeal of the Planning Commission's decision to deny, thereby upholding, the Community Development Director's decision of Planning Case No. PLZC2024-0002 on property located at 5323 Ironwood. The appeal request is to overturn the Community Development Director's determination that the proposed project which includes 482 units (1,173,927 square feet) does not qualify for

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Builder's Remedy status and for SB35/423 ministerial review therefore requiring the following entitlements: general plan amendment, zone change, certificate of compliance, major grading permit, variance, environmental review and major site plan review as required by the Rancho Palos Verdes Municipal Code pursuant to Chapter 17.80.

The appeal hearing is tentatively scheduled to be considered by the City Council at its February 18, 2026 meeting.

Western Avenue Storefront Program Virtual Information Session

On October 21, 2024, Staff held a virtual information session on the Western Avenue Commercial Storefront Program. Please visit the program homepage at <https://www.rpvca.gov/1780/Western-Avenue-Commercial-Storefront-Imp> to view the information video, program guidelines and application eligibility. As a reminder, the application deadline is December 1, 2024. For questions, please email WesternStorefrontProgram@rpvca.gov or contact Senior Administrative Analyst, Lisa Garrett at (310) 544-5236.

Status Update - Proposed US Bank at Former Marie Callender's Restaurant Location (29051 S. Western Avenue)

On October 22, 2024, the Planning Division approved a Major Site Plan Review permit for the remodel of the former Marie Callender's restaurant site located at 29051 S. Western Avenue into a US Bank. The scope of work primarily includes the remodel of the building, the recontouring and resurfacing of the existing parking lot, new signage and lighting, new architectural features and new landscaping. As part of the next steps, the project plans will be submitted to the City's Building & Safety Division for structural plan-check and permit issuance for the proposed work. Please contact Senior Planner, Amy Seeraty at (310) 544-5231 or amys@rpvca.gov with any questions.



No Construction on Monday, November 11th (Veterans Day Observed)

Pursuant to Section 17.56.020(B) of the Rancho Palos Verdes Municipal Code, it is unlawful to carry on construction, grading, or landscaping activities, or to operate heavy equipment except between the hours of 7:00 A.M. and 6:00 P.M. Monday through Friday, and between the hours of 9:00 A.M. and 5:00 P.M. on Saturday. No such activity shall be permitted on Sundays, or the legal holidays (within the city's permitted construction hours), unless a Special Construction Permit is approved by the Community Development Director. Click [here](#) to download the Special Construction Permit application. For additional information, please contact the Community Development Department at (310) 544-5228 or planning@rpvca.gov.



Damaged Structure Due to Traffic Collision

On October 21, 2024, the City's Building & Safety Division responded to a single vehicle traffic collision involving a house in the 28000 block of Santona Drive. The collision involved a vehicle landing on and damaging a portion of the roof structure. The City's Building Official inspected the property and ultimately red-tagged the damaged portion of the home. All electricity and gas services were shut off to the damaged area of the home, allowing the residents to stay on the property while repairs are being completed.



RECREATION AND PARKS DEPARTMENT



Plenty of Trunks, Treats, and Good Times at Annual Trunk or Treat Event

Approximately 2,000 people attended a fa-boolous Trunk or Treat event on October 22 at the Ken Dyda Civic Center. Costumed trick or treaters, including many boys and ghouls, enjoyed visiting the 18 car trunks, playing games with and being entertained by Kiddie-Karoo, having their faces painted, jumping on inflatables, and tasting yummy food and drinks! The event was a pumpkin-smashing success!



REACH Update

The REACH program serves the social and recreational needs of youths and adults with developmental disabilities and is back at Hesse Park for in-person activities.

To RSVP for REACH activities or if you have questions, please email reach@rpvca.gov.

ADMINISTRATIVE REPORT

October 23, 2024

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REACH Embraces the Aloha Spirit-Halloween Style

REACH members were pumped up for Hawiian style hijinks at the annual Trunk or Treat event. Reach rolled in on a wave of spooktacular colors. Our Luau tropical dream of a theme made sure to brighten the frightening celebration and bring out a whole new atmosphere to the day. We love to participate in this annual event. Not just to see all the extraordinary kids in their costumes, but because it's a great way for Reach to give back to the community in a fun and wholesome way. Happy Howl-adays!



Upcoming REACH events include a ghoulid Halloween Party on October 30 and Chef Arm comes back November 6 for Baked Ziti! Yum!



For information, contact the Recreation and Parks Department at 310.544.5266. To RSVP, please e-mail REACH@rpvca.gov.

If you are a person with a disability and you need a disability related accommodation to participate in the program, service or activity, contact Risk Manager, jdeziel@rpvca.gov, 30940 Hawthorne Blvd., Rancho Palos Verdes, CA 90275, at least 48 hours in advance at 310-544-5331.

A poster for a REACH Therapeutic Recreation Cooking Class. The top right features the REACH logo and the text "RANCHO PALOS VERDES California". The main title "COOKING CLASS BAKED ZITI" is in large, bold, black letters. Below the title are three photographs of food: a plate of grilled chicken, a stack of pancakes with syrup and fruit, and a salad. At the bottom, the text "WEDNESDAY, NOVEMBER 6TH, 2024, 5:30 PM - 8:30 PM *MEET AT HESSE" is followed by "FOR INFORMATION, CONTACT THE RECREATION AND PARKS DEPARTMENT AT 310.544.5266. TO RSVP, PLEASE E-MAIL REACH@RPVCA.GOV". At the very bottom, there is a box containing the text "IF YOU ARE A PERSON WITH A DISABILITY AND YOU NEED A DISABILITY RELATED ACCOMMODATION TO PARTICIPATE IN THE PROGRAM, SERVICE OR ACTIVITY, CONTACT RISK MANAGER, JDEZIEL@RPVCA.GOV, 30940 HAWTHORNE BLVD., RANCHO PALOS VERDES, CA 90275, AT LEAST 48 HOURS IN ADVANCE AT 310-544-5331.".

School Fundraiser at Ken Dyda Civic Center

Point Vicente Elementary School PTA is hosting a fundraiser dinner on the main grass area of the Ken Dyda Civic Center on October 26 from 2-9pm. Approximately 90 people are scheduled to attend.



Parks Weekend Attendance Report

Below is a summary report of estimated public usage for the past weekend.

- HESSE PARK - walking paths, playground, and grass area
Estimated total park attendance: 932
- RYAN PARK - walking paths, playground, basketball court, and grass area
Estimated total park attendance: 481
- EASTVIEW PARK - walking paths, playground, dog park, and grass area
Estimated total park attendance: 539
- LOWER POINT VICENTE PARK - walking paths and grass area
Estimated total park attendance 5,019
- LADERA LINDA COMMUNITY PARK – walking paths, grass areas, playgrounds, basketball and paddle tennis courts.
Estimated total park attendance: 271

Total Weekend Attendance: 7,242

ADMINISTRATIVE REPORT

October 23, 2024

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Preserve and Beach Weekend

October 19-20

Public Contacts: 114

Violations observed: 9

Abalone Cove Reserve and Park

On October 16, Staff replaced an “Area Closed / No Access” sign on the coastal blufftop fence on Via de Campo Trail.



ADMINISTRATIVE REPORT

October 23, 2024

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Del Cerro Park

On October 19, Park Rangers removed two instances of graffiti from the perimeter fence.



Forrestal Reserve

On October 22, Park Rangers received a report (via the Preserve Information and Reporting Hotline) regarding a group of people who were lost in the Forrestal Reserve. The Park Rangers contacted the group who were not in any medical or emergency distress and provided them with a map of the area to help them return to the trail. The individuals reported they were able to get back on Coolheights Trail with no issues.

ADMINISTRATIVE REPORT

October 23, 2024

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Ocean Trails Reserve

On October 17, Park Rangers received a report (via the Preserve Information and Reporting Hotline) regarding a deceased red fox on East Portal Trail. Park Rangers were able to locate the animal. Los Angeles County Animal Control was notified and confirmed pick up within 24 hours.

Vicente Bluffs Reserve

On October 20, Park Rangers conducted litter abatement within the Vicente Bluffs Reserve. PVPLC completed removal of non-native acacia within this area.





October 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 7:00 pm – City Council Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	2 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	3	4	5
6	7	8 7:00 pm – Planning Commission Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	9 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	10 7:00 pm – Finance Advisory Committee (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room CANCELLED	11	12
13	14 5:30 pm – ACLAD Board Meeting (Virtual Meeting)	15 7:00 pm – City Council Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	16 12:00 pm – Mayor's Lunch @ The Depot (Mayor Cruikshank) 1:30 pm – Sanitation District Meeting (Mayor Cruikshank) 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	17 6:30 pm – Emergency Preparedness Committee (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	18 3:30 pm – Youth Advisory Committee (Hybrid In-Person/Virtual Special Meeting) @ Ken Dyda Civic Center Community Room	19
20	21 6:00 pm – IMAC Meeting (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	22 7:00 pm – Planning Commission Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	23 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	24 6:00pm – Civic Center Advisory Committee (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	25 8:00 am—Mayor's Breakfast @ Trump National Golf Club (Mayor Cruikshank/ Councilmember Seo)	26
27	28 4:00 pm – Youth Advisory Committee (Hybrid In-Person/Virtual Meeting) @ Hesse Park CANCELLED 5:00 pm-Klondike Canyon Meeting (Virtual Meeting) 6:00 pm – TSC Meeting (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	29	30 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	31		



November 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5 7:00 pm – City Council Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	6 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	7	8	9
10	11 5:30 pm – ACLAD Board Meeting (Virtual Meeting) ★ VETERANS DAY ★ City Hall Closed to Public	12 7:00 pm – Planning Commission Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	13 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	14 7:00 pm – Finance Advisory Committee (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	15	16
17	18 6:00 pm – IMAC Meeting (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	19 7:00 pm – City Council Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	20 12:00 pm – Mayor's Lunch @ The Depot (Mayor Cruikshank) 1:30 pm – Sanitation District Meeting (Mayor Cruikshank) 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	21 6:30 pm – Emergency Preparedness Committee (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	22 8:00 am—Mayor's Breakfast @ Terranea Resort – Catalina Kitchen (Mayor Cruikshank/ Councilmember Bradley)	23
24	25 4:00 pm – Youth Advisory Committee (Hybrid In-Person/Virtual Meeting) @ Hesse Park 5:00 pm–Klondike Canyon Meeting (Virtual Meeting) 6:00 pm – TSC Meeting (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	26 7:00 pm – Planning Commission Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	27 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	28 6:00pm – Civic Center Advisory Committee (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	29	30
A graphic with the words "HAPPY THANKSGIVING" in a stylized font, with small orange leaf icons.						
Thanksgiving Holiday – City Hall Closed						



December 2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3 7:00 pm – City Council Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	4 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	5	6	7
8 5:30 pm – ACLAD Board Meeting (Virtual Meeting)	9	10 7:00 pm – Planning Commission Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	11 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	12 7:00 pm – Finance Advisory Committee (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	13	14
15 6:00 pm – IMAC Meeting (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	16	17 7:00 pm – City Council Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	18 12:00 pm – Mayor’s Lunch @ The Depot (Mayor Cruikshank) 1:30 pm – Sanitation District Meeting (Mayor Cruikshank) 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	19 6:30 pm – Emergency Preparedness Committee (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	20	21
22 4:00 pm – Youth Advisory Committee (Hybrid In-Person/Virtual Meeting) @ Hesse Park 5:00 pm-Klondike Canyon Meeting (Virtual Meeting) 6:00 pm – TSC Meeting (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	23	24 7:00 pm – Planning Commission Meeting (Hybrid In-Person/Virtual Meeting) @ Hesse Park	25 3:00 pm–4:30 pm - Landslide Complex Working Group (Virtual)	26 6:00pm – Civic Center Advisory Committee (Hybrid In-Person/Virtual Meeting) @ City Hall Community Room	27	28
<p><i>Happy Holidays</i> <i>Happy Holidays</i> <i>Happy Holidays</i> <i>Happy Holidays</i> <i>Happy Holidays</i></p>						
<p>Winter Holiday Break – City Hall Closed</p>						
29	30	31				
<p><i>Happy Holidays</i> <i>Happy Holidays</i></p>						
<p>Winter Holiday Break – City Hall Closed</p>						

TENTATIVE AGENDAS

Agenda items listed below will be presented to the City Council for their consideration

DEPARTMENT	AGENDA SECTION	AGENDA TITLE	ESTIMATED TIME
November 6, 2024 (WEDNESDAY)			
CLOSED SESSION - 6:00 PM			
	CLOSED SESSION		
REGULAR MEETING - 7:00 PM			
ADMIN	CONSENT CALENDAR	Minutes	1:00
ADMIN	CONSENT CALENDAR	Consider increasing the City's HSA Contributions within the IRS 2025 limits	
ADMIN	CONSENT CALENDAR	Claim against the City (Chikazawa)	
FINANCE	CONSENT CALENDAR	Warrant Register	
FINANCE	CONSENT CALENDAR	Treasury Report (CC) (IA)	
PUBLIC WORKS	CONSENT CALENDAR	Affirm continued landslide emergency contracting	
REC&PARKS	CONSENT CALENDAR	Consider City's security camera video retention policy	
REC&PARKS	CONSENT CALENDAR	Consideration of the Assignment and Assumptions Agreement for two Preserve-related grant projects	
REC&PARKS	CONSENT CALENDAR	2023 Palos Verdes Nature Preserve Annual Report	
PUBLIC WORKS	REGULAR BUSINESS	Consider extending the resolutions declaring the local state of emergency related to the landslide and receive a progress report on landslide projects	1:00
PUBLIC WORKS	REGULAR BUSINESS	Consider amending RPVMC Ch. 12.16 to include an E-bikes ordinance	0:15
REC&PARKS	REGULAR BUSINESS	Consider gazebo designs at Civic Center	0:15
REC&PARKS	REGULAR BUSINESS	Receive a status report on a historical society building	0:30
November 19, 2024			
CLOSED SESSION - 6:00 PM			
	CLOSED SESSION	NO ITEMS SCHEDULED AT THIS TIME	
REGULAR MEETING - 7:00 PM			
ADMIN	CONSENT CALENDAR	Minutes	1:00
ADMIN	CONSENT CALENDAR	Consider PSA with emergency planning consultant	
FINANCE	CONSENT CALENDAR	Warrant Register	
FINANCE	CONSENT CALENDAR	Consideration and possible action regarding the annual Business License Tax (BLT) for calendar year 2025	
PUBLIC WORKS	CONSENT CALENDAR	Affirm continued landslide emergency contracting	
PUBLIC WORKS	CONSENT CALENDAR	Consider construction agreement for the Coastal Bluff Fence at Calle Entradero Agreement	
PUBLIC WORKS/CDD	REGULAR BUSINESS	Receive progress report on Western Avenue commercial corridor projects	0:30
PUBLIC WORKS	REGULAR BUSINESS	Receive status report on traffic improvements @ PVDE/Miraleste Dr	0:30
REC&PARKS	REGULAR BUSINESS	Consider Amendment No. 2 to the City/PVP Land Conservancy Management Agreement	0:15
REC&PARKS	REGULAR BUSINESS	Progress report on discussions with the US Coast Guard properties.	0:15
December 3, 2024			
CLOSED SESSION - 6:00 PM			
	CLOSED SESSION	NO ITEMS SCHEDULED AT THIS TIME	
		Council Reorganization	
REGULAR MEETING - 7:00 PM			
ADMIN	CONSENT CALENDAR	Minutes	1:00
ADMIN	CONSENT CALENDAR	Consider canceling first meeting in January	

TENTATIVE AGENDAS

Agenda items listed below will be presented to the City Council for their consideration

DEPARTMENT	AGENDA SECTION	AGENDA TITLE	ESTIMATED TIME
FINANCE	CONSENT CALENDAR	Warrant Register	
FINANCE	CONSENT CALENDAR	Treasury Report (CC) (IA)	
PUBLIC WORKS	CONSENT CALENDAR	Affirm continued landslide emergency contracting	
REC&PARKS	CONSENT CALENDAR	Consider contract to address Wildlife Corridor encroachments	
December 17, 2024			
CLOSED SESSION - 6:00 PM			
	CLOSED SESSION	NO ITEMS SCHEDULED AT THIS TIME	
REGULAR MEETING - 7:00 PM			
ADMIN	CONSENT CALENDAR	Minutes	3:30
ADMIN	CONSENT CALENDAR	Council assignments for outside agencies and committee liaisons for upcoming year	1:00
FINANCE	CONSENT CALENDAR	Warrant Register	
FINANCE	CONSENT CALENDAR	Receive and file Fiscal Year 2023-24 Unaudited Year-End Report	
FINANCE	CONSENT CALENDAR	Receive and file Fiscal Year 2024-25 First Quarter Financial Report	
PUBLIC WORKS	CONSENT CALENDAR	Affirm continued landslide emergency contracting	
CDD	REGULAR BUSINESS	Receive a report on Los Verdes Golf Course net project	0:30
PUBLIC WORKS	REGULAR BUSINESS	Reassess Encroachment Permit Issuance Protocols	0:15
PUBLIC WORKS	REGULAR BUSINESS	Consider extending the resolutions declaring the local state of emergency related to the landslide and receive a progress report on landslide projects.	1:00
ADMIN	REGULAR BUSINESS	Consider authorizing a delegation of City Council Members and staff to conduct the first official visit to Sister City, Sakura, Japan, on the occasion of their 25th anniversary as a municipality in March 2025	0:15
January 7, 2025			
CLOSED SESSION - 6:00 PM			
	CLOSED SESSION	NO ITEMS SCHEDULED AT THIS TIME	
REGULAR MEETING - 7:00 PM			
ADMIN	CONSENT CALENDAR	Minutes	1:30
FINANCE	CONSENT CALENDAR	Warrant Register	1:00
FINANCE	CONSENT CALENDAR	Treasury Report (CC) (IA)	
January 21, 2025			
CLOSED SESSION - 6:00 PM			
	CLOSED SESSION	NO ITEMS SCHEDULED AT THIS TIME	
REGULAR MEETING - 7:00 PM			
ADMIN	CONSENT CALENDAR	Minutes	4:30
ADMIN	CONSENT CALENDAR	Consider PSA for Federal Lobbyist	1:00
FINANCE	CONSENT CALENDAR	Warrant Register	
PUBLIC WORKS	CONSENT CALENDAR	Affirm continued landslide emergency contracting	

TENTATIVE AGENDAS

Agenda items listed below will be presented to the City Council for their consideration

DEPARTMENT	AGENDA SECTION	AGENDA TITLE	ESTIMATED TIME
ADMIN	REGULAR BUSINESS	Receive a report on speed cameras and loud exhaust legislation	0:15
ADMIN	REGULAR BUSINESS	Consider report on forming a Peninsula-wide Landslide Insurance Pool Authority	0:15
ADMIN	REGULAR BUSINESS	Consider program to address high fire vegetation in canyons by working with neighboring cities/homeowners to address	0:15
ADMIN	REGULAR BUSINESS	Consideration and possible action to adopt the City's 2024 Legislative Platform	0:15
ALL DEPTS	REGULAR BUSINESS	Consideration and possible action to receive biannual reports from City Committees and the Planning Commission	0:30
PUBLIC WORKS	REGULAR BUSINESS	Status report on non native water entering Portuguese Bend landslide	0:30
PUBLIC WORKS	REGULAR BUSINESS	Consider extending the resolutions declaring the local state of emergency related to the landslide and receive a progress report on landslide projects.	1:00
February 4, 2025			
CLOSED SESSION - 6:00 PM			
	CLOSED SESSION	NO ITEMS SCHEDULED AT THIS TIME	
REGULAR MEETING - 7:00 PM			
ADMIN	CONSENT CALENDAR	Minutes	1:00
FINANCE	CONSENT CALENDAR	Warrant Register	
FINANCE	CONSENT CALENDAR	Treasury Report (CC) (IA)	
PUBLIC WORKS	CONSENT CALENDAR	Affirm continued landslide emergency contracting	
February 18, 2025			
CLOSED SESSION - 6:00 PM			
	CLOSED SESSION	NO ITEMS SCHEDULED AT THIS TIME	
REGULAR MEETING - 7:00 PM			
ADMIN	CONSENT CALENDAR	Minutes	1:00
FINANCE	CONSENT CALENDAR	Warrant Register	
PUBLIC WORKS	CONSENT CALENDAR	Affirm continued landslide emergency contracting	
CDD	REGULAR BUSINESS	Consider Ironwood appeal	2:00
PUBLIC WORKS	REGULAR BUSINESS	Consider extending the resolutions declaring the local state of emergency related to the landslide and receive a progress report on landslide projects.	1:00
PUBLIC WORKS	REGULAR BUSINESS	Report on citywide beautification projects including Lower Hesse and medians	0:15
FUTURE AGENDA ITEMS TO BE			
Request Date:	Requested By:	Item:	Scheduled Date:
7/21/2020	Alegria	Reassess Encroachment Permit Issuance Protocols	12/17/2024
12/21/2021	Bradley	Status report on non native water entering Portuguese Bend landslide	1/21/2025
4/19/2022	Alegria	Stormwater/Drainage Asset Management Update	TBD
9/6/2022	Cruikshank	Consider program to address high fire vegetation in canyons by working with neighboring cities/homeowners to address	1/21/2025
9/20/2022	Ferraro	Report on citywide beautification projects including Lower Hesse and medians	2/4/2025
7/18/2023	Cruikshank/Seo	Consider report on forming a Peninsula-wide Landslide Insurance Pool Authority	1/21/2025
9/19/2023	Alegria	Receive a report on Los Verdes Golf Course net project	12/17/2024

TENTATIVE AGENDAS

Agenda items listed below will be presented to the City Council for their consideration

DEPARTMENT	AGENDA SECTION	AGENDA TITLE	ESTIMATED TIME
1/16/2024	Alegria/Cruikshank	Receive a report on speed cameras and loud exhaust legislation	1/21/2025
3/19/2024	Seo/Cruikshank	Consider PSA for Federal Lobbyist	1/21/2025
4/16/2024	Seo	Receive a report on accounting and oversight of the GHADS	TBD
6/18/2024	Cruikshank	Receive status report on traffic improvements @ PVDE/Miraleste Dr	11/19/2024
7/16/2024	Alegria	Consider gazebo designs at Civic Center	11/6/2024
8/6/2024	Bradley	Progress report on discussions with the US Coast Guard properties	11/19/2024
10/1/2024	Bradley	Receive a status report on a historical society building	11/6/2024
CITY MANAGER REPORT			0:15

RPVtv Cox 33 / Frontier 38 Programming Schedule Guide Schedule -10/27/24 - 11/2/24

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	October 20, 2024	October 21, 2024	October 22, 2024	October 23, 2024	October 24, 2024	October 25, 2024	October 26, 2024
6:00 AM - 6:30 AM	Fitness Programming						
6:30 AM - 7:00 AM	Fitness Programming						
7:00 AM - 7:30 AM	RPV City Talk						
7:30 AM - 8:00 AM	Around the Peninsula						
8:00 AM - 8:30 AM	Peninsula Seniors Connections						
8:30 AM - 9:00 AM							
09:00 AM - 9:30 AM	Fitness Programming						
9:30 AM - 10:00 AM	Fitness Programming						
10:00 AM - 10:30AM	Lectures with Lianne						
10:30 AM - 11 AM							
11:00 AM -11:30 AM	RPV City Talk						
11:30 AM -12:00PM	Around the Peninsula						
12:00 PM -12:30PM	Barbershop Harmony South Bay Coastliners						
12:30 PM - 1:00PM							
1:00 PM - 1:30PM	Peninsula Seniors Connections						
1:30 PM - 2:00PM							
2:00 PM - 2:30PM	Fitness Programming						
2:30 PM - 3:00PM	Fitness Programming						
3:00 PM - 3:30PM	RPV City Talk						
3:30 PM - 4:00 PM	Around the Peninsula						
4:00 PM - 4:30PM	RPV City Talk						
4:30 PM - 5:00PM	Around the Peninsula						
5:00 PM - 5:30PM	Playing the Field- Local Edition						
5:30 PM - 6:00PM	Fitness Programming						
6:00 PM - 6:30PM	RPV City Talk						
6:30 PM - 7:00PM	RPV City Talk						
7:00 PM - 7:30PM	LA Fireboat #2						
7:30 PM - 8:00PM							
8:00 PM - 8:30PM	Around the Peninsula						
8:30 PM - 9:00PM	Playing the Field- Local Edition						
9:00 PM - 9:30PM	RPV City Talk						
9:30 PM - 10:00PM	RPV City Talk						
10:00 PM -10:30PM	Lectures with Lianne						
10:30 PM -11:00PM							
11:00 PM -11:30PM	Community Announcements						
11:30 PM -12:00 AM	Community Announcements						
12:00 AM - 1:00 AM	Community Announcements						

PVPtv Cox 35 / Frontier 39 Programming Schedule Guide Schedule - 10/27/24 -11/2/24

	Sunday October 27, 2024	Monday October 28, 2024	Tuesday October 29, 2024	Wednesday October 30, 2024	Thursday October 31, 2024	Friday November 1, 2024	Saturday November 2, 2024
6:00 AM - 6:30 AM							
6:30 AM - 7:00 AM							
7:00 AM - 7:30 AM	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024
7:30 AM - 8:00 AM							
8:00 AM - 8:30 AM							
8:30 AM - 9:00 AM							
09:00 AM - 9:30 AM							
9:30 AM - 10:00 AM							
10:00 AM - 10:30AM							
10:30 AM -11:00AM							
11:00 AM -11:30 AM	The City of Rancho Palos Verdes Planning Commission Meeting October 8, 2024	The City of Rancho Palos Verdes Planning Commission Meeting October 8, 2024	The City of Rancho Palos Verdes Planning Commission Meeting October 8, 2024	The City of Rancho Palos Verdes Planning Commission Meeting October 8, 2024	The City of Rancho Palos Verdes Planning Commission Meeting October 8, 2024	The City of Rancho Palos Verdes Planning Commission Meeting October 8, 2024	The City of Rancho Palos Verdes Planning Commission Meeting October 8, 2024
11:30 AM -12:00PM							
12:00 PM -12:30PM							
12:30 PM - 1:00PM							
1:00 PM - 1:30PM							
1:30 PM - 2:00PM							
2:00 PM - 2:30PM	Community Announcements						
2:30 PM - 3:00PM							
3:00 PM - 3:30PM	Community Announcements						
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6:00 PM - 6:30PM	Community Announcements						
6:30 PM - 7:00PM							
7:00 PM - 7:30PM	Community Announcements						
7:30 PM - 8:00PM							
8:00 PM - 8:30PM	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024	Community Announcements	Community Announcements	The City of Rolling Hills Estates City Council Meeting	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024	The City of Rolling Hills Estates City Council Meeting	The City of Rancho Palos Verdes City Council Meeting, October 15, 2024
8:30 PM - 9:00PM							
9:00 PM - 9:30PM							
9:30 PM - 10:00PM							
10:00 PM -10:30PM							
10:30 PM -11:00PM							
11:00 PM -11:30PM							
11:30 PM -12:00 AM							
12:00 AM - 1:00 AM							
1:00 AM - 6:00 AM							

Comments or questions? Please email us at RPVtv@rpvca.gov



LOS ANGELES COUNTY SHERIFF'S DEPARTMENT- LOMITA STATION
REPORTED CRIMES & ARRESTS BETWEEN (10/06/2024 - 10/12/2024)



LOMITA:

CRIME	FILE #	RD	DATE	TIME	LOCATION-PUBLIC
BURGLARY (RESIDENTIAL)	24-03056	1751	10/6/2024	2348	1800 BLK PALOS VERDES DR NORTH
BURGLARY (BUSINESS)	24-03059	1714	10/7/2024	1112	2200 BLK PCH
GRAND THEFT (AUTO)	24-03060	1714	9/23/2024-10/6/2024	1700-1000	2000 BLK PCH
GRAND THEFT (AUTO)	24-03080	1710	10/8/2024	0200	1800 BLK LOMITA BLVD
ROBBERY/ASSAULT	24-03091	1714	10/10/2024	0411	1800 BLK PCH
GRAND THEFT (AUTO)	24-03103	1713	10/10/2024-10/11/2024	1800-0750	PCH/ REED ST

RANCHO PALOS VERDES:

CRIME	FILE #	RD	DATE	TIME	LOCATION-PUBLIC
BURGLARY (VEHICLE)	24-03051	1746	10/5/2024-10/6/2024	1830-0730	2000 BLK CADDINGTON DR
BURGLARY (RESIDENTIAL)	24-03055	1745	10/6/2024	1658	ROCKINGHORSE RD
BURGLARY (VEHICLE)	24-03082	1746	10/9/2024	1300-1400	28000 BLK WESTERN AVE
GRAND THEFT (AUTO)	24-03101	1735	10/11/2024	0340	28000 BLK HAZELRIDGE DR
ATTEMPT GRAND THEFT (AUTO)	24-03104	1747	9/27/2024-10/10/2024	2200-1400	27000 BLK AVENIDA DEL MESA

ROLLING HILLS:

CRIME	FILE #	RD	DATE	TIME	LOCATION-PUBLIC
NO CRIMES DURING THIS TIME					

ROLLING HILLS ESTATES:

CRIME	FILE #	RD	DATE	TIME	LOCATION-PUBLIC
SHOPLIFTING	24-03061	1724	10/7/2024	1423	800 BLK SILVER SPUR RD
SHOPLIFTING	24-03084	1724	10/9/2024	0530	PENINSULA CTR
GRAND THEFT (AUTO)	24-03118	1724	10/12/2024	1515	PENINSULA CTR

SAN PEDRO:

CRIME	FILE #	RD	DATE	TIME	LOCATION-PUBLIC
NO CRIMES DURING THIS TIME					

PVP:

CRIME	FILE #	RD	DATE	TIME	LOCATION-PUBLIC
GRAND THEFT (AUTO)	24-03052	1754	10/5/2024- 10/6/2024	1930- 1230	2100 BLK GAUCHO DR

**Data included in this report is time sensitive and subject to change.

DATE OF REQUEST	DATE RECEIVED	REQUESTOR	SUBJECT	ACTION TAKEN
5/5/2024	5/6/2024	Trevor Yaremko	<p>Request for the following:</p> <ol style="list-style-type: none"> 1. A copy of any and all Los Angeles County Sheriff's Department ("LASD") Lomita Station roster/staffing documents provided to Rancho Palos Verdes by the LASD Lomita Station from January 1, 2022 to April 25, 2024; 2. A copy of any and all e-mails, including attachments, that have been sent to and from Rancho Palos Verdes's e-mail addresses and @lasd.org domain e-mail addresses (including cc'd or bcc'd) from January 1, 2022 to April 25, 2024; 3. A copy of any and all agreements and/or contracts between LASD and Rancho Palos Verdes relating to the policing of Rancho Palos Verdes by LASD personnel; please also include the daily staffing agreements and daily deployment schedules from January 1, 2022 to April 25, 2024; 4. A copy of all procurement records (purchase orders, invoices, or other related documents) between Rancho Palos Verdes or its representatives and any vendors for the procurement of equipment to be used by LASD personnel (including, but not limited to, shirts, trousers, gun belts, gloves, shoes and other footwear, hats, jackets, helmets, and armor vests) from January 1, 2022 to April 25, 2024; 5. A copy of any and all presentation materials (including, but not limited to, informational handouts and PowerPoint slides) used by LASD in Rancho Palos Verdes City Council Meetings from March 2023 to April 2024; 6. A copy of any and all reports, documents and instructional materials (including, but not limited to, e-mails, photos, videos, notes, handouts, and training notices/curricula) provided by LASD relating to its operations in Rancho Palos Verdes (e.g., creation of special teams, staffing of said teams, etc.); 7. A copy of any and all reports, documents and instructional materials (including, but not limited to, e-mails, photos, videos, notes, handouts, and training notices/curricula) used to assess and determine compliance by LASD with its contract agreements with Rancho Palos Verdes; 8. A copy of any and all invoices submitted by LASD to Rancho Palos Verdes for policing services from January 1, 2022 to April 25, 2024; 9. A copy of any and all reports, documents and materials submitted by LASD to Rancho Palos Verdes in support of its invoices to Rancho Palos Verdes for policing services from January 1, 2022 to April 25, 2024 	5/6/24 AA Zweizig forwarded request to staff. 5/16/23 AA Zweizig sent 14-day extension letter. 5/30/24 AA Zweizig sent determination letter. 6/13/24 AA Zweizig sent determination letter and First production of documents. 6/27/24 AA Zweizig sent determination letter.
6/5/2024	6/5/2024	Bryan Sanders	Requesting to view responsive documents, including emails, written by and received by the following public employees: Octavia Silva and Brandy Forbes. The topic to search includes "HCD" "RHNA" "Clipper Lot" "Rezone" and "Coastal Commission". The timeline is January 1, 2022 through today June 5, 2024. Thank you for your assistance. Please include any responsive documents held on private cell phones and laptops, as they are also subject to public records requests since they belong to public employees. I do not need physical copies so please do not incur any fees. I only want to see the digital copies	6/5/24 DCC Sisson forwarded request to staff. 6/17/24 14-day extension letter sent. 7/1/24 First production sent. 7/26/24 Extension email sent. 7/30/24 Second production sent. 9/3/24 Third production sent. 10/1/24 Fourth production sent.

DATE OF REQUEST	DATE RECEIVED	REQUESTOR	SUBJECT	ACTION TAKEN
6/17/2024	6/17/2024	Mona Jeffery	Request for the following records: i. All records addressing landslide activity in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request; ii. All records of damages to public and/or private property from landslide activity in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request resulting from landslide activity; iii. All records of remediation efforts for damages caused to public and/or private property as a result of any landslide activity in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request; iv. All records of water usage by the City of Rancho Palos Verdes in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, and the date of this request; v. All records of water supplied by the City of Rancho Palos Verdes to private residences within the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, and the date of this request; vi. All records of water leaks in the water mains supplying water to the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request; vii. All records of damages to public and/or private property located activity in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request resulting from water leaks in the water mains; viii. All records of remediation of damages from water leaks in the water mains supplying water to the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request; ix. All records of notifications from property owners and/or tenants of homes located in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request to the City of Rancho Palos Verdes, whether written and/or oral, regarding soils movement from any cause; x. All records of damages to public and/or private property located activity in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request resulting from soil movement from any cause; xi. All records of remediation efforts for damages caused to public and/or private property as a result of any landslide activity in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request resulting from soils movement from any cause; xii. All records concerning soils testing in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request performed by and/or on behalf of the City of Rancho Palos Verdes; xiii. All records of monitoring of soils movement performed in the Portuguese Bend area of the Palos Verdes Peninsula, Rancho Palos Verdes between January 1, 2010, to the date of this request by and/or on behalf of the City of Rancho Palos Verdes.	6/17/24 AA Zweizig forwarded request to staff. 6/27/24 AA Zweizig sent 14-day extension letter. 7/11/24 AA Zweizig emailed requestor to possibly narrow request. 7/18/24 AA Zweizig emailed requestor following up on narrowing request.
6/18/2024	6/18/2024	Michele Carbone	Request for all notes, calls, text from the Zoom meeting held on August 25 @ 3 pm between Octavio Silva and Luis de Moraes and Ali Vahdani and asahabi@optimumseismic.com. Any communication between Octavio and Ara Mihranian and John Cruikshank.	6/18/24 AA Zweizig forwarded request to staff. AA Zweizig requested clarification from requestor. 6/27/24 AA Zweizig sent 14-day extension letter.
7/5/2024	7/8/2024	Jessica Reeves	Request for all recent soils reports and geotechnical studies completed on behalf of Rancho Palos Verdes, with regard to the Portuguese Bend Landslide Complex	7/8/24 AA Zweizig forwarded request to staff. 7/18/24 and 7/25/24 AA Zweizig emailed requestor to possibly narrow request. 7/25/24 Requestor clarified request. AA Zweizig sent 14-day extension letter.
8/4/2024	8/5/2024	Michele Carbone	Request for all communication, emails, text to and from city employees and city council and to and from any external inquires for 8 Clipper, RPV 90275 since January 1, 2024	8/5/24 AA Zweizig forwarded request to staff. 8/15/24 AA Zweizig sent 14-day extension letter. 8/29/24 AA Zweizig sent determination letter
8/28/2024	8/28/2024	Lauren Winters	Request for any correspondence from May 2024 to present regarding the Rancho Palos Verdes Housing Element	8/28/24 AA Zweizig forwarded request to staff. 9/9/23 AA Zweizig sent 14-day extension letter. 9/24/24 AA Zweizig sent determination letter and First production of documents. 10/10/24 AA Zweizig sent determination letter and Second production of documents.

DATE OF REQUEST	DATE RECEIVED	REQUESTOR	SUBJECT	ACTION TAKEN
9/12/2024	9/12/2024	Kathy Millea	Request for All inquiries regarding rezoning development potential of 0 Clipper Road. All correspondence, meetings, emails, texts messages, meeting invites, phone records and communications between city officials and staff including but not limited to John Cruikshank, Ara Mihranian, Brandy Forbes and Octavio Silva with Ali Vahdani, Ali Sahabi, Optimum Seismic, JMC-2 (John Cruikshank's civil engineering company), Amy Cimetta, Barry Segal, Luis de Moraes, Scott Peotter, Schmitz & Associates, or any other person or company acting on behalf of Ali Vahdani/Optimum Seismic regarding the development and rezoning of 0 Clipper.	9/16/24 AA Zweizig requested clarification from requestor. 9/19/24 AA Zweizig followed up on clarification. 9/24/24 AA Zweizig sent 14-day extension letter.
9/17/2024	9/17/2024	Christian Ehlers	Request for Records relating to payment for landscaping at Palos Verdes Drive East and Ganado Drive. Records relating to maintenance and/or landscaping by city, city subcontractor, city employees, agents, etc at Palos Verdes Drive East and Ganado Drive. All traffic studies that included the intersection of Palos Verdes Drive East and Ganado Drive, including recommendations from said traffic studies, and including whether the recommendations were followed. Any public commentary or requests or complaints relating to the intersection of Palos Verdes Drive East and Ganado Drive.	9/17/24 AA Zweizig forwarded request to staff. 9/27/24 AA Zweizig sent 14-day extension letter.
9/20/2024	9/20/2024	Marisol Hernandez	Requesting citywide landscape maintenance: 1. Name and license number of the awarded general/multi-prime contractor., 2.Copy of the subcontractors list with license numbers of the awarded general/multi-prime contractor submitted at time of bid, even if left blank by the contractor., 3. Copy of the original bid advertisement with proof of publication., 4. DIR Project ID of the project".	9/20/24 DCC Sisson forwarded request to staff. 10/2/24 14- day extension letter sent.

DATE OF REQUEST	DATE RECEIVED	REQUESTOR	SUBJECT	ACTION TAKEN
10/21/2024	10/21/2024	Janet Gagliano	<p>Requesting request copies of the California - City of Rancho Palos Verdes's financial records concerning unclaimed, uncashed, undeliverable, and/or outstanding funds or obligations due back to non-individuals (businesses), including any and all:</p> <ul style="list-style-type: none"> • Checks or warrants issued for payments on obligations incurred by any agency, department, office, or other authorized authority that have remained outstanding. • Amounts on deposit that are held in trust for recipients whose whereabouts are unknown, including instances in which payment was never attempted, payment was never requested, and/or instances when payments were returned as undeliverable. <p>Such payments may relate to (but are not limited to) tax refunds/overages/refunds, overpayments, vendor payments, cash deposits, cash escrows, and unsuccessful electronic fund transfers.</p> <p>Criteria</p> <ul style="list-style-type: none"> • Amount is greater than \$999.99; • Payee retains the right to claim the funds (i.e. The payment has not been replaced, was not issued in error, and/or the obligation to the payee has not been voided by law.); • Is owed/payable to a business (corporations, partnerships, etc); • Has remained outstanding for a period of six months or longer; • Are not in the process of being reissued, to the best of your knowledge; and • Has not been turned over to a State Abandoned Property Office. <p>Requested Data Columns:</p> <ul style="list-style-type: none"> • Owner name (Required); • Amount (Required); • Original payment date (Required); • Check number; 	10/21/24 DCC Sisson forwarded request to staff.
10/22/2024	10/22/2024	Grace Toohey LA Times	<p>We'd like to request to review:</p> <p>--A report completed by EDAW Inc of Newport Beach in December 1974 about the safety of different areas in Rancho Palos Verdes.</p> <p>The city had commissioned the report.</p> <p>--A US Army Corps of Engineers study about the landslide area, completed in August or September 1991</p> <p>I also was curious if you'd be able to provide a list of the different building moratoriums (or however it's easiest to share) established over the years.</p> <p>Trying to better understand when the moratoriums started, changed and were lifted, if applicable.</p>	10/22/24 CC Takaoka forwarded request to staff.
10/22/2024	10/22/2024	Nick Clapp	<p>Requesting copies of the condominium tract or condominium plan, and subdivision map for the property located at: 28125 Peacock Ridge Dr, Rancho Palos Verdes, CA 90275.</p> <p>APN: 7589007011</p>	10/22/24 DCC Sisson forwarded request to staff.



JOHN CRUIKSHANK, MAYOR
ERIC ALEGRIA, MAYOR PRO TEM
DAVID L. BRADLEY, COUNCILMEMBER
BARBARA FERRARO, COUNCILMEMBER
PAUL SEO, COUNCILMEMBER

October 17, 2024

Via email

Jill Anderson
Executive Vice President and Chief Operating Officer
Southern California Edison

Subject: **Request to Re-Energize the Portuguese Bend Beach Club and Seaview Neighborhoods**

Dear Ms. Anderson,

In September 2024, Southern California Edison (SCE) indefinitely de-energized the neighborhoods of Portuguese Bend Community Association (PBCA), Seaview, and Portuguese Bend Beach Club (PBBC) due to cited public safety concerns resulting from land movement, abruptly leaving hundreds of customers without power.

Since the power shut-offs, the City and its residents have been seeking clarification from the utilities, including SCE, on what thresholds would need to be met to restore services to the affected neighborhoods. To date, a definitive response has not been provided.

As you know, the City began operating new dewatering wells on September 13, 2024 and now has eight wells extracting over one million gallons of water per day from the ground. The new dewatering program in combination with dewatering conducted by the Klondike Canyon Landslide Abatement District and a dry summer, have drastically reduced the artesian pressure resulting in a significant reduction in land movement throughout the Greater Portuguese Bend – Altamira Landslide Complex. This week, the City will also prepare for the upcoming winter season by implementing emergency winterization measures, in the form of filling grabens and fissures to re-establish drainage to the ocean and not directly into the ground.

On October 13, 2024, the City received GPS monitoring data from its surveyor who has been monitoring land movement in the area. This GPS data shows that there is

October 17, 2024

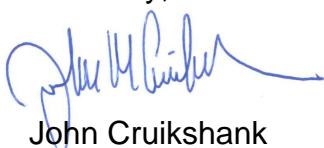
Page 2

now **no** land movement in the area of the PBBC and Seaview (see attached exhibit visualizing the data).

In light of this report, on behalf of the affected residents, the City is requesting that SCE re-energize the PBBC and Seaview neighborhoods immediately. We request a response to this letter by Monday, October 21 with a timeline to re-energize the affected households.

Please contact City Manager Ara Mihranian at 310-544-5202 or via email at aram@rpvca.gov with any questions.

Sincerely,



John Cruikshank
Mayor

cc. Caroline Choi, Senior Vice President of Corporate Affairs and Public Policy, SCE
Larry Chung, Vice President of Customer Engagement, SCE
Rancho Palos Verdes City Council
Ara Mihranian, City Manager
Catherine Jun, Deputy City Manager

Portuguese Bend Land Movement Monitoring Survey

October 10, 2023 (M38) through October 13, 2024 (M49)

Survey Report

for the

City of Rancho Palos Verdes

prepared by

McGee Surveying Consulting

Dated: October 30, 2023 with subsequent updates through October 15 2024

Portuguese Bend is typically monitored for land movement on a tri-annual basis with an initial survey of all current monitoring points at the beginning of the rainy season in the fall of each year followed by two subsequent partial Winter and partial Spring Monitoring Surveys of 30-40 points. In past years, the survey report was published following the spring survey; however, since the beginning of 2024 due to the excessive land movement the surveys have been conducted every six weeks and now every month as listed below. The October 10, 2023 M38 survey is reported here in detail and subsequent surveys are reported as Addendums beginning with Addendum No. 1 for M39 on page 7. The movement results are listed in the attached "PB MOVEMENT DATA POSTING M??.....xlsx". Movements are reported for the average date of the survey listed below.

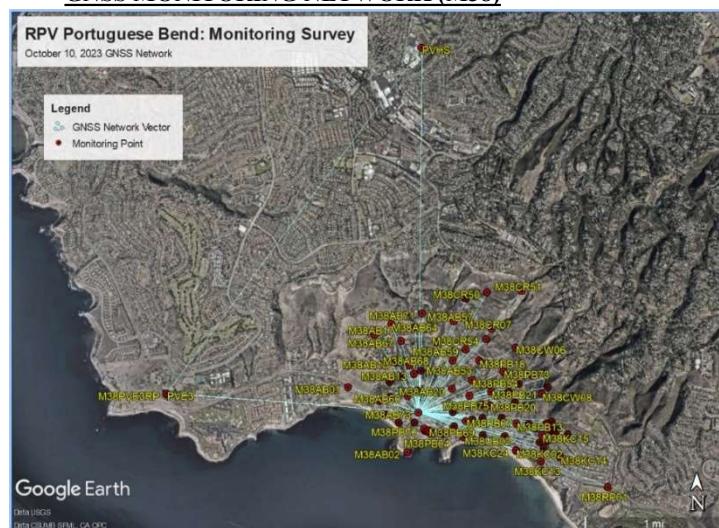
List of Reported Monitoring Surveys

- M38 Full Survey - October 10, 2023
- M39 Full Survey - January 13, 2024
- M40 Partial Survey - March 8, 2024
- M41 Partial Survey - April 17, 2024
- M42 Full Survey - May 28, 2024
- M43 Full Survey - July 1, 2024
- M44 Full Survey - August 1, 2024
- M45 Full Survey - September 4, 2024
- M46 Partial Survey - September 20, 2024
- M47 Partial Survey - September 27, 2024
- M48 Full Survey - October 8, 2024
- M49 Partial Survey - October 13, 2024

OVERVIEW:

McGee Surveying Consulting (MSC) performed the 2023-2024 land movement monitoring surveys at Portuguese Bend. The surveys were planned, coordinated, and executed by Michael McGee, PLS3945 of MSC who is responsible for the field surveys, processing observations, network adjustments, analysis, and reports. For a general history, details and procedures utilized in this survey but not re-stated here, see the "Portuguese Bend Land Movement 2020-2021 Monitoring Survey" report dated October 5, 2021, revised and published May 11, 2022. See also prior reports.

GNSS MONITORING NETWORK (M38)



McGEE SURVEYING CONSULTING
5290 Overpass Road, Ste#107, Santa Barbara, CA 93111

Survey in Klondike Canyon (Seaview) and ten new points set in September 2023. Additional points have been set on most subsequent surveys as necessary and noted in the addendums. Point KC02 was replaced by KC24 nearby in the October in anticipation of its future destruction. Point AB21 was recovered from the 2007 survey and substituted for nearby AB20 (destroyed by others) and will facilitate continuous monitoring at this location. The movements of new points are included in this Report as an Addendum. All monitoring survey coordinates and movements to date are listed in the spreadsheet “PB MOVEMENT DATA POSTING M?? 2007-[present].xlsx” attached to this Report.

PROJECT DATUMS - REFERENCE FRAME

The horizontal and vertical positions of the monitoring points are based on the North American Datum of 1983 (NAD83) Epoch 2007.00 and the North American Vertical Datum of 1988 (NAVD 88) reference frames. Although more current epoch adjustments are available e.g. NAD83 (2011) Epoch 2010.00, Epoch 2007.00 is retained to maintain consistently relative positions over time. Orthometric heights (NAVD88 Elevations) are based on measured ellipsoid heights combined with the NGS Geoid03 model and referenced to NGS Benchmarks. Although more current geoid models (e.g. Geoid18), are available, Geoid03 is retained to maintain consistently relative height movements over time as explained in said May 2022 Report. The latitudes and longitudes determined by GNSS measurements are converted to grid coordinates by projected onto NAD83 California State Plane Coordinates Zone 5 in US Survey Feet.

A valid recovery of the survey reference frame is essential to accurately measure and assess actual movements of individual points relative to the greater peninsula. The method for recovering the monitoring survey reference frame was modified in 2019 to improve the efficiency and simplify the processing and analysis of the monitoring surveys. Since 2007, Point AB02 (at the south end of Portuguese Point) has proven to be stable relative to PVE3 which is a California Spatial Reference Center (CSRC) Continuously Operated GPS Station (CGPS) at City Hall. The present procedure fixes PVE3RP (a PK Nail set on the concrete base of PVE3 as a reference mark to PVE3) and checking to point AB02. The proven positions relative to PVE3 are listed below.

Pt#	Latitude	Longitude	NAVD88 Ht	Source
AB02	33-44-13.84878	118-22-26.19243	116.47 ft	2007 - October 2018 position
PVE3RP	33-44-35.74239	118-24-15.27451	346.88 ft	Average of 5 years referencing to PVE3

Comparing the positions of AB02 on Portuguese Point with PVE3RP at City Hall and other CSRC CGPS Stations provides a redundant verification that the reference frame is stable and successfully recovered for each monitoring survey. An additional stable check point “RP01” was established near the entrance to the Trump Golf Course for verification on future surveys.

The rate of movement (velocities) of the land masses have increased over the past five years compared to the previous 12-year average. See “Assessment of Movements & Accelerations” addressed on Page 11.

Notwithstanding the 2019 monitoring process noted above, the processing of observations was necessarily modified for this fall survey because of the higher velocities as follows.

The October 2023 observations were processed as follows. The Base Station at AB73 was occupied over a six-day period and was found to have moved about 0.016 feet per day similar to other monitoring points in the area. To determine accurate positions and therefore precision movements it was necessary to determine a daily position of AB73. This was accomplished by processing the static data collected each day at AB73 with static data downloaded from the CSRC for CGPS stations PVE3 and PVHS. PVE3 is and has always been the basic constraint for the monitoring survey’s reference frame. PVHS was used to verify the stability of PVE3. Subsequently positions of AB73 were computed for each day referenced to PVE3. The identity for processing the daily observations of AB73 and related RTK measurements was to assign to AB73 the identity of AB731, AB732, AB733, AB734 & AB735 for days 1 through 5 occurring on October 8, 9, 10, 11 & 13.

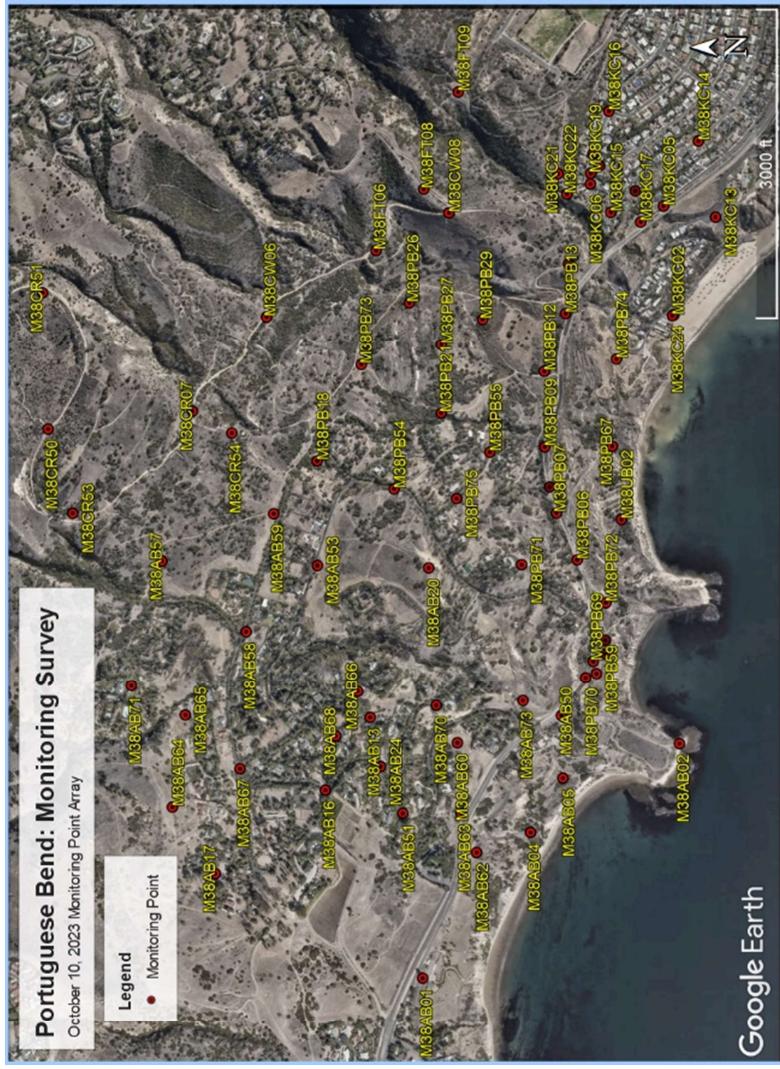
BASE STATIONS – POINT NAMES

AB61 and AB20 have previously served as suitable GNSS Base Stations for referencing measured positions of the monitoring points. AB61 is no longer accessed due to its environmental sensitivity and lack of security. AB73, located on the US Pony Club property was utilized as the Base Station up to the October 2023 survey.

Access was obtained unilaterally by MSC from the Pony Club manager for exclusive permission to enter the property confirmed prior to each survey entry with the understanding that 5 mph driving protocols are observed. Point AB73 was not a planned monitoring point but given the increased rates of movement, it fills in a gap between AB20 and AB50 and moves consistent with AB20. AB50 and AB73 are on the south and north sides of PVDS respectively. The separation between AB73 and AB50 is diminishing at the rate of about one foot per month in April 2024 resulting in a steeper slope on the north side of PVDS which may be de-stabilizing.

Due to the continuously increasing velocities of land movement, the present on-site base stations (AB20 and AB73) are no longer stable for measuring relative movements. In the January 2024 survey the Smartnet RTN network utilizing remote base stations connected by the Internet was used to measure positions and vectors which were re-referenced to PVE3RP and PVE3 in a network least squares adjustment. Surveys subsequent to the January survey are referenced to a new base station monument “RP02” set about 1400 feet northerly of the entrance to Abalone Cove Park and ¼ mile westerly of the present active slide boundary. See discussion hereafter.

October 2023 GNSS Survey Monitoring Points Network



The monitoring points names were established in the early surveys. The points are named for the slide they fall within and given a number. For example, slides AB, PB, KC, CR and FT. The number is increased as new points are established to replace abandoned or destroyed points or expand the network. Many of the original points are lost or no longer monitored. For data management purposes the point names are also prefixed with a sequential monitoring number to distinguish subsequent surveys. For example, for the occupation of AB02 on

McGEE SURVEYING CONSULTING
5290 Overpass Road, Ste#107, Santa Barbara, CA 93111

the 16th monitoring survey, AB02 is called M16AB02 where M16 indicates the sequence number since the first Monitoring Survey "M01" in September 2007. The prefix is stripped in the spreadsheet reports.

GNSS October 2023 M38 Survey Parameters, Metadata & Equipment

Date of Annual Initial Survey: M38 – October 10, 2023 (mean date) between 0800-1700 PDST (+7 hrs for UTC).

Constellations: GPS (31 Satellites), Russian GLONASS (23 Satellites), Galileo (23 Satellites) and Beidou (40 Satellites).

Observables (Carrier Waves): GPS (L1, L2, L5), GLONASS (L1, L2), Beidou (L1, L2); & Galileo (4 Carrier Waves)

Data Epoch Rate - 0.2 seconds (20HZ) at the GS18 Rover; 1 second at the GS18 Base

Satellites: 20-40; **GDOP:** < 2; **Elevation Mask:** 0° at the Rover and Base Station

Ephemeris: Broadcast for RTK vectors.

Weather: Mostly calm clear skies, temperature 65-75° F, no significant weather.

Space Weather: Boulder K Index 1-3 averaging 2 (gauges ionospheric activity on a scale of 0-9; less than 6 preferred)

Equipment: GNSS Base Receiver Unit No. M11, Operator: M. McGee, PLS; Occupied Base Station

 Receiver Make & Model: Leica GS18 with integrated Antenna; Mount: Tripod & Tribrach

 GNSS Rover Receiver Unit No. M10, Operator: M. McGee, PLS

 Receiver Make & Model: Leica GS18T with integrated Antenna; Mount: Fixed Height Pole #4

Processing & Adjustments: Leica Infinity v4.0 and "Starnet-PRO" version 11.0.6 Software

Prior to 2019, geodetic grade GNSS receivers collected static satellite signal data for post processing. The instrumentation was upgraded in 2020 to a Leica GS18 Base with a GS18T RTK Rover operating in real-time with an FM radio system which utilizes the latest technology to deliver increased productivity and precision of point positions. The GS18 receiver incorporates an Inertial Measurement Unit and tracks four Global Navigation Satellite Systems (GNSS): GPS, GLONASS, Galileo and Beidou Satellites. The differences in two measured vectors are acceptable if they fall within 0.03 feet (1 cm) horizontally; otherwise, additional measurements are usually obtained with some exceptions. Experience has shown the independent measurements generally agree on average about 0.02 feet when referenced to a local base receiver.

ADJUSTMENTS & ANALYSIS

Network Adjustment: A minimally constrained adjustment is utilized to develop NAD83 (2007) 2007.00

Epoch Zone 5 State Plane Coordinates and NAVD88 Heights of the monitoring points. The NAVD88 orthometric heights (elevations) are determined by combining the measured ellipsoid heights with the Geoid 03 Model. Previously, Point AB02 was fixed, and the stability verified relative to PVE3RP which is 1.5 to 3 miles westerly and outside the influence of the land movements. AB02 is expected to be stable and unaffected by the land movement; however, due to the substantially increased rates of movement resulting in dynamically differential movements the process was modified as noted above to assure accurate positions. This was accomplished by computing daily positions on the Base Station AB73 (AB731, AB732, AB733, AB734, AB735) relative to the reference frame fixed at station PVE3 noted above. Listed here are the differences.

ID	Differences in Feet		
	dN	dE	dZ
PVE3	0.000	0.000	
AB02	-0.022	-0.008	0.000
PVE3RP	-0.010	-0.003	-0.055
PVHS	-0.035	0.003	

Fixed Horizontal, CGPS Station at City Hall
Fixed Elevation & Horizontal Check
Closure Check from PVE3 to AB73 to PVE3RP at City Hall
Horizontal Check on CGPS Station 2 Miles North of PB

Comments: Fixing the CGPS station PVE3 finds the differences at CGPS Station PVHS, Reference Point PVE3RP and Monitoring point AB02 are insignificant measurement noise. Given that AB02, PVE3RP, PVE3 and PVHS are in good relative agreement, the survey reference frame is deemed stable and successfully recovered from which local land movements were determined.

ACCURACY STATEMENTS

Vector Residuals: In this Initial Survey, the two-dimensional vector residuals averaged 0.012 feet and the absolute value of the vertical residuals averaged 0.02 feet as listed below. The vector residuals are based on a network adjustment of independent point positions.

Vector Lengths (ft)		Two Dimensional Residuals			Absolute Vertical Residuals		
Vary	Average	Average	Std.Dev.	Maximum	Average	Std.Dev.	Range
131-16391	3792	0.012	0.006	0.029	0.02	0.02	-0.03 to +0.08

Movement Accuracy: A point is deemed to have moved if, at the 95% level of confidence the horizontal movement (signal) of a point between two epochs is greater than the 95% Error (noise). Based on multiple independent occupations, the horizontal (2D) movements reported between October 2022 (M34) and October 2023 (M38) statistically attained a relative average accuracy of 0.014 feet at the 95% Level of Confidence with a Standard Deviation of 0.004 feet and a Range of 0.01 to 0.03 feet. See the attached file “PB MOVEMENT DATA POSTINGxlsx” for movements and coordinates.

Table of 2D & Vertical Movements for 12.0 Months October 10, 2022 (M34) & October 10, 2023 (M38)

Listed below are the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See the attached spreadsheet “PB MOVEMENT DATA POSTING.....xlsx”. Note: The horizontal measured movement confidence is estimated at +/-0.02' (1/4"); therefore, movements of less than 0.03' are statistically indeterminate. The estimated vertical measured movement confidence is +/-0.05'.

* = Control Point for Recovery of the Reference Frame.

Point ID	Azimuth°	Horizontal Movement	Vertical Movement	Point ID	Azimuth°	Horizontal Movement	Vertical Movement
AB01	244	0.06	0.0	KC02	196	1.99	0.1
AB02	201	0.02	0.0	KC05	219	0.88	-0.1
AB04	223	4.80	-0.6	KC06	253	1.34	-0.5
AB05	231	3.51	-0.6	KC07	256	0.02	0.0
AB13	198	2.48	-0.6	KC13	193	0.70	0.1
AB16	191	1.20	0.0	KC14	259	0.12	-0.1
AB17	187	0.06	0.0	KC15	233	1.36	-0.4
AB20	199	3.06	-0.1	KC16	251	0.03	0.0
AB24	198	2.68	0.0	KC17	222	1.24	-0.3
AB50	236	1.99	0.2	KC18	202	2.86	-0.3
AB51	202	2.05	-0.2	PB04	203	3.62	-0.3
AB53	192	2.75	-0.4	PB06	200	3.35	-0.3
AB57	169	2.37	-0.7	PB07	201	3.85	-0.1
AB58	183	2.22	-0.4	PB08	201	3.61	0.0
AB59	186	3.17	-0.8	PB09	198	3.49	-0.1
AB60	204	2.69	-0.3	PB12	200	4.67	-0.3
AB62	203	3.73	-0.4	PB13	201	3.83	0.1
AB63	207	3.58	-0.9	PB18	187	3.51	-0.5
AB64	155	0.35	-0.1	PB20	199	4.23	-0.4
AB65	167	1.49	-0.3	PB21	195	3.93	-0.6
AB66	196	2.29	-0.5	PB26	192	3.94	-0.4
AB67	180	1.12	-0.2	PB27	195	4.18	-0.8
AB68	193	2.03	-0.6	PB29	200	4.02	-1.0
AB70	203	2.97	-0.1	PB54	196	3.39	-0.2
AB71	158	1.76	-0.6	PB55	199	3.86	-0.8
AB73	203	3.00	-0.3	PB59	199	4.11	-0.6
CR07	171	1.87	-1.6	PB67	194	5.93	-0.8
CR50	225	0.11	-0.1	PB68	202	3.49	-0.1
CR51	223	0.08	0.0	PB69	202	3.91	-0.3
CR53	231	0.21	0.0	PB70	207	3.58	-0.8
FT06	192	3.66	-1.7	PB71	198	3.65	-0.4
FT08	257	0.06	0.0	UB02	189	4.17	0.3
FT09	271	0.08	-0.1	*PVE3RP	195	0.01	0.0

October 10, 2022 to October 10, 2023 Movement Distances (Feet) & Directions as Indicated

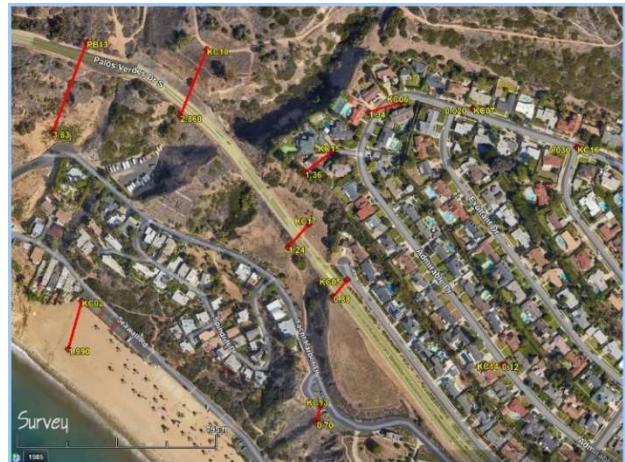
Note: Distances are exaggerated x 100 for viewing



Enlargement (PVDS)



Enlargement (Seaview)



MONITORING POINT MONUMENT NOTES & STATUS

See the May 2022 Survey Report for prior monument notes.

2023: 16 points added to the monitoring program as listed below. AB20 destroyed after October 2023 Survey and replaced by AB21. All other Point Descriptions are listed in prior Reports

MONITORING POINT MONUMENT DESCRIPTIONS

California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and NAVD88 Datums are listed in the attached spreadsheet file "PB MOVEMENT DATA POSTING....".

Point Description

Points added in July and October 2023

AB21	2"	Punched GIP in "Cable Box", Replaced AB20 after Oct. 2023 survey
PB72	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
PB73	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
PB74	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
PB75	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
CR54	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
CW05	Found 1/2" x 48"	Punched Rebar in Concrete Collar set June 2022 for CalWater
CW06	Found 1/2" x 48"	Punched Rebar in Concrete Collar set June 2022 for CalWater
CW07	Found 1/2" x 48"	Punched Rebar in Concrete Collar set June 2022 for CalWater
CW08	Found 2"	Mag nail in Concrete Base of 3' Bollard set June 2022 for CalWater
KC19	2"	Mag Nail Drilled in a Concrete Curb on South side of Dauntless Dr.
KC20	2"	Mag Nail Drilled in a Concrete Curb on West side of Excelsior Dr.
KC21	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
KC22	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
KC23	2"	Mag Nail Drilled in a Concrete Curb on South side of Admirable Dr.
KC24	2"	Mag Nail Drilled in the Southwest Corner of a Concrete Vault, KC02 planned replacement
RP01	Check Point at Trump Golf Course	established in July 2023 for verifying the recovery of a stable reference frame. Point is the top open part of the "B" on the south side of the rim of a manhole on the south side of PVDS at Conqueror Dr.

Addendum No. 1 Report

Portuguese Bend Land Movement Monitoring Survey **Early Winter Full Monitoring Survey No. M39 - January 13, 2024**

A special Portuguese Bend Full Monitoring Surveys (M39) was requested by the City in January 2024. The average date of the survey is January 13, 2024, 3.1 months after the October 10, 2023 Initial Monitoring for 2023-2024 reported above. The M39 survey included 79 monitoring points representing the present full network. A central base station (usually occupying AB73) was not feasible due to the excessive rate of land movement and reliance was made on the remote Smartnet RTN Stations which resulted in a lesser accuracy. For this survey, this was not an issue since the signal (measured movement) was much greater than the noise of the measurements expected to be less than 0.05'. A typical minimally constrained adjustment, as described above for M38, was processed for M39 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights.

The horizontal (2D) vector residuals averaged 0.03 feet with a Standard Deviation of 0.02 feet. The absolute value of the vertical residuals averaged 0.04 feet with a Standard Deviation of 0.04 feet. At the 95% Level of Confidence, estimated accuracy of the horizontal (2D) movements is 0.05 feet.

ADJUSTMENTS & ANALYSIS

The network adjustment fixed point PVE3RP (an indirect fix on PVE3) and checked to other points found to be stable. Differences from the known fixed positions to the measured positions in this survey are listed here with their north, east and vertical components in feet. The successful recovery of a stable reference frame (coordinate system) is confirmed.

Differences in Feet				
ID	dN	dE	dZ	
PVE3RP	0.00	0.00	0.00	Fixed Reference at City Hall
AB02	0.01	0.01	-0.05	Check Point at Portuguese Point
RP01	-0.01	0.01	0.05	Check Point at Trump Golf Course

Table of 2D & Vertical Movements for 3.1 Months October 10, 2023 (M38) & January 13, 2024 (M39)

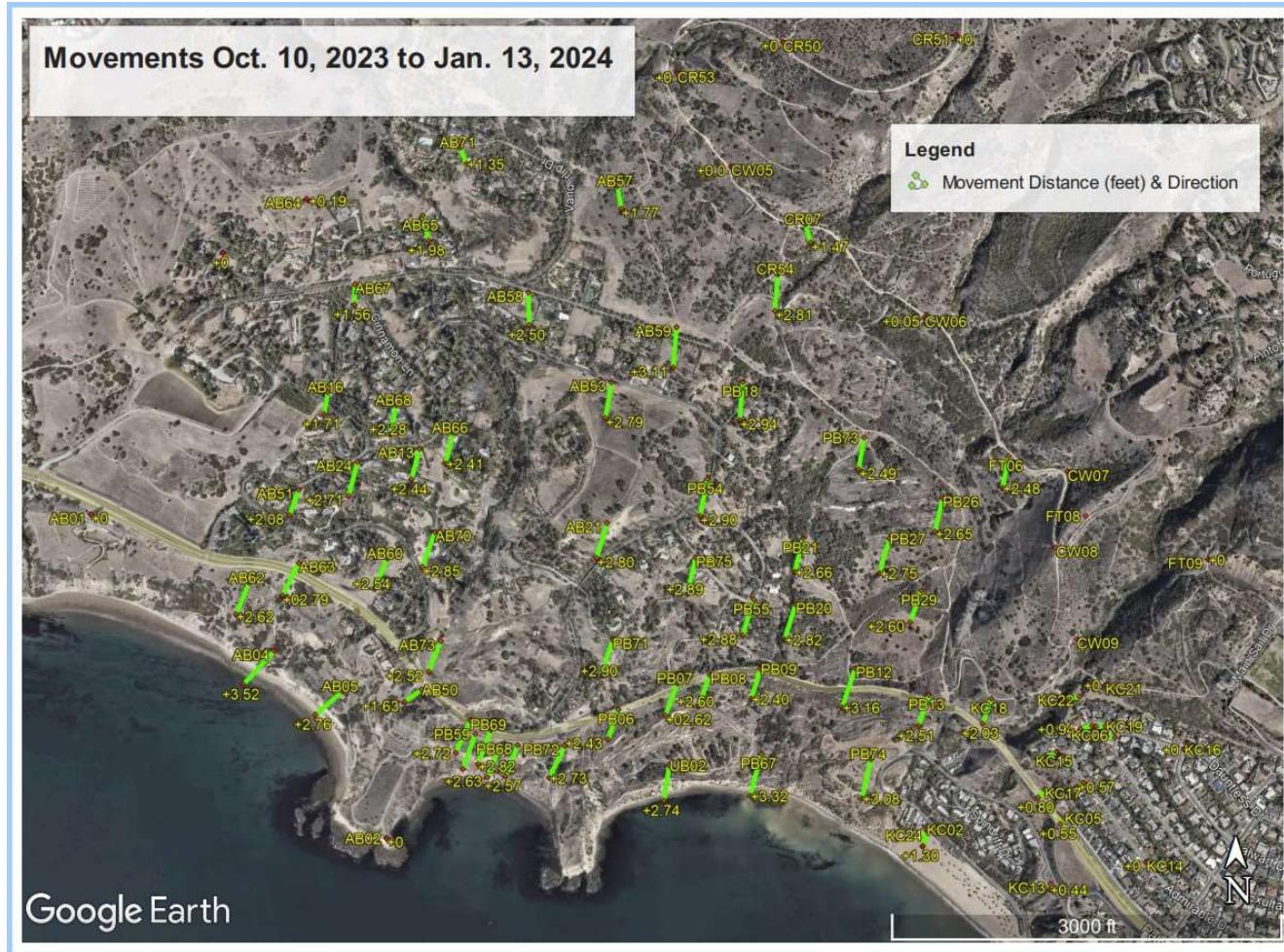
Listed below are the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See the

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attached spreadsheet “PB MOVEMENT DATA POSTING (Revised 012224) 2007-Jan2024.xlsx”. Note: The horizontal measured movement confidence is estimated at +/-0.04’ (1/2”); therefore, indicated movements of less than 0.05’ are statistically indeterminate. The estimated vertical measured movement confidence is +/-0.08’.
* = Control Point for Recovery of the Reference Frame.

Point ID	Azimuth°	Horizontal Movement	Vertical Movement		Point ID	Azimuth°	Horizontal Movement	Vertical Movement
AB01	23	0.01	-0.1		KC13	188	0.44	0.0
AB02	27	0.01	0.0		KC14	262	0.03	0.0
AB04	223	3.52	-0.4		KC15	233	0.91	-0.3
AB05	230	2.76	-0.4		KC16	88	0.02	0.0
AB13	195	2.44	-0.4		KC17	218	0.80	-0.3
AB16	190	1.71	-0.1		KC18	200	2.03	-0.3
AB17	118	0.03	0.0		KC19	269	0.74	-0.2
AB21	197	2.80	0.1		KC20	277	0.67	-0.2
AB24	195	2.71	0.0		KC21	92	0.04	0.0
AB50	234	1.63	0.0		KC22	255	1.07	-0.5
AB51	200	2.08	0.0		KC23	237	0.57	-0.3
AB53	190	2.79	-0.3		KC24	199	1.22	-0.1
AB57	170	1.77	-0.5		PB04	202	2.63	0.0
AB58	179	2.50	-0.4		PB06	200	2.43	-0.2
AB59	185	3.11	-0.8		PB07	201	2.62	0.0
AB60	204	2.54	-0.2		PB08	201	2.60	0.0
AB62	203	2.62	-0.3		PB09	197	2.40	-0.1
AB63	207	2.79	-0.8		PB12	199	3.16	-0.3
AB64	128	0.19	0.0		PB13	199	2.51	0.0
AB65	167	1.98	-0.6		PB18	185	2.94	-0.5
AB66	193	2.41	-0.4		PB20	198	2.82	-0.3
AB67	181	1.56	-0.3		PB21	194	2.66	-0.5
AB68	191	2.28	-0.4		PB26	193	2.65	-0.2
AB70	200	2.85	-0.2		PB27	196	2.75	-0.5
AB71	158	1.35	-0.4		PB29	200	2.60	-0.7
AB73	202	2.52	-0.1		PB54	192	2.90	0.0
CR07	164	1.47	-1.2		PB55	198	2.88	-0.5
CR50	37	0.04	0.0		PB59	200	2.86	-0.3
CR51	107	0.04	0.2		PB67	195	3.32	-0.3
CR53	180	0.02	0.1		PB68	202	2.57	0.0
CR54	185	2.81	-0.9		PB69	201	2.82	-0.1
CW05	185	0.02	0.1		PB70	204	2.72	-0.3
CW06	59	0.05	0.1		PB71	197	2.90	0.0
FT06	191	2.48	-1.1		PB72	206	2.73	0.3
FT09	148	0.02	0.2		PB73	190	2.49	-0.4
KC02	193	1.30	0.0		PB74	193	3.08	-0.4
KC05	215	0.55	0.0		PB75	193	2.89	-0.1
KC06	256	0.94	-0.4		UB02	189	2.74	0.2
KC07	135	0.01	0.0	*PVE3RP	0	0	0.1	

October 10, 2023 to January 13, 2024 Movement Distances (Feet) & Directions as Indicated
Note: Movement distances exaggerated 100x for viewing



Enlargement (PVDS)



Enlargement (Seaview)



ASSESSMENT of MOVEMENT VELOCITIES & ACCELERATIONS 2014 to 2024

Others performed monitoring surveys of the Portuguese Bend land movement between 1994 and 2006. McGee Surveying Consulting assumed responsibility and defensibility for the Portuguese Bend Monitoring Program in 2007. The annual measured movements between 2007 and 2018 were fairly small and stable as shown below by the averages and maximums of a sampling of points for the 2014-2018 period. The fall 2019 monitoring survey found the annual rate of movements (velocities) increased (accelerated) about 4 to 6 times and remained stable for the next four years through 2022. A “year” here is defined as the 12-month period beginning with the rainy season on October 1st.

Annual Average Movements in Feet, Maximum Movements & Change in the Average of a Sample of Points

ID	2014-2018 (4 Yrs)		2018-2022 (4 Yrs)		Change in Average
	Average	Max.	Average	Max.	
AB20	0.09	0.20	0.48	0.54	+5X
AB53	0.07	0.18	0.43	0.49	+6X
AB68	0.05	0.11	0.31	0.32	+6X
CR07	0.06	0.13	0.30	0.32	+5X
KC06	0.04	0.09	0.16	0.22	+4X
PB55	0.89	1.31	0.89	1.23	+1X (No Change)

In the following twelve months between October 2022 and October 2023, the annual rate of movements were found to have again accelerated. The table below shows a sample of points within Abalone Cove (AB), Klondike Canyon (KC) and Portuguese Bend (PB). The left half of the table compares the annual movements and rate of movements per month for the October 2021 to October 2022 with the October 2022 to October 2023 period. The annual rate of movement for the sample averages in each slide increased about 6x for AB, 8x for KC and 5x for PB.

In the same 12-month period between October 2022 and October 2023, accelerations were noted in the first seven months over the previous year and again in the last five months over the previous seven months as shown in the right half of the table below. The average rate of movement in each slide for these samples in the first seven months October 2022 through April 2023 increased about 3x for AB, 4x for KC and 2x for PB over the previous 12-month period of October 2021 to October 2022. The average rate of movements in each slide for the samples in the last five months May 2023 to October 2023 increased 4x for AB, 4x for KC and 3x for PB over the previous seven months.

October 2021 to October 2023 Movements & Rates per Month (Feet)								
Point	M32 > M34 (12 Mo.)		M34 > M38 (12 Mo.)		M34 > M36 (7 Mo.)		M36 > M38 (5 Mo.)	
	Oct '21 > Oct '22	Oct '22 > Oct '23	Oct '22 > May '23	May '22 > Oct '23	Movement	Rate/Mo	Movement	Rate/Mo
	Movement	Rate/Mo	Movement	Rate/Mo	Movement	Rate/Mo	Movement	Rate/Mo
AB20	0.51	0.042	3.06	0.255	0.84	0.119	2.22	0.444
AB53	0.49	0.041	2.75	0.229	0.74	0.105	2.01	0.403
AB58	0.41	0.034	2.22	0.185	0.60	0.085	1.62	0.325
AB60	0.45	0.038	2.69	0.224	0.80	0.114	1.90	0.379
AB67	0.18	0.015	1.12	0.094	0.32	0.046	0.80	0.160
AB68	0.32	0.027	2.03	0.169	0.54	0.077	1.49	0.299
AB70	0.48	0.040	2.97	0.248	0.84	0.120	2.14	0.427
CR07	0.31	0.026	1.87	0.156	0.44	0.062	1.43	0.287
Av Move	0.39	0.033	2.34	0.195	0.64	0.091	1.70	0.340
KC06	0.16	0.014	1.34	0.111	0.33	0.047	1.01	0.202
KC13	0.09	0.007	0.70	0.058	0.19	0.027	0.51	0.102
KC17	0.14	0.012	1.24	0.104	0.31	0.044	0.93	0.187
Av Move	0.13	0.011	1.09	0.091	0.27	0.039	0.82	0.163
PB55	0.80	0.067	3.86	0.321	1.06	0.151	2.80	0.560
PB70	0.72	0.060	3.58	0.299	1.14	0.163	2.44	0.488
Av Move	0.76	0.063	3.72	0.310	1.10	0.157	2.62	0.524

Movement & Rate of Movement per Month

In the last 3-month period October 10, 2023 to January 13, 2024, accelerations were noted again relative to the previous 12-months. The average rate of movements in each slide for the last 3-months for these samples increased about 4x for AB, 3x for KC and 3x for PB over the previous 12-month period of October 2022 to October 2023.

Point	M38 > M39 (3.1 Mo.)	
	Oct. 10, 2023 to Jan. 13, 2024	Movement
AB20	2.80	0.90
AB53	2.79	0.90
AB58	2.50	0.81
AB60	2.54	0.82
AB67	1.56	0.50
AB68	2.28	0.73
AB70	2.85	0.92
CR07	1.47	0.47
Average	2.35	0.76
KC06	0.94	0.30
KC13	0.44	0.14
KC17	0.80	0.26
Average	0.73	0.24
PB55	2.88	0.93
PB70	2.72	0.88
Average	2.80	0.90

RECOMMENDATION

Continuity in the methods, precision and reporting of the monitoring surveys are necessary to evaluating results relative to and consistent with prior 2007-2024 monitoring survey campaigns. Monitoring survey campaigns require the services of an independent GNSS/Geodetic expert to evaluate and validate results to assure program integrity and defensibility.

Maintaining a clearing of foliage in a 10' radius around monitoring points and trimming nearby trees and brush above eye height is necessary to assure a clear view of the sky for tracking satellites. Satellites, although unseen, can appear anywhere in the sky above the horizon and the radio signals passing through foliage degrade the required survey accuracy and productivity. Points AB04, AB13, AB17, AB24, AB51, AB58, AB66, PB18, PB54, PB55, CR51 and CR53 have foliage obstructions limiting sky (satellite) visibility and require clearing to facilitate accurate results of the surveys.

Addendum No. 2 Report

Portuguese Bend Land Movement Monitoring Survey Partial Monitoring Survey No. M40 – March 8, 2024

This is the mid-winter Partial Monitoring Survey No. M40 Report. The average date of the survey is March 8, 2024, 1.8 months after the January 13, 2024 Full Monitoring Survey. The survey included 44 monitoring points and 3 reference control points. Occupying a central base station (usually AB73) was not feasible due to the excessive rate of land movement and reliance was made on the remote Smartnet RTN Stations which resulted in a lesser accuracy. For this survey, this was not an issue since the signal (measured movement) was much greater than the noise of the measurements expected to be about less than 0.05'.

ADJUSTMENTS & ANALYSIS

A typical minimally constrained network adjustment, as described above for survey M38, was processed for M40 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. The adjustment fixed point PVE3RP and checked to other points expected to be and found stable. Differences from the known fixed positions to the measured positions in this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	0.00	0.00	0.00
AB02	0.02	0.01	-0.09
RP01	0.00	0.02	-0.10

Fixed Reference at City Hall
Check Point on Portuguese Point
Check Point at Trump Golf Course

The successful recovery of a stable horizontal reference frame confirmed. The Z height variations are attributed to the noise in the Smartnet Network solution. RP01 is intended to replace AB02.

2D Horizontal & Vertical Movements for 1.8 Months January 13, 2024 (M39) to March 8, 2024 (M40)

The general rate of land movement increased significantly over the January 13, 2024 survey assessment. See the attached spreadsheet “PB MOVEMENT DATA POSTING.... .xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average month.

Accuracy Statements

The horizontal (2D) vector residuals averaged 0.04 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals averaged 0.04 feet with a Standard Deviation of 0.03 feet.

At the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be less than 0.04'. Movements of less than 0.05' are statistically indeterminate. The estimated vertical measured movement confidence is 0.06' to 0.09'.

Addendum No. 3 Report

Portuguese Bend Land Movement Monitoring Survey Partial Monitoring Survey No. M41 – April 17, 2024

This is the Spring Partial Monitoring Survey No. M41 Addendum Report. The field survey took place April 16-18, 2024, average date of April 17, 2024, 1.35 months after the last March 8, 2024 Monitoring Survey. The survey included 55 monitoring points and 3 reference control points. Eleven new monitoring points were set and surveyed. The location of two new points were identified and will be surveyed on the next campaign in late May after the monuments are set by others. See the points descriptions below.

Occupying previous base stations was not feasible due to the excessive rate of land movement. The Smartnet RTN Network does not require a base station but results in a somewhat lesser accuracy. Smartnet may be used in the future; however, it was deemed beneficial to establish a new base station outside the slide complex to facilitate future surveys. A new base station point “RP02” was set westerly of the slide complex and north of Abalone Cove Park.

ADJUSTMENTS & ANALYSIS

A typical minimally constrained adjustment, as described above for the M38 survey, was processed for M41 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point PVE3RP to establish a position on the base at RP02 and thereby all other points in the survey. A check to RP01 easterly outside the slide complex was made as noted below.

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This process will be the standard on future surveys. Differences from the known fixed positions to the measured positions in this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	0.00	0.00	0.00
RP01	-0.01	0.00	-0.03

Fixed Reference at City Hall
Check Point at Trump Golf Course

The successful recovery of a stable horizontal reference frame is confirmed. Point AB02 replaced by RP01, was used in previous surveys to also confirm recovery of the reference frame has limited access do to the slides.

2D Horizontal & Vertical Movements for 1.35 Months March 8, 2024 (M40) to April 17, 2024 (M41)

The general rate of land movement increased significantly over the March survey. On average the velocities increased 76% with a maximum of 143%. Eight points doubled their velocities in the last six weeks over the previous eight weeks. In Abalone Cove and Portuguese Bend Slides many points are moving about three feet per month and in the Seaside Klondike Canyon Slide about $\frac{3}{4}$ of a foot per month. See the attached spreadsheet “PB MOVEMENT DATA POSTING.... .xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average month.

Accuracy Statements

The horizontal (2D) vector residuals averaged 0.04 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals averaged 0.04 feet with a Standard Deviation of 0.03 feet.

The land is moving 0.05' to 0.10' daily. Most points are measured a day apart resulting in large residuals but accurate positions of the mean coordinate. Therefore, it is at estimated the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be less than 0.03'. Movements of less than 0.04' are statistically indeterminate. The estimated vertical measured movement confidence is 0.05' to 0.10'.

Monitoring Point Monument Descriptions

See prior Reports for all other Point Descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING....” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and NAVD88 Datums n

Point Description of Points added in April 2024

AB74	8" Spike set as temporary monument to be replaced with a 2" GIP by others
AB75	8" Spike set as temporary monument to be replaced with a 2" GIP by others
AB76	8" Spike set as temporary monument to be replaced with a 2" GIP by others
AB77	Location identified, 2" GIP to be set by others
CR55	Set Mag Nail drilled in a Concrete walk/valley gutter
CR56	Location identified, 2" GIP to be set by others
KC25	Set Mag Nail drilled in a concrete & rock wall
KC26	Set Mag Nail drilled in a concrete wall
KC27	Set Mag Nail drilled in a concrete 6' fire pit
KC28	Set Mag Nail drilled in a concrete headwall
KC29	Set Mag Nail drilled in a concrete headwall
KC30	8" Spike set as temporary monument to be replaced with a 2" GIP by others
KC31	8" Spike set as temporary monument to be replaced with a 2" GIP by others
RP02	½" x 4' rebar in large sloping meadow with T-bar witness for new base station

Addendum No. 4 Report

Portuguese Bend Land Movement Monitoring Survey
Full Monitoring Survey No. M42 – May 28, 2024

This is Full Monitoring Survey No. 42 Addendum Report. The field survey took place May 27-30, 2024, with an average date of May 28, 2024, 1.35 months after the last April 17, 2024 Partial Monitoring Survey. The survey included 93 monitoring points and 3 reference control points. Two new monitoring points (AB77 & CR56) were

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set and surveyed. Seven temporary monuments were reset with a permanent monument. Monuments CW01, CW07 and CW08, set in 2022 for CalWater, were adopted for the purpose of these surveys. See the point descriptions below.

There are 14 monitoring points in the upper portion of the Reserve which are now difficult and time consuming to access due to the slides. An assistant provided by sub-contractor Chris Nelson & Associates (CNA) has been assigned these locations beginning with this May survey. CNA conducted their survey measurements with a Trimble R12 referenced to the Smartnet RTN for positioning. These monitoring point observations were referenced to the RPV Portuguese Bend network by way of connections to RP01, RP02 & PVE3RP. In the late June survey, CAN will be using Leica instrument similar to those used by McGee Surveying Consulting to assure the highest precision and increased productivity.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment, as described above for the above M38 Survey Report, was processed for M42 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point PVE3RP to establish a position on the base at RP02 and thereby all other points in the survey. A check to RP01 easterly outside the slide complex and other nearly stable points were made as noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	-0.00	-0.00	-0.00
RP01	-0.00	0.01	-0.01
RP02	-0.03	0.02	-0.01
AB02	0.00	-0.02	0.09

The successful recovery of a stable reference frame is confirmed. Point RP01 is intended to supersede AB02 used in previous surveys to confirm recovery of the reference frame. AB02 now has limited access do to the slides. Additionally, California Spatial Reference Center CGPS (Continous Operating GPS Stations) PVE3 and PVHS are incorporated from time to time to verify the stability of the refence frame.

2D Horizontal & Vertical Movements for 1.35 Months April 17, 2024 (M41) to May 28, 2024 (M42)

The general rate of land movement increased in the last six weeks over the April survey. On average the velocities increased about 40% which is an increased rate of movement; however, the rate of acceleration is less than the estimated average of 76% in the previous six weeks. See the attached spreadsheet "PB MOVEMENT DATA POSTING.... .xlsx" for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

The rate of land movement varies and is as much as 0.12' daily. It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be 0.04-0.06'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is 0.05' to 0.10'.

Monitoring Point Monument Descriptions

See prior Reports for all other Point Descriptions. See the attached spreadsheet file "PB MOVEMENT DATA POSTING...." for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and NAVD88 Datums n

Addendum No. 5 Report

Portuguese Bend Land Movement Monitoring Survey **Full Monitoring Survey No. M43 – July 1, 2024**

This is Full Monitoring Survey No. 43 Addendum Report. The field survey took place June 30, 2024 to July 3, 2024 with an average date taken as July 1, 2024, 1.12 months after the last May 28 Monitoring Survey. The survey included 93 monitoring points and 3 reference control points.

14 monitoring points in the upper portion of the Reserve require about three miles of hiking to access due to the slides. An assistant provided by sub-contractor Chris Nelson & Associates (CNA) is assigned these locations. A loaner GS18 Leica instrument same as used by McGee Surveying Consulting (MSC) and connected to MSC's RTK base station is utilized to assure the highest precision and increased productivity.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment, as described above for the above M38 Survey Report, was processed for M43 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point PVE3RP to verify the position on the base at RP02 and thereby all points in the survey. A check to RP01 easterly outside the slide complex, AB02 and other nearly stable points were made as noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

Differences in Feet			
ID	dN	dE	dZ
PVE3RP	-0.00	-0.00	-0.00
RP01	+0.01	-0.01	-0.00
RP02	-0.03	0.02	-0.01
AB02	-0.01	-0.02	+0.03
PVE3	+0.01	+0.00	-0.11

Fixed Reference at City Hall

CSRC CGPS Station at City Hall

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Because AB02 has limited access do to the slides, Point RP01 is intended to supplement AB02 used in previous surveys to confirm recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continous Operating GPS Stations) PVE3 and PVHS are incorporated to verify the stability and recovery of the refence frame.

2D Horizontal & Vertical Movements for 1.12 Months M42 to M43

The rate of land movement varies and averages about 3 feet per average month with a maximum of 4.88 feet. The general rate of land movement increased about 25% on average; however, the rate of acceleration is less as indicated by the estimated average increase of 41% in the rate of land movement in the previous month. See the attached spreadsheet "PB MOVEMENT DATA POSTING.... .xlsx" for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

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It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be 0.04-0.06'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is 0.05' to 0.10'.

Monitoring Point Monument Descriptions

See prior Reports for Point Descriptions. See the attached spreadsheet file "PB MOVEMENT DATA POSTING...." for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Point Description: Update of Points set in April & May

AB74	1/2" x 4' rebar encased in concrete witnessed by a steel t-bar post
AB75	1/2" x 4' rebar encased in concrete witnessed by a steel t-bar post
AB76	1/2" x 4' rebar encased in concrete witnessed by a steel t-bar post
AB77	1" x 24" GIP with cap "Control Point" encased in concrete witnessed by a steel t-bar post
CR56	1" x 24" GIP with cap "Control Point" encased in concrete witnessed by a steel t-bar post
CW07	1/2" x 4' punched rebar in concrete with T-bar witness post
CW08	1/2" x 4' punched rebar in concrete with T-bar witness post
KC30	1/2" x 4' rebar encased in concrete witnessed by a steel t-bar post
KC31	8" spike set between two steel posts in line with a string of boulders
KC32	Temporary reference to KC31, took west side of chain link fence post south of PVDS
KC33	Found 1.5" GIP for Property Corner on top of dyke
RP02	1/2" x 4' punched rebar in concrete in large sloping meadow witnessed by a steel T-bar post

Addendum No. 6 Report

Portuguese Bend Land Movement Monitoring Survey
Full Monitoring Survey No. M44 – August 1, 2024

This is Full Monitoring Survey No. 44 Addendum Report. The field survey took place July 30, 2024 to August 3, 2024 with an average date taken as August 1, 2024, 1.02 months after the last July 1 Monitoring Survey. The survey included 98 monitoring points and 3 reference control points (RP01, RP02, PVE3RP & AB02).

Many of the monitoring points in the upper portion of the Reserve require substantial hiking for access due to the slides. An assistant provided by sub-contractor Chris Nelson & Associates (CNA) is assigned these locations.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment, as described above for the above M38 Survey Report, was processed for M44 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point PVE3RP to verify the position at the base station point RP02 and thereby all points in the survey. A check to RP01 easterly outside the slide complex, AB02 and other nearly stable points were made as noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

Differences in Feet				
ID	dN	dE	dZ	
PVE3RP	-0.00	-0.00	-0.00	Fixed Reference at City Hall
RP01	0.03	-0.03	0.01	Check Point
RP02	-0.00	0.01	0.07	Base Station
AB02	-0.01	0.00	0.07	Check Point
AB17	0.00	0.00	0.05	Point Historically Not Moving
CW01	0.01	0.02	0.11	Point Historically Not Moving
KC16	0.00	0.01	0.10	Point Historically Not Moving

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Because AB02 has limited access do to the slides, Point RP01 is

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intended to supplement AB02 used in previous surveys to confirm recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continous Operating GPS Stations) PVE3 and PVHS are incorporated at times for additional verification of the stability and recovery of the refence frame.

2D Horizontal & Vertical Movements for 1.02 Months M43 to M44

The rate of land movement varies and averaged about 2.8 feet per average month in the last period with a maximum of 4.69 feet per month. The general change in the rate of land movement (velocity) slowed and varied from about -13% to +13% and averaged nearly zero. See the attached spreadsheet “PB MOVEMENT DATA POSTING.... .xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be 0.04'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10'.

Monitoring Point Monument Descriptions

See prior Reports for Point Descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING....” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Points AB71 and CR07 destroyed since the last monitoring survey by slides and construction.

Point Description: Update of Set Points

AB78	2" Magnetic Nail drilled in a concrete curb on the N. side of Vanderlip Dr., replaced AB71
CR57	½" x 4' punched rebar in concrete with T-bar witness post, replaces CR07
KC34	2" Magnetic Nail set in Stalwart Dr. East of Schooner Dr.
KC35	2" Magnetic Nail set in Xn of Schooner & Stalwart Dr.
KC36	2" Magnetic Nail set in Xn of Schooner & Admirable Dr.
KC37	Punch mark on north side Sewer MH in Admirable Dr. East of Schooner Dr.

Addendum No. 7 Report

Portuguese Bend Land Movement Monitoring Survey **Full Monitoring Survey No. M45 – September 4, 2024**

This is Full Monitoring Survey No. 45 Addendum Report. The field survey took place September 3, 2024 to September 6, 2024 with an average date taken as September 4, 2024, 1.12 months after the last Monitoring Survey. The survey included 102 monitoring points and 3 reference control points (RP01, RP02, PVE3RP & AB02).

Many of the monitoring points in the upper portion of the Reserve require substantial hiking for access due to the slides. An assistant provided by sub-contractor Chris Nelson & Associates (CNA) is assigned these locations.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M45 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was

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fixed at point PVE3RP to verify the position at the base station point RP02 and thereby all points in the survey. A check to RP01 easterly outside the slide complex, AB02 and other nearly stable points were made as noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

Differences in Feet				
ID	dN	dE	dZ	
AB02	-0.02	-0.02	0.00	Check Point
PVE3RP	-0.00	-0.00	-0.00	Fixed Reference at City Hall
RP01	-0.02	0.01	0.05	Check Point
RP02	0.01	0.00	0.02	Base Station

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Because AB02 has limited access do to the slides, Point RP01 is intended to supplement AB02 used in previous surveys to confirm recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for 1.12 Months M44 to M45

The rate of land movement varies and averaged about 2.6 feet per average month in the last period with a maximum of 4.0 feet per month. The general change in the rate of land movement (velocity) slowed and varied from about -25% to +1% and averaged -13%. See the attached spreadsheet “PB MOVEMENT DATA POSTING...M???.xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements are estimated at 0.04'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10'.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING...M???.xlsx” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Points KC27 and PB73 were destroyed since the last monitoring survey by construction. PB73 was reset nearby as new point PB76. Other new points are reported as follows: AB79, AB80, CR55A (replaces CR55), CR58, CR59, FT10, & KC38 on the offshore uplift. The uplifted area is generally about 11 feet above mean lower low water. Points KC34, KC35, KC36 & KC37 were set last month along and easterly of Schooner to assess if movement was occurring in that area. No movement was detected above the noise level of the measurements.

Point Description: Update of Set Points

AB79	Found L&T on curb of 31&34 San Clemente Dr.
AB80	2" Magnetic Nail drilled into the asphalt road on Santa Catalina Dr.
CR55A	Punch in center of square plastic marker in centerline of Valley View Dr.
CR58	Set 5/8"x 4' rebar/ plastic cap "Control Pt"
CR59	Set 5/8"x 4' rebar/ plastic cap "Control Pt"
FT10	Set 1"x 18" GIP/ plastic cap "Control Pt"
KC38	8" Spike on small bentonite rise in uplift 300' south of old shoreline

Addendum No. 8 Report

Portuguese Bend Land Movement Monitoring Survey Partial Monitoring Survey No. M46 – September 20, 2024

This is Partial Monitoring Survey No. 46 Addendum Report. The field survey took place September 20 2024 0.53 months after the last M45 Monitoring Survey. The survey included 19 monitoring points along PVDS and 4 reference control points (RP01, RP02, RP03 & PVE3RP).

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M46 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point RP02 and a check was made to PVE3RP and RP01 noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet			Reference at City Hall
	dN	dE	dZ	
PVE3RP	0.01	0.00	0.02	Reference at City Hall
RP01	-0.03	0.00	0.02	Check Point
RP02	0.00	0.00	0.00	Fixed Base Station

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for 0.56 Months M45 to M46

The rate of land movement for this sub-set of 19 points along PVDS varies and averaged about 1.9 feet per average month in the last period with a maximum of 2.6 feet per month. The general change in the rate of land movement (velocity) slowed and varied from about -47% to -7% and averaged -27%. See the attached spreadsheet “PB MOVEMENT DATA POSTING...M???.xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements are estimated at 0.04'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10'.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file ‘PB MOVEMENT DATA POSTING...M???.xlsx’ for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Point Description: Update of Set Points

RP03 Set 1/2"x 4' rebar in open field, bears N69-30E 44.37' from RP02 Set as a new reference point to allow for operating a second base station and for a check.

Addendum No. 9 Report

Portuguese Bend Land Movement Monitoring Survey Partial Monitoring Survey No. M47 – September 27, 2024

This is Partial Monitoring Survey No. 47 Addendum Report. The field survey took place September 27, 2024 0.23 months after the last M46 Monitoring Survey. The survey included 19 monitoring points along PVDS and 4 reference control points (RP01, RP02, RP03 & PVE3RP). See the attached spreadsheet “PB MOVEMENT DATA POSTING...M47xlsx” for the movements.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M47 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point RP02 and a check was made to PVE3RP and RP01 noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	0.00	-0.01	0.03
	Reference at City Hall		
RP01	-0.02	0.04	0.00
	Check Point		
RP02	-0.00	-0.00	-0.00
	Check Point		
RP03	0.00	0.00	-0.01
	Fixed Base Station		

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for 0.23 Months M46 to M47

In the “PB MOVEMENT DATA POSTING” spreadsheet, the measured land movements are listed for the period and also for a normalized average month of 30.42 days for comparing the rates of movement for previous periods. This survey included a sub-set of 19 points along PVDS. The movements vary and average about 1.4 feet with a maximum of 2.2 feet for an average month. The change in the rate of land movement (velocity) over the previous period slowed and varies from about -55% to -15% averaging about -30%. The attached spreadsheet “PB MOVEMENT DATA POSTING M47xlsx” lists the movement azimuths (directions clockwise from north) in degrees, the two-dimensional horizontal movements, and vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period normalized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical vector residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

Between two surveys, the accuracy of the measured horizontal (2D) movements is estimated, at the 95% Level of Confidence, at $0.04'$. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about $0.05'$ to $0.10'$ depending on obstructions to satellite signals. For the movements normalized to an average month, the estimated confidence interval is inversely proportional to the period (portion of the month). For example, $1 / 0.23 \text{ mo.} = 4.35 * 0.04' = 0.17'$. “Deflection Analysis” is an alternate method for estimating the confidence interval which is estimated at $-0.19'$ to $+0.20'$.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING...M??” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Addendum No. 10 Report

Portuguese Bend Land Movement Monitoring Survey Full Monitoring Survey No. M48 – October 8, 2024

This is Full Monitoring Survey No. 48 Addendum Report. The field survey took place October 7-10, 2024, 1.12 months after M45 the last Full Monitoring Survey. The survey included 105 monitoring points and 4 reference control points (RP01, RP02, RP03 & PVE3RP). See the attached spreadsheet “PB MOVEMENT DATA POSTING M--xlsx” for the movements. Partial surveys of 19 points along PVDS were published as M46 and M47 as listed in the spreadsheet. The report for M45 to M48 is addressed here and in the spreadsheet.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M48 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point RP02 and a check was made to PVE3RP, RP01 and RP03 noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	0.00	0.00	0.02
RP01	-0.02	0.00	0.05
RP02	-0.00	-0.00	-0.00
RP03	0.00	0.00	0.02

Reference at City Hall
Check Point
Fixed Base Station
Check Point

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for M45 to M48

In the attached “PB MOVEMENT DATA POSTING...” spreadsheet, the measured land movements are listed for the period and also for a normalized average month of 30.42 days for comparing the rates of movement for previous periods. This survey included 105 points. For the stated period, the normalized movements vary and average about 1.5 feet with a maximum of 2.6 feet for an average month. The change in the rate of land movement (velocity) over the previous period slowed and varies from about -63% to -19% averaging about -41%. The attached spreadsheet “PB MOVEMENT DATA POSTING... .xlsx” lists the movement azimuths (directions clockwise from north) in degrees, the two-dimensional horizontal movements, and vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period normalized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.01 feet with a Standard Deviation of 0.01 feet and range 0.00 to 0.05'. The absolute value of the vertical vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.02 feet, and range -0.06 to +0.08'..

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The accuracy or uncertainty of the measured horizontal (2D) movements between two monitoring surveys is estimated to be 0.04' at the 95% Level of Confidence. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10' depending on obstructions to satellite signals. For the movements normalized to an average month, the estimated confidence interval is inversely proportional to the period (portion of the month). For example, $1 / 0.23 \text{ mo.} = 4.35 * 0.04' = 0.17'$. "Deflection Analysis" is an alternate method for assessing uncertainties.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file "PB MOVEMENT DATA POSTING...M??" for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum

Point Description: Update of Set Points

CR60 Set 1/2"x 4' rebar with plastic cap "Control Point" in open field, northeast of the Ishibashi Trail

Addendum No. 11 Report

Portuguese Bend Land Movement Monitoring Survey **Partial Monitoring Survey No. M49 – October 13, 2024**

This is Partial Monitoring Survey No. 49 Addendum Report. The field survey took place October 13, 2024, 6 days or 0.23 months after the last M48 Partial Monitoring Survey dated October 7, 2024. The survey included 19 monitoring points along PVDS and 4 reference control points (RP01, RP02, RP03 & PVE3RP). See the attached spreadsheet "PB MOVEMENT DATA POSTING...M47xlsx" for the movements.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M49 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point RP02 and a check was made to PVE3RP, RP01 and RP03 noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet			
	dN	dE	dZ	
PVE3RP	-0.01	-0.01	0.06	Reference at City Hall
RP01	-0.02	0.02	-0.01	Check Point
RP02	-0.00	-0.00	-0.00	Check Point
RP03	0.00	0.00	0.02	Fixed Base Station

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for M48 to M49

In the attached "PB MOVEMENT DATA POSTING..." spreadsheet, the measured land movements are listed for the period and also for a normalized average month of 30.42 days for comparing the rates of movement for previous periods. This survey included 19 points and four reference points. For the stated period, the normalized movements vary and average about 0.8 feet with a maximum of 1.7 feet for an average month. The

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change in the rate of land movement (velocity) over the previous period slowed and varies from about -54% to -5% averaging about -22%. The attached spreadsheet “PB MOVEMENT DATA POSTING... .xlsx” lists the movement azimuths (directions clockwise from north) in degrees, the two-dimensional horizontal movements, and vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period normalized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.01 feet with a Standard Deviation of 0.01 feet and range 0.00 to 0.05'. The absolute value of the vertical vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.02 feet, and range -0.06 to +0.08' .

The accuracy or uncertainty of the measured horizontal (2D) movements between two monitoring surveys is estimated to be 0.04' at the 95% Level of Confidence. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10' depending on obstructions to satellite signals. For the movements normalized to an average month, the estimated confidence interval is inversely proportional to the period (portion of the month). For example, $1 / 0.23 \text{ mo.} = 4.35 * 0.04' = 0.17'$. “Deflection Analysis” is an alternate method for assessing uncertainties.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING...M??” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

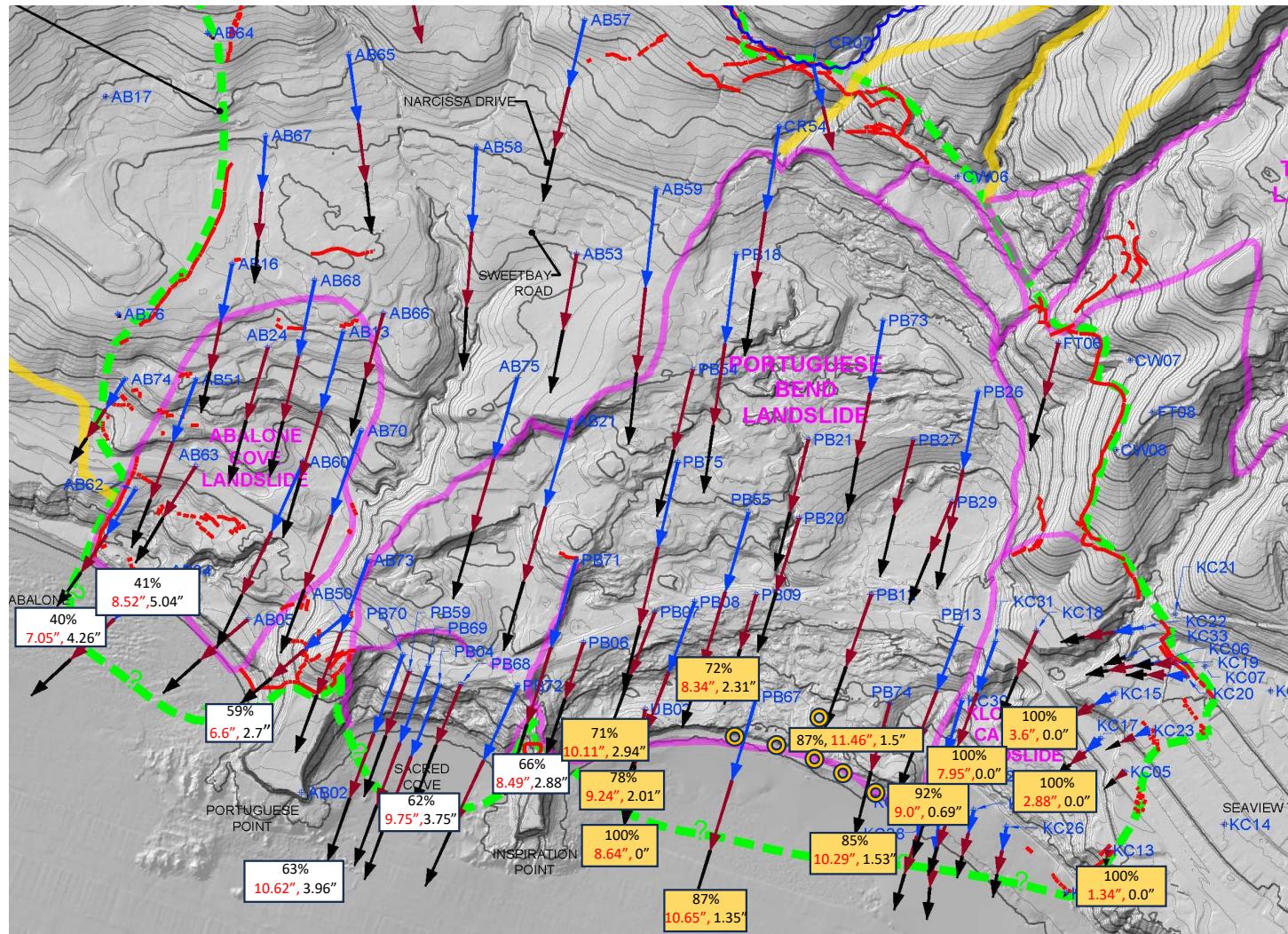
SURVEYOR'S STATEMENT

The M38 Fall October 2023 Full Survey and subsequent 2024 Surveys and Addendum Reports on the procedures, criteria, and results of the City of Rancho Palos Verdes Portuguese Bend Land Movement Monitoring Surveys were prepared by me on October 30, 2023 with updates through October 15, 2024 at the request of Ramzi Awwad, Director of Public Works for the City of Rancho Palos Verdes.


Michael R. McGee, PLS3945



Effect of Deep Dewatering Wells on Land Movement Between 9/4/24 and 10/13/24



PORtUGUESE BEND LANDSLIDE MONITORING - MOVEMENT as of October 13 2024
 Prepared by McGee Surveying Consulting - Document Date: October 14, 2024

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Notes:

PARTIAL PVDS MONITORING #49 (M49)

Monitoring Point Movements

An average month is 30.42 days

* = Indicates no horizontal movement detected in the Period at the 95% level of confidence

\$ = Overall Movement is Relative to the Date of Origin, See Year

Michael R. McGee
 Michael R. McGee, PLS3945



October 13, 2024 Positions														Overall Movements (US Feet)						Periodic Movements M48 to M49 (US Feet)											
Point	NAD83 CA SPC Zone 5			NAVD88			Original Position to October 13, 2024										October 7, 2024 to October 13, 2024 (6 days - 0.197 Mo.)						Rate/Mo								
	North (ft)	East (ft)	Elev(ft)	North	East	Height	Azim. [°]	2D Dist.	Year	North	East	Height	Azim. [°]	2D Dist.	95%Err	Rate/Mo.	Note	% Chg													
AB01	1729427.53	6445709.60	178.69	-0.05	-0.01	0.07	192	0.05	1994	-0.01	0.00	0.03	160	0.01	0.04		*						AB01								
																							AB02								
																							AB04								
																							AB05								
																							AB13								
																							AB16								
																							AB17								
																							AB21								
																							AB24								
AB50	1728070.50	6448229.55	184.02	-14.50	-18.63	2.04	232	23.61	1998	-0.12	-0.13	-0.03	227	0.18	0.04	0.90		-10					AB50								
																							AB51								
																							AB53								
																							AB57								
																							AB58								
																							AB59								
																							AB60								
AB62	1728884.34	6446911.16	140.24	-26.01	-14.30	-2.77	209	29.68	2011	-0.23	-0.16	-0.04	214	0.28	0.04	1.42		-5					AB62								
AB63	1729029.34	6447290.03	171.97	-29.96	-17.01	-8.87	210	34.45	2011	-0.29	-0.16	-0.08	209	0.33	0.04	1.68		-10					AB63								
																							AB64								
																							AB65								
																							AB66								
																							AB67								
																							AB68								
																							AB70								
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																							FT08								
																							FT09								
																							FT10								
																							KC05								
																							KC06								
																							KC07								
KC13	1726576.33	6453068.89	192.05	-4.83	-0.75	0.85	189	4.89	2007	-0.01	0.01	-0.01	149	0.01	0.04		*						KC13								
KC15	1727584.41	6453111.58	284.06	-6.05	-9.52	-3.04	238	11.28	2007	-0.02	0.03	-0.03	128	0.04	0.04		*						KC14								
																							KC15								
																							KC16								

KC17	1727295.89	6453019.60	212.77	-6.87	-6.83	-2.49	225	9.69	2012	-0.03	0.02	-0.03	144	0.03	0.04		*		KC17
																		KC18	
																		KC19	
																		KC20	
																		KC21	
																		KC22	
																		KC23	
																		KC24	
																		KC25	
																		KC26	
																		KC28	
																		KC29	
																		KC30	
KC31	1727911.23	6452353.29	206.93	-13.70	-4.91	-0.57	200	14.56	2024	-0.02	0.03	-0.02	122	0.04	0.04		*		KC31
																		KC33	
																		KC34	
																		KC35	
																		KC36	
																		KC37	
																		KC38	
PB04	1727627.07	6448834.44	164.40	-48.86	-17.30	-6.12	199	51.83	1994	-0.23	-0.09	0.04	203	0.25	0.04	1.25		-23	PB04
PB06	1727900.55	6449748.18	174.15	-67.90	-13.66	-8.91	191	69.26	1995	-0.19	0.00	0.02	180	0.19	0.04	0.96		-9	PB06
PB07	1728095.05	6450198.68	196.08	-80.88	-21.08	-4.14	195	83.58	1995	-0.19	-0.03	0.01	188	0.19	0.04	0.98		-17	PB07
PB08	1728162.02	6450450.71	195.66	-75.48	-19.09	1.98	194	77.86	1994	-0.13	0.00	0.01	178	0.13	0.04	0.67		-41	PB08
PB09	1728208.18	6450840.42	188.12	-80.40	-10.60	-4.40	188	81.10	1994	-0.15	0.04	0.04	164	0.15	0.04	0.77		-6	PB09
PB12	1728205.80	6451566.87	178.55	-124.68	-37.70	-14.74	197	130.26	1994	-0.10	0.01	-0.04	173	0.10	0.04	0.50		-36	PB12
PB13	1728005.72	6452133.35	205.81	-80.25	-30.99	-4.73	201	86.03	1995	-0.04	0.03	-0.03	144	0.05	0.04	0.23		-54	PB13
																		PB18	
																		PB20	
																		PB21	
																		PB26	
																		PB27	
																		PB29	
																		PB54	
																		PB55	
																		PB59	
PB67	1727552.64	6450842.15	64.74	-86.08	-16.03	-11.27	191	87.56	2014	-0.09	-0.01	-0.06	184	0.09	0.04	0.45		-34	PB67
																		PB68	
																		PB69	
PB70	1727818.18	6448604.99	149.90	-36.72	-14.61	-6.34	202	39.52	2015	-0.25	-0.06	0.01	193	0.26	0.04	1.32		-20	PB70
																		PB71	
																		PB72	
PB74	1727510.61	6451685.73	99.54	-28.68	-7.09	-2.75	194	29.55	2023	-0.10	0.01	0.01	175	0.10	0.04	0.51		-23	PB74
																		PB75	
																		PB76	
UB02	1727473.27	6450139.98	65.39	-107.85	6.20	-1.76	177	108.03	1997	-0.01	0.03	-0.06	100	0.03			*		UB02
PVE3RP	1729195.88	6438764.67	346.94	0.00	0.00	0.06				-0.01	-0.01	0.03							PVE3RP
RP01	1725591.73	6455633.56	292.71	-0.01	0.02	-0.03				0.00	0.02	-0.06		0.02					RP01
RP02	1730832.98	6445586.64	480.61	0.00	0.00	0.00				0.00	0.00	0.00		0.00	Fixed				RP02
RP03	1730848.52	6445628.20	479.96	0.00	0.00	0.02				0.00	0.00	0.00		0.00					RP03
																Av.	0.90	-22	



JOHN CRUIKSHANK, MAYOR
ERIC ALEGRIA, MAYOR PRO TEM
DAVID L. BRADLEY, COUNCILMEMBER
BARBARA FERRARO, COUNCILMEMBER
PAUL SEO, COUNCILMEMBER

October 17, 2024

Via email

Roger Schwecke
Senior Vice President and Chief Infrastructure Officer
SoCalGas

Subject: **Request to Reinstate Natural Gas Service to the Portuguese Bend Beach Club and Seaview Neighborhoods**

Dear Ms. Anderson,

In late July 2024, SoCalGas began to indefinitely discontinue natural gas service to the neighborhoods of Portuguese Bend Community Association (PBCA), Seaview, and Portuguese Bend Beach Club (PBBC) due to cited public safety concerns resulting from land movement, abruptly leaving hundreds of customers without natural gas.

Since the natural gas shutoffs, the City and its residents have been seeking clarification from the utilities, including SoCalGas, on what thresholds would need to be met to restore services to the affected neighborhoods. To date, a definitive response has not been provided.

As you know, the City began operating new dewatering wells on September 13, 2024 and now has eight wells extracting over one million gallons of water per day from the ground. The new dewatering program in combination with dewatering conducted by the Klondike Canyon Landslide Abatement District and a dry summer, have drastically reduced the artesian pressure resulting in a significant reduction in land movement throughout the Greater Portuguese Bend – Altamira Landslide Complex. This week, the City will also prepare for the upcoming winter season by implementing emergency winterization measures, in the form of filling grabens and fissures to re-establish drainage to the ocean and not directly into the ground.

On October 13, 2024, the City received GPS monitoring data from its surveyor who has been monitoring land movement in the area. This GPS data shows that there is

Request to Reinstall Natural Gas Service Rancho Palos Verdes - Portuguese Bend Area

October 17, 2024

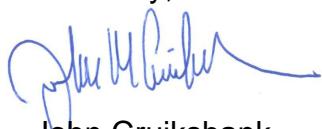
Page 2

now **no** land movement in the area of the PBBC and Seaview (see attached exhibit visualizing the data).

In light of this report, on behalf of the affected residents, the City is requesting that SoCalGas restore natural gas service to the PBBC and Seaview neighborhoods immediately. We request a response to this letter by Monday, October 21 with a timeline to restore service to the affected households.

Please contact City Manager Ara Mihranian at 310-544-5202 or via email at aram@rpvca.gov with any questions.

Sincerely,



John Cruikshank
Mayor

cc. Ben Steinberger, Public Affairs Manager, SoCalGas
Gabriela Medina, Public Affairs Manager, SoCalGas
Rancho Palos Verdes City Council
Ara Mihranian, City Manager
Catherine Jun, Deputy City Manager

Portuguese Bend Land Movement Monitoring Survey

October 10, 2023 (M38) through October 13, 2024 (M49)

Survey Report

for the

City of Rancho Palos Verdes

prepared by

McGee Surveying Consulting

Dated: October 30, 2023 with subsequent updates through October 15 2024

Portuguese Bend is typically monitored for land movement on a tri-annual basis with an initial survey of all current monitoring points at the beginning of the rainy season in the fall of each year followed by two subsequent partial Winter and partial Spring Monitoring Surveys of 30-40 points. In past years, the survey report was published following the spring survey; however, since the beginning of 2024 due to the excessive land movement the surveys have been conducted every six weeks and now every month as listed below. The October 10, 2023 M38 survey is reported here in detail and subsequent surveys are reported as Addendums beginning with Addendum No. 1 for M39 on page 7. The movement results are listed in the attached "PB MOVEMENT DATA POSTING M??.....xlsx". Movements are reported for the average date of the survey listed below.

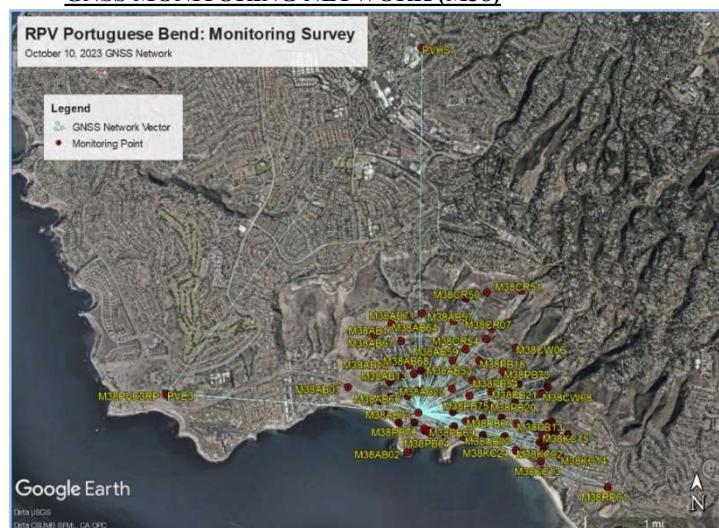
List of Reported Monitoring Surveys

- M38 Full Survey - October 10, 2023
- M39 Full Survey - January 13, 2024
- M40 Partial Survey - March 8, 2024
- M41 Partial Survey - April 17, 2024
- M42 Full Survey - May 28, 2024
- M43 Full Survey - July 1, 2024
- M44 Full Survey - August 1, 2024
- M45 Full Survey - September 4, 2024
- M46 Partial Survey - September 20, 2024
- M47 Partial Survey - September 27, 2024
- M48 Full Survey - October 8, 2024
- M49 Partial Survey - October 13, 2024

OVERVIEW:

McGee Surveying Consulting (MSC) performed the 2023-2024 land movement monitoring surveys at Portuguese Bend. The surveys were planned, coordinated, and executed by Michael McGee, PLS3945 of MSC who is responsible for the field surveys, processing observations, network adjustments, analysis, and reports. For a general history, details and procedures utilized in this survey but not re-stated here, see the "Portuguese Bend Land Movement 2020-2021 Monitoring Survey" report dated October 5, 2021, revised and published May 11, 2022. See also prior reports.

GNSS MONITORING NETWORK (M38)



McGEE SURVEYING CONSULTING
5290 Overpass Road, Ste#107, Santa Barbara, CA 93111

Survey in Klondike Canyon (Seaview) and ten new points set in September 2023. Additional points have been set on most subsequent surveys as necessary and noted in the addendums. Point KC02 was replaced by KC24 nearby in the October in anticipation of its future destruction. Point AB21 was recovered from the 2007 survey and substituted for nearby AB20 (destroyed by others) and will facilitate continuous monitoring at this location. The movements of new points are included in this Report as an Addendum. All monitoring survey coordinates and movements to date are listed in the spreadsheet “PB MOVEMENT DATA POSTING M?? 2007-[present].xlsx” attached to this Report.

PROJECT DATUMS - REFERENCE FRAME

The horizontal and vertical positions of the monitoring points are based on the North American Datum of 1983 (NAD83) Epoch 2007.00 and the North American Vertical Datum of 1988 (NAVD 88) reference frames. Although more current epoch adjustments are available e.g. NAD83 (2011) Epoch 2010.00, Epoch 2007.00 is retained to maintain consistently relative positions over time. Orthometric heights (NAVD88 Elevations) are based on measured ellipsoid heights combined with the NGS Geoid03 model and referenced to NGS Benchmarks. Although more current geoid models (e.g. Geoid18), are available, Geoid03 is retained to maintain consistently relative height movements over time as explained in said May 2022 Report. The latitudes and longitudes determined by GNSS measurements are converted to grid coordinates by projected onto NAD83 California State Plane Coordinates Zone 5 in US Survey Feet.

A valid recovery of the survey reference frame is essential to accurately measure and assess actual movements of individual points relative to the greater peninsula. The method for recovering the monitoring survey reference frame was modified in 2019 to improve the efficiency and simplify the processing and analysis of the monitoring surveys. Since 2007, Point AB02 (at the south end of Portuguese Point) has proven to be stable relative to PVE3 which is a California Spatial Reference Center (CSRC) Continuously Operated GPS Station (CGPS) at City Hall. The present procedure fixes PVE3RP (a PK Nail set on the concrete base of PVE3 as a reference mark to PVE3) and checking to point AB02. The proven positions relative to PVE3 are listed below.

Pt#	Latitude	Longitude	NAVD88 Ht	Source
AB02	33-44-13.84878	118-22-26.19243	116.47 ft	2007 - October 2018 position
PVE3RP	33-44-35.74239	118-24-15.27451	346.88 ft	Average of 5 years referencing to PVE3

Comparing the positions of AB02 on Portuguese Point with PVE3RP at City Hall and other CSRC CGPS Stations provides a redundant verification that the reference frame is stable and successfully recovered for each monitoring survey. An additional stable check point “RP01” was established near the entrance to the Trump Golf Course for verification on future surveys.

The rate of movement (velocities) of the land masses have increased over the past five years compared to the previous 12-year average. See “Assessment of Movements & Accelerations” addressed on Page 11.

Notwithstanding the 2019 monitoring process noted above, the processing of observations was necessarily modified for this fall survey because of the higher velocities as follows.

The October 2023 observations were processed as follows. The Base Station at AB73 was occupied over a six-day period and was found to have moved about 0.016 feet per day similar to other monitoring points in the area. To determine accurate positions and therefore precision movements it was necessary to determine a daily position of AB73. This was accomplished by processing the static data collected each day at AB73 with static data downloaded from the CSRC for CGPS stations PVE3 and PVHS. PVE3 is and has always been the basic constraint for the monitoring survey’s reference frame. PVHS was used to verify the stability of PVE3. Subsequently positions of AB73 were computed for each day referenced to PVE3. The identity for processing the daily observations of AB73 and related RTK measurements was to assign to AB73 the identity of AB731, AB732, AB733, AB734 & AB735 for days 1 through 5 occurring on October 8, 9, 10, 11 & 13.

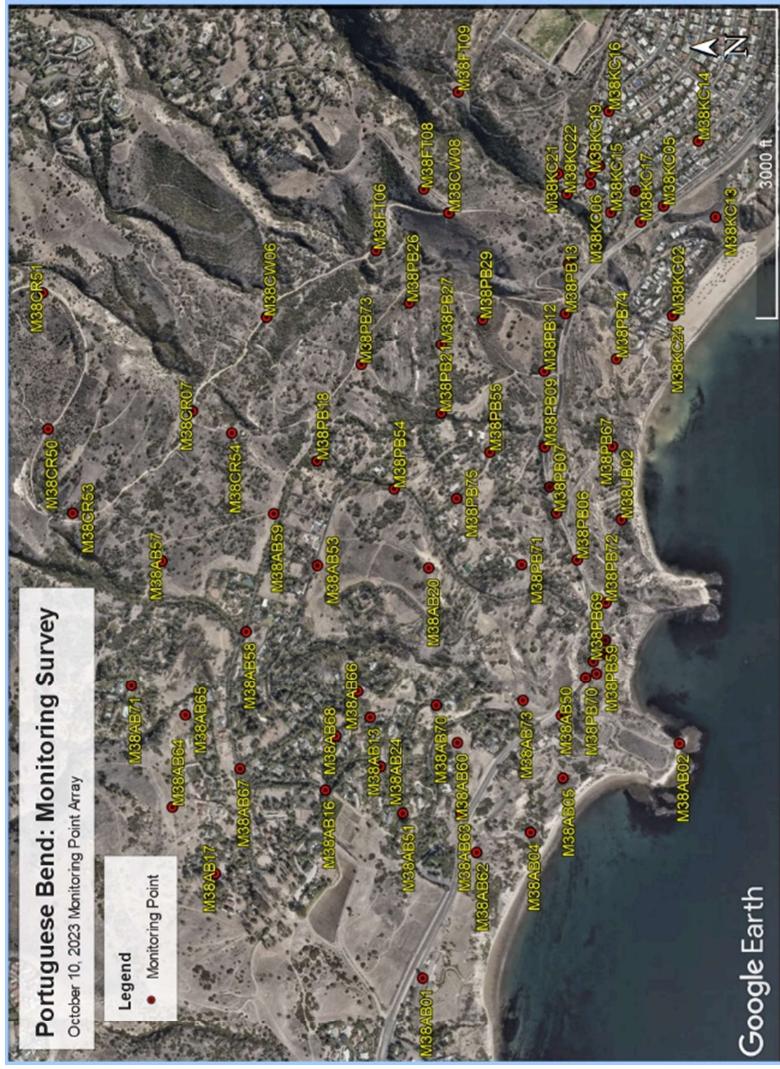
BASE STATIONS – POINT NAMES

AB61 and AB20 have previously served as suitable GNSS Base Stations for referencing measured positions of the monitoring points. AB61 is no longer accessed due to its environmental sensitivity and lack of security. AB73, located on the US Pony Club property was utilized as the Base Station up to the October 2023 survey.

Access was obtained unilaterally by MSC from the Pony Club manager for exclusive permission to enter the property confirmed prior to each survey entry with the understanding that 5 mph driving protocols are observed. Point AB73 was not a planned monitoring point but given the increased rates of movement, it fills in a gap between AB20 and AB50 and moves consistent with AB20. AB50 and AB73 are on the south and north sides of PVDS respectively. The separation between AB73 and AB50 is diminishing at the rate of about one foot per month in April 2024 resulting in a steeper slope on the north side of PVDS which may be de-stabilizing.

Due to the continuously increasing velocities of land movement, the present on-site base stations (AB20 and AB73) are no longer stable for measuring relative movements. In the January 2024 survey the Smartnet RTN network utilizing remote base stations connected by the Internet was used to measure positions and vectors which were re-referenced to PVE3RP and PVE3 in a network least squares adjustment. Surveys subsequent to the January survey are referenced to a new base station monument “RP02” set about 1400 feet northerly of the entrance to Abalone Cove Park and ¼ mile westerly of the present active slide boundary. See discussion hereafter.

October 2023 GNSS Survey Monitoring Points Network



The monitoring points names were established in the early surveys. The points are named for the slide they fall within and given a number. For example, slides AB, PB, KC, CR and FT. The number is increased as new points are established to replace abandoned or destroyed points or expand the network. Many of the original points are lost or no longer monitored. For data management purposes the point names are also prefixed with a sequential monitoring number to distinguish subsequent surveys. For example, for the occupation of AB02 on

McGEE SURVEYING CONSULTING
5290 Overpass Road, Ste#107, Santa Barbara, CA 93111

the 16th monitoring survey, AB02 is called M16AB02 where M16 indicates the sequence number since the first Monitoring Survey "M01" in September 2007. The prefix is stripped in the spreadsheet reports.

GNSS October 2023 M38 Survey Parameters, Metadata & Equipment

Date of Annual Initial Survey: M38 – October 10, 2023 (mean date) between 0800-1700 PDST (+7 hrs for UTC).

Constellations: GPS (31 Satellites), Russian GLONASS (23 Satellites), Galileo (23 Satellites) and Beidou (40 Satellites).

Observables (Carrier Waves): GPS (L1, L2, L5), GLONASS (L1, L2), Beidou (L1, L2); & Galileo (4 Carrier Waves)

Data Epoch Rate - 0.2 seconds (20HZ) at the GS18 Rover; 1 second at the GS18 Base

Satellites: 20-40; **GDOP:** < 2; **Elevation Mask:** 0° at the Rover and Base Station

Ephemeris: Broadcast for RTK vectors.

Weather: Mostly calm clear skies, temperature 65-75° F, no significant weather.

Space Weather: Boulder K Index 1-3 averaging 2 (gauges ionospheric activity on a scale of 0-9; less than 6 preferred)

Equipment: GNSS Base Receiver Unit No. M11, Operator: M. McGee, PLS; Occupied Base Station

 Receiver Make & Model: Leica GS18 with integrated Antenna; Mount: Tripod & Tribrach

 GNSS Rover Receiver Unit No. M10, Operator: M. McGee, PLS

 Receiver Make & Model: Leica GS18T with integrated Antenna; Mount: Fixed Height Pole #4

Processing & Adjustments: Leica Infinity v4.0 and "Starnet-PRO" version 11.0.6 Software

Prior to 2019, geodetic grade GNSS receivers collected static satellite signal data for post processing. The instrumentation was upgraded in 2020 to a Leica GS18 Base with a GS18T RTK Rover operating in real-time with an FM radio system which utilizes the latest technology to deliver increased productivity and precision of point positions. The GS18 receiver incorporates an Inertial Measurement Unit and tracks four Global Navigation Satellite Systems (GNSS): GPS, GLONASS, Galileo and Beidou Satellites. The differences in two measured vectors are acceptable if they fall within 0.03 feet (1 cm) horizontally; otherwise, additional measurements are usually obtained with some exceptions. Experience has shown the independent measurements generally agree on average about 0.02 feet when referenced to a local base receiver.

ADJUSTMENTS & ANALYSIS

Network Adjustment: A minimally constrained adjustment is utilized to develop NAD83 (2007) 2007.00

Epoch Zone 5 State Plane Coordinates and NAVD88 Heights of the monitoring points. The NAVD88 orthometric heights (elevations) are determined by combining the measured ellipsoid heights with the Geoid 03 Model. Previously, Point AB02 was fixed, and the stability verified relative to PVE3RP which is 1.5 to 3 miles westerly and outside the influence of the land movements. AB02 is expected to be stable and unaffected by the land movement; however, due to the substantially increased rates of movement resulting in dynamically differential movements the process was modified as noted above to assure accurate positions. This was accomplished by computing daily positions on the Base Station AB73 (AB731, AB732, AB733, AB734, AB735) relative to the reference frame fixed at station PVE3 noted above. Listed here are the differences.

ID	Differences in Feet		
	dN	dE	dZ
PVE3	0.000	0.000	
AB02	-0.022	-0.008	0.000
PVE3RP	-0.010	-0.003	-0.055
PVHS	-0.035	0.003	

Fixed Horizontal, CGPS Station at City Hall
Fixed Elevation & Horizontal Check
Closure Check from PVE3 to AB73 to PVE3RP at City Hall
Horizontal Check on CGPS Station 2 Miles North of PB

Comments: Fixing the CGPS station PVE3 finds the differences at CGPS Station PVHS, Reference Point PVE3RP and Monitoring point AB02 are insignificant measurement noise. Given that AB02, PVE3RP, PVE3 and PVHS are in good relative agreement, the survey reference frame is deemed stable and successfully recovered from which local land movements were determined.

ACCURACY STATEMENTS

Vector Residuals: In this Initial Survey, the two-dimensional vector residuals averaged 0.012 feet and the absolute value of the vertical residuals averaged 0.02 feet as listed below. The vector residuals are based on a network adjustment of independent point positions.

Vector Lengths (ft)		Two Dimensional Residuals			Absolute Vertical Residuals		
Vary	Average	Average	Std.Dev.	Maximum	Average	Std.Dev.	Range
131-16391	3792	0.012	0.006	0.029	0.02	0.02	-0.03 to +0.08

Movement Accuracy: A point is deemed to have moved if, at the 95% level of confidence the horizontal movement (signal) of a point between two epochs is greater than the 95% Error (noise). Based on multiple independent occupations, the horizontal (2D) movements reported between October 2022 (M34) and October 2023 (M38) statistically attained a relative average accuracy of 0.014 feet at the 95% Level of Confidence with a Standard Deviation of 0.004 feet and a Range of 0.01 to 0.03 feet. See the attached file “PB MOVEMENT DATA POSTINGxlsx” for movements and coordinates.

Table of 2D & Vertical Movements for 12.0 Months October 10, 2022 (M34) & October 10, 2023 (M38)

Listed below are the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See the attached spreadsheet “PB MOVEMENT DATA POSTING.....xlsx”. Note: The horizontal measured movement confidence is estimated at +/-0.02’ (1/4”); therefore, movements of less than 0.03’ are statistically indeterminate. The estimated vertical measured movement confidence is +/-0.05’.

* = Control Point for Recovery of the Reference Frame.

Point ID	Azimuth°	Horizontal Movement	Vertical Movement	Point ID	Azimuth°	Horizontal Movement	Vertical Movement
AB01	244	0.06	0.0	KC02	196	1.99	0.1
AB02	201	0.02	0.0	KC05	219	0.88	-0.1
AB04	223	4.80	-0.6	KC06	253	1.34	-0.5
AB05	231	3.51	-0.6	KC07	256	0.02	0.0
AB13	198	2.48	-0.6	KC13	193	0.70	0.1
AB16	191	1.20	0.0	KC14	259	0.12	-0.1
AB17	187	0.06	0.0	KC15	233	1.36	-0.4
AB20	199	3.06	-0.1	KC16	251	0.03	0.0
AB24	198	2.68	0.0	KC17	222	1.24	-0.3
AB50	236	1.99	0.2	KC18	202	2.86	-0.3
AB51	202	2.05	-0.2	PB04	203	3.62	-0.3
AB53	192	2.75	-0.4	PB06	200	3.35	-0.3
AB57	169	2.37	-0.7	PB07	201	3.85	-0.1
AB58	183	2.22	-0.4	PB08	201	3.61	0.0
AB59	186	3.17	-0.8	PB09	198	3.49	-0.1
AB60	204	2.69	-0.3	PB12	200	4.67	-0.3
AB62	203	3.73	-0.4	PB13	201	3.83	0.1
AB63	207	3.58	-0.9	PB18	187	3.51	-0.5
AB64	155	0.35	-0.1	PB20	199	4.23	-0.4
AB65	167	1.49	-0.3	PB21	195	3.93	-0.6
AB66	196	2.29	-0.5	PB26	192	3.94	-0.4
AB67	180	1.12	-0.2	PB27	195	4.18	-0.8
AB68	193	2.03	-0.6	PB29	200	4.02	-1.0
AB70	203	2.97	-0.1	PB54	196	3.39	-0.2
AB71	158	1.76	-0.6	PB55	199	3.86	-0.8
AB73	203	3.00	-0.3	PB59	199	4.11	-0.6
CR07	171	1.87	-1.6	PB67	194	5.93	-0.8
CR50	225	0.11	-0.1	PB68	202	3.49	-0.1
CR51	223	0.08	0.0	PB69	202	3.91	-0.3
CR53	231	0.21	0.0	PB70	207	3.58	-0.8
FT06	192	3.66	-1.7	PB71	198	3.65	-0.4
FT08	257	0.06	0.0	UB02	189	4.17	0.3
FT09	271	0.08	-0.1	*PVE3RP	195	0.01	0.0

October 10, 2022 to October 10, 2023 Movement Distances (Feet) & Directions as Indicated

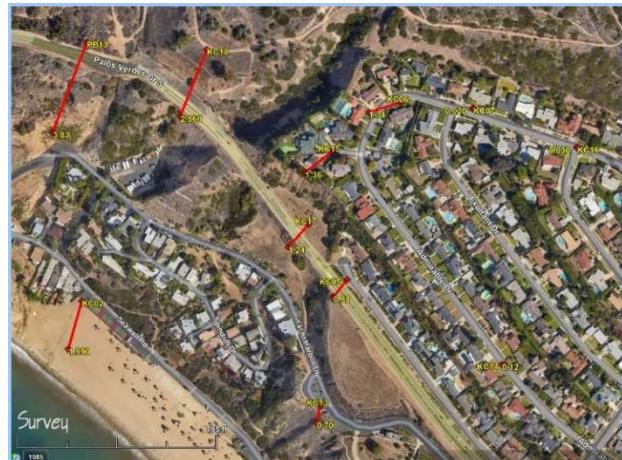
Note: Distances are exaggerated x 100 for viewing



Enlargement (PVDS)



Enlargement (Seaview)



MONITORING POINT MONUMENT NOTES & STATUS

See the May 2022 Survey Report for prior monument notes.

2023: 16 points added to the monitoring program as listed below. AB20 destroyed after October 2023 Survey and replaced by AB21. All other Point Descriptions are listed in prior Reports

MONITORING POINT MONUMENT DESCRIPTIONS

California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and NAVD88 Datums are listed in the attached spreadsheet file "PB MOVEMENT DATA POSTING....".

Point Description

Points added in July and October 2023

AB21	2"	Punched GIP in "Cable Box", Replaced AB20 after Oct. 2023 survey
PB72	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
PB73	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
PB74	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
PB75	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
CR54	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
CW05	Found ½"	x 48" Punched Rebar in Concrete Collar set June 2022 for CalWater
CW06	Found ½"	x 48" Punched Rebar in Concrete Collar set June 2022 for CalWater
CW07	Found ½"	x 48" Punched Rebar in Concrete Collar set June 2022 for CalWater
CW08	Found 2"	Mag nail in Concrete Base of 3' Bollard set June 2022 for CalWater
KC19	2"	Mag Nail Drilled in a Concrete Curb on South side of Dauntless Dr.
KC20	2"	Mag Nail Drilled in a Concrete Curb on West side of Excelsior Dr.
KC21	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
KC22	2"	mag nail & washer in conc. in 2"x 24" GIP Collared in Concrete
KC23	2"	Mag Nail Drilled in a Concrete Curb on South side of Admirable Dr.
KC24	2"	Mag Nail Drilled in the Southwest Corner of a Concrete Vault, KC02 planned replacement
RP01	Check Point at Trump Golf Course established in July 2023 for verifying the recovery of a stable reference frame. Point is the top open part of the "B" on the south side of the rim of a manhole on the south side of PVDS at Conqueror Dr.	

Addendum No. 1 Report

Portuguese Bend Land Movement Monitoring Survey **Early Winter Full Monitoring Survey No. M39 - January 13, 2024**

A special Portuguese Bend Full Monitoring Surveys (M39) was requested by the City in January 2024. The average date of the survey is January 13, 2024, 3.1 months after the October 10, 2023 Initial Monitoring for 2023-2024 reported above. The M39 survey included 79 monitoring points representing the present full network. A central base station (usually occupying AB73) was not feasible due to the excessive rate of land movement and reliance was made on the remote Smartnet RTN Stations which resulted in a lesser accuracy. For this survey, this was not an issue since the signal (measured movement) was much greater than the noise of the measurements expected to be less than 0.05'. A typical minimally constrained adjustment, as described above for M38, was processed for M39 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights.

The horizontal (2D) vector residuals averaged 0.03 feet with a Standard Deviation of 0.02 feet. The absolute value of the vertical residuals averaged 0.04 feet with a Standard Deviation of 0.04 feet. At the 95% Level of Confidence, estimated accuracy of the horizontal (2D) movements is 0.05 feet.

ADJUSTMENTS & ANALYSIS

The network adjustment fixed point PVE3RP (an indirect fix on PVE3) and checked to other points found to be stable. Differences from the known fixed positions to the measured positions in this survey are listed here with their north, east and vertical components in feet. The successful recovery of a stable reference frame (coordinate system) is confirmed.

Differences in Feet				
ID	dN	dE	dZ	
PVE3RP	0.00	0.00	0.00	Fixed Reference at City Hall
AB02	0.01	0.01	-0.05	Check Point at Portuguese Point
RP01	-0.01	0.01	0.05	Check Point at Trump Golf Course

Table of 2D & Vertical Movements for 3.1 Months October 10, 2023 (M38) & January 13, 2024 (M39)

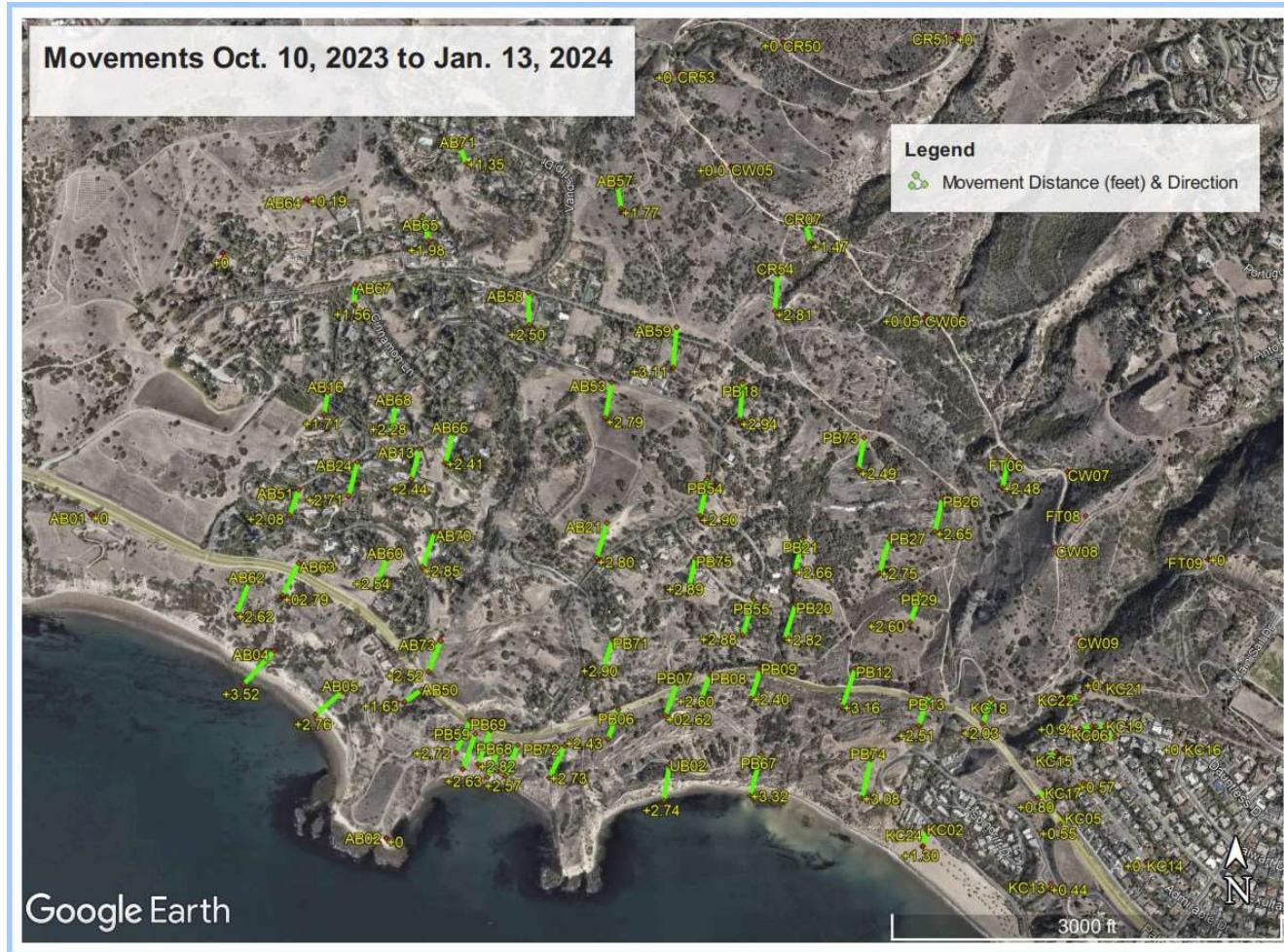
Listed below are the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See the

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attached spreadsheet “PB MOVEMENT DATA POSTING (Revised 012224) 2007-Jan2024.xlsx”. Note: The horizontal measured movement confidence is estimated at +/-0.04’ (1/2”); therefore, indicated movements of less than 0.05’ are statistically indeterminate. The estimated vertical measured movement confidence is +/-0.08’.
* = Control Point for Recovery of the Reference Frame.

Point ID	Azimuth°	Horizontal Movement	Vertical Movement		Point ID	Azimuth°	Horizontal Movement	Vertical Movement
AB01	23	0.01	-0.1		KC13	188	0.44	0.0
AB02	27	0.01	0.0		KC14	262	0.03	0.0
AB04	223	3.52	-0.4		KC15	233	0.91	-0.3
AB05	230	2.76	-0.4		KC16	88	0.02	0.0
AB13	195	2.44	-0.4		KC17	218	0.80	-0.3
AB16	190	1.71	-0.1		KC18	200	2.03	-0.3
AB17	118	0.03	0.0		KC19	269	0.74	-0.2
AB21	197	2.80	0.1		KC20	277	0.67	-0.2
AB24	195	2.71	0.0		KC21	92	0.04	0.0
AB50	234	1.63	0.0		KC22	255	1.07	-0.5
AB51	200	2.08	0.0		KC23	237	0.57	-0.3
AB53	190	2.79	-0.3		KC24	199	1.22	-0.1
AB57	170	1.77	-0.5		PB04	202	2.63	0.0
AB58	179	2.50	-0.4		PB06	200	2.43	-0.2
AB59	185	3.11	-0.8		PB07	201	2.62	0.0
AB60	204	2.54	-0.2		PB08	201	2.60	0.0
AB62	203	2.62	-0.3		PB09	197	2.40	-0.1
AB63	207	2.79	-0.8		PB12	199	3.16	-0.3
AB64	128	0.19	0.0		PB13	199	2.51	0.0
AB65	167	1.98	-0.6		PB18	185	2.94	-0.5
AB66	193	2.41	-0.4		PB20	198	2.82	-0.3
AB67	181	1.56	-0.3		PB21	194	2.66	-0.5
AB68	191	2.28	-0.4		PB26	193	2.65	-0.2
AB70	200	2.85	-0.2		PB27	196	2.75	-0.5
AB71	158	1.35	-0.4		PB29	200	2.60	-0.7
AB73	202	2.52	-0.1		PB54	192	2.90	0.0
CR07	164	1.47	-1.2		PB55	198	2.88	-0.5
CR50	37	0.04	0.0		PB59	200	2.86	-0.3
CR51	107	0.04	0.2		PB67	195	3.32	-0.3
CR53	180	0.02	0.1		PB68	202	2.57	0.0
CR54	185	2.81	-0.9		PB69	201	2.82	-0.1
CW05	185	0.02	0.1		PB70	204	2.72	-0.3
CW06	59	0.05	0.1		PB71	197	2.90	0.0
FT06	191	2.48	-1.1		PB72	206	2.73	0.3
FT09	148	0.02	0.2		PB73	190	2.49	-0.4
KC02	193	1.30	0.0		PB74	193	3.08	-0.4
KC05	215	0.55	0.0		PB75	193	2.89	-0.1
KC06	256	0.94	-0.4		UB02	189	2.74	0.2
KC07	135	0.01	0.0	*PVE3RP	0	0	0.1	

October 10, 2023 to January 13, 2024 Movement Distances (Feet) & Directions as Indicated
Note: Movement distances exaggerated 100x for viewing



Enlargement (PVDS)



Enlargement (Seaview)



ASSESSMENT of MOVEMENT VELOCITIES & ACCELERATIONS 2014 to 2024

Others performed monitoring surveys of the Portuguese Bend land movement between 1994 and 2006. McGee Surveying Consulting assumed responsibility and defensibility for the Portuguese Bend Monitoring Program in 2007. The annual measured movements between 2007 and 2018 were fairly small and stable as shown below by the averages and maximums of a sampling of points for the 2014-2018 period. The fall 2019 monitoring survey found the annual rate of movements (velocities) increased (accelerated) about 4 to 6 times and remained stable for the next four years through 2022. A “year” here is defined as the 12-month period beginning with the rainy season on October 1st.

Annual Average Movements in Feet, Maximum Movements & Change in the Average of a Sample of Points

ID	2014-2018 (4 Yrs)		2018-2022 (4 Yrs)		Change in Average
	Average	Max.	Average	Max.	
AB20	0.09	0.20	0.48	0.54	+5X
AB53	0.07	0.18	0.43	0.49	+6X
AB68	0.05	0.11	0.31	0.32	+6X
CR07	0.06	0.13	0.30	0.32	+5X
KC06	0.04	0.09	0.16	0.22	+4X
PB55	0.89	1.31	0.89	1.23	+1X (No Change)

In the following twelve months between October 2022 and October 2023, the annual rate of movements were found to have again accelerated. The table below shows a sample of points within Abalone Cove (AB), Klondike Canyon (KC) and Portuguese Bend (PB). The left half of the table compares the annual movements and rate of movements per month for the October 2021 to October 2022 with the October 2022 to October 2023 period. The annual rate of movement for the sample averages in each slide increased about 6x for AB, 8x for KC and 5x for PB.

In the same 12-month period between October 2022 and October 2023, accelerations were noted in the first seven months over the previous year and again in the last five months over the previous seven months as shown in the right half of the table below. The average rate of movement in each slide for these samples in the first seven months October 2022 through April 2023 increased about 3x for AB, 4x for KC and 2x for PB over the previous 12-month period of October 2021 to October 2022. The average rate of movements in each slide for the samples in the last five months May 2023 to October 2023 increased 4x for AB, 4x for KC and 3x for PB over the previous seven months.

October 2021 to October 2023 Movements & Rates per Month (Feet)								
Point	M32 > M34 (12 Mo.)		M34 > M38 (12 Mo.)		M34 > M36 (7 Mo.)		M36 > M38 (5 Mo.)	
	Oct '21 > Oct '22	Oct '22 > Oct '23	Oct '22 > May '23	May '22 > Oct '23	Movement	Rate/Mo	Movement	Rate/Mo
	Movement	Rate/Mo	Movement	Rate/Mo	Movement	Rate/Mo	Movement	Rate/Mo
AB20	0.51	0.042	3.06	0.255	0.84	0.119	2.22	0.444
AB53	0.49	0.041	2.75	0.229	0.74	0.105	2.01	0.403
AB58	0.41	0.034	2.22	0.185	0.60	0.085	1.62	0.325
AB60	0.45	0.038	2.69	0.224	0.80	0.114	1.90	0.379
AB67	0.18	0.015	1.12	0.094	0.32	0.046	0.80	0.160
AB68	0.32	0.027	2.03	0.169	0.54	0.077	1.49	0.299
AB70	0.48	0.040	2.97	0.248	0.84	0.120	2.14	0.427
CR07	0.31	0.026	1.87	0.156	0.44	0.062	1.43	0.287
Av Move	0.39	0.033	2.34	0.195	0.64	0.091	1.70	0.340
KC06	0.16	0.014	1.34	0.111	0.33	0.047	1.01	0.202
KC13	0.09	0.007	0.70	0.058	0.19	0.027	0.51	0.102
KC17	0.14	0.012	1.24	0.104	0.31	0.044	0.93	0.187
Av Move	0.13	0.011	1.09	0.091	0.27	0.039	0.82	0.163
PB55	0.80	0.067	3.86	0.321	1.06	0.151	2.80	0.560
PB70	0.72	0.060	3.58	0.299	1.14	0.163	2.44	0.488
Av Move	0.76	0.063	3.72	0.310	1.10	0.157	2.62	0.524

Movement & Rate of Movement per Month

In the last 3-month period October 10, 2023 to January 13, 2024, accelerations were noted again relative to the previous 12-months. The average rate of movements in each slide for the last 3-months for these samples increased about 4x for AB, 3x for KC and 3x for PB over the previous 12-month period of October 2022 to October 2023.

Point	M38 > M39 (3.1 Mo.)	
	Oct. 10, 2023 to Jan. 13, 2024	Movement
AB20	2.80	0.90
AB53	2.79	0.90
AB58	2.50	0.81
AB60	2.54	0.82
AB67	1.56	0.50
AB68	2.28	0.73
AB70	2.85	0.92
CR07	1.47	0.47
Average	2.35	0.76
KC06	0.94	0.30
KC13	0.44	0.14
KC17	0.80	0.26
Average	0.73	0.24
PB55	2.88	0.93
PB70	2.72	0.88
Average	2.80	0.90

RECOMMENDATION

Continuity in the methods, precision and reporting of the monitoring surveys are necessary to evaluating results relative to and consistent with prior 2007-2024 monitoring survey campaigns. Monitoring survey campaigns require the services of an independent GNSS/Geodetic expert to evaluate and validate results to assure program integrity and defensibility.

Maintaining a clearing of foliage in a 10' radius around monitoring points and trimming nearby trees and brush above eye height is necessary to assure a clear view of the sky for tracking satellites. Satellites, although unseen, can appear anywhere in the sky above the horizon and the radio signals passing through foliage degrade the required survey accuracy and productivity. Points AB04, AB13, AB17, AB24, AB51, AB58, AB66, PB18, PB54, PB55, CR51 and CR53 have foliage obstructions limiting sky (satellite) visibility and require clearing to facilitate accurate results of the surveys.

Addendum No. 2 Report

Portuguese Bend Land Movement Monitoring Survey Partial Monitoring Survey No. M40 – March 8, 2024

This is the mid-winter Partial Monitoring Survey No. M40 Report. The average date of the survey is March 8, 2024, 1.8 months after the January 13, 2024 Full Monitoring Survey. The survey included 44 monitoring points and 3 reference control points. Occupying a central base station (usually AB73) was not feasible due to the excessive rate of land movement and reliance was made on the remote Smartnet RTN Stations which resulted in a lesser accuracy. For this survey, this was not an issue since the signal (measured movement) was much greater than the noise of the measurements expected to be about less than 0.05'.

ADJUSTMENTS & ANALYSIS

A typical minimally constrained network adjustment, as described above for survey M38, was processed for M40 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. The adjustment fixed point PVE3RP and checked to other points expected to be and found stable. Differences from the known fixed positions to the measured positions in this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	0.00	0.00	0.00
AB02	0.02	0.01	-0.09
RP01	0.00	0.02	-0.10

Fixed Reference at City Hall
Check Point on Portuguese Point
Check Point at Trump Golf Course

The successful recovery of a stable horizontal reference frame confirmed. The Z height variations are attributed to the noise in the Smartnet Network solution. RP01 is intended to replace AB02.

2D Horizontal & Vertical Movements for 1.8 Months January 13, 2024 (M39) to March 8, 2024 (M40)

The general rate of land movement increased significantly over the January 13, 2024 survey assessment. See the attached spreadsheet “PB MOVEMENT DATA POSTING.... .xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average month.

Accuracy Statements

The horizontal (2D) vector residuals averaged 0.04 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals averaged 0.04 feet with a Standard Deviation of 0.03 feet.

At the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be less than 0.04'. Movements of less than 0.05' are statistically indeterminate. The estimated vertical measured movement confidence is 0.06' to 0.09'.

Addendum No. 3 Report

Portuguese Bend Land Movement Monitoring Survey Partial Monitoring Survey No. M41 – April 17, 2024

This is the Spring Partial Monitoring Survey No. M41 Addendum Report. The field survey took place April 16-18, 2024, average date of April 17, 2024, 1.35 months after the last March 8, 2024 Monitoring Survey. The survey included 55 monitoring points and 3 reference control points. Eleven new monitoring points were set and surveyed. The location of two new points were identified and will be surveyed on the next campaign in late May after the monuments are set by others. See the points descriptions below.

Occupying previous base stations was not feasible due to the excessive rate of land movement. The Smartnet RTN Network does not require a base station but results in a somewhat lesser accuracy. Smartnet may be used in the future; however, it was deemed beneficial to establish a new base station outside the slide complex to facilitate future surveys. A new base station point “RP02” was set westerly of the slide complex and north of Abalone Cove Park.

ADJUSTMENTS & ANALYSIS

A typical minimally constrained adjustment, as described above for the M38 survey, was processed for M41 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point PVE3RP to establish a position on the base at RP02 and thereby all other points in the survey. A check to RP01 easterly outside the slide complex was made as noted below.

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This process will be the standard on future surveys. Differences from the known fixed positions to the measured positions in this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	0.00	0.00	0.00
RP01	-0.01	0.00	-0.03

Fixed Reference at City Hall
Check Point at Trump Golf Course

The successful recovery of a stable horizontal reference frame is confirmed. Point AB02 replaced by RP01, was used in previous surveys to also confirm recovery of the reference frame has limited access do to the slides.

2D Horizontal & Vertical Movements for 1.35 Months March 8, 2024 (M40) to April 17, 2024 (M41)

The general rate of land movement increased significantly over the March survey. On average the velocities increased 76% with a maximum of 143%. Eight points doubled their velocities in the last six weeks over the previous eight weeks. In Abalone Cove and Portuguese Bend Slides many points are moving about three feet per month and in the Seaside Klondike Canyon Slide about $\frac{3}{4}$ of a foot per month. See the attached spreadsheet “PB MOVEMENT DATA POSTING.... .xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average month.

Accuracy Statements

The horizontal (2D) vector residuals averaged 0.04 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals averaged 0.04 feet with a Standard Deviation of 0.03 feet.

The land is moving 0.05' to 0.10' daily. Most points are measured a day apart resulting in large residuals but accurate positions of the mean coordinate. Therefore, it is at estimated the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be less than 0.03'. Movements of less than 0.04' are statistically indeterminate. The estimated vertical measured movement confidence is 0.05' to 0.10'.

Monitoring Point Monument Descriptions

See prior Reports for all other Point Descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING....” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and NAVD88 Datums n

Point Description of Points added in April 2024

AB74	8" Spike set as temporary monument to be replaced with a 2" GIP by others
AB75	8" Spike set as temporary monument to be replaced with a 2" GIP by others
AB76	8" Spike set as temporary monument to be replaced with a 2" GIP by others
AB77	Location identified, 2" GIP to be set by others
CR55	Set Mag Nail drilled in a Concrete walk/valley gutter
CR56	Location identified, 2" GIP to be set by others
KC25	Set Mag Nail drilled in a concrete & rock wall
KC26	Set Mag Nail drilled in a concrete wall
KC27	Set Mag Nail drilled in a concrete 6' fire pit
KC28	Set Mag Nail drilled in a concrete headwall
KC29	Set Mag Nail drilled in a concrete headwall
KC30	8" Spike set as temporary monument to be replaced with a 2" GIP by others
KC31	8" Spike set as temporary monument to be replaced with a 2" GIP by others
RP02	½" x 4' rebar in large sloping meadow with T-bar witness for new base station

Addendum No. 4 Report

Portuguese Bend Land Movement Monitoring Survey
Full Monitoring Survey No. M42 – May 28, 2024

This is Full Monitoring Survey No. 42 Addendum Report. The field survey took place May 27-30, 2024, with an average date of May 28, 2024, 1.35 months after the last April 17, 2024 Partial Monitoring Survey. The survey included 93 monitoring points and 3 reference control points. Two new monitoring points (AB77 & CR56) were

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set and surveyed. Seven temporary monuments were reset with a permanent monument. Monuments CW01, CW07 and CW08, set in 2022 for CalWater, were adopted for the purpose of these surveys. See the point descriptions below.

There are 14 monitoring points in the upper portion of the Reserve which are now difficult and time consuming to access due to the slides. An assistant provided by sub-contractor Chris Nelson & Associates (CNA) has been assigned these locations beginning with this May survey. CNA conducted their survey measurements with a Trimble R12 referenced to the Smartnet RTN for positioning. These monitoring point observations were referenced to the RPV Portuguese Bend network by way of connections to RP01, RP02 & PVE3RP. In the late June survey, CAN will be using Leica instrument similar to those used by McGee Surveying Consulting to assure the highest precision and increased productivity.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment, as described above for the above M38 Survey Report, was processed for M42 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point PVE3RP to establish a position on the base at RP02 and thereby all other points in the survey. A check to RP01 easterly outside the slide complex and other nearly stable points were made as noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	-0.00	-0.00	-0.00
RP01	-0.00	0.01	-0.01
RP02	-0.03	0.02	-0.01
AB02	0.00	-0.02	0.09

The successful recovery of a stable reference frame is confirmed. Point RP01 is intended to supersede AB02 used in previous surveys to confirm recovery of the reference frame. AB02 now has limited access do to the slides. Additionally, California Spatial Reference Center CGPS (Continous Operating GPS Stations) PVE3 and PVHS are incorporated from time to time to verify the stability of the refence frame.

2D Horizontal & Vertical Movements for 1.35 Months April 17, 2024 (M41) to May 28, 2024 (M42)

The general rate of land movement increased in the last six weeks over the April survey. On average the velocities increased about 40% which is an increased rate of movement; however, the rate of acceleration is less than the estimated average of 76% in the previous six weeks. See the attached spreadsheet "PB MOVEMENT DATA POSTING.... .xlsx" for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

The rate of land movement varies and is as much as 0.12' daily. It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be 0.04-0.06'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is 0.05' to 0.10'.

Monitoring Point Monument Descriptions

See prior Reports for all other Point Descriptions. See the attached spreadsheet file "PB MOVEMENT DATA POSTING...." for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and NAVD88 Datums n

Addendum No. 5 Report

Portuguese Bend Land Movement Monitoring Survey **Full Monitoring Survey No. M43 – July 1, 2024**

This is Full Monitoring Survey No. 43 Addendum Report. The field survey took place June 30, 2024 to July 3, 2024 with an average date taken as July 1, 2024, 1.12 months after the last May 28 Monitoring Survey. The survey included 93 monitoring points and 3 reference control points.

14 monitoring points in the upper portion of the Reserve require about three miles of hiking to access due to the slides. An assistant provided by sub-contractor Chris Nelson & Associates (CNA) is assigned these locations. A loaner GS18 Leica instrument same as used by McGee Surveying Consulting (MSC) and connected to MSC's RTK base station is utilized to assure the highest precision and increased productivity.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment, as described above for the above M38 Survey Report, was processed for M43 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point PVE3RP to verify the position on the base at RP02 and thereby all points in the survey. A check to RP01 easterly outside the slide complex, AB02 and other nearly stable points were made as noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

Differences in Feet			
ID	dN	dE	dZ
PVE3RP	-0.00	-0.00	-0.00
RP01	+0.01	-0.01	-0.00
RP02	-0.03	0.02	-0.01
AB02	-0.01	-0.02	+0.03
PVE3	+0.01	+0.00	-0.11

Fixed Reference at City Hall

CSRC CGPS Station at City Hall

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Because AB02 has limited access do to the slides, Point RP01 is intended to supplement AB02 used in previous surveys to confirm recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continous Operating GPS Stations) PVE3 and PVHS are incorporated to verify the stability and recovery of the refence frame.

2D Horizontal & Vertical Movements for 1.12 Months M42 to M43

The rate of land movement varies and averages about 3 feet per average month with a maximum of 4.88 feet. The general rate of land movement increased about 25% on average; however, the rate of acceleration is less as indicated by the estimated average increase of 41% in the rate of land movement in the previous month. See the attached spreadsheet "PB MOVEMENT DATA POSTING.... .xlsx" for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, and the vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

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It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be 0.04-0.06'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is 0.05' to 0.10'.

Monitoring Point Monument Descriptions

See prior Reports for Point Descriptions. See the attached spreadsheet file "PB MOVEMENT DATA POSTING...." for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Point Description: Update of Points set in April & May

AB74	1/2" x 4' rebar encased in concrete witnessed by a steel t-bar post
AB75	1/2" x 4' rebar encased in concrete witnessed by a steel t-bar post
AB76	1/2" x 4' rebar encased in concrete witnessed by a steel t-bar post
AB77	1" x 24" GIP with cap "Control Point" encased in concrete witnessed by a steel t-bar post
CR56	1" x 24" GIP with cap "Control Point" encased in concrete witnessed by a steel t-bar post
CW07	1/2" x 4' punched rebar in concrete with T-bar witness post
CW08	1/2" x 4' punched rebar in concrete with T-bar witness post
KC30	1/2" x 4' rebar encased in concrete witnessed by a steel t-bar post
KC31	8" spike set between two steel posts in line with a string of boulders
KC32	Temporary reference to KC31, took west side of chain link fence post south of PVDS
KC33	Found 1.5" GIP for Property Corner on top of dyke
RP02	1/2" x 4' punched rebar in concrete in large sloping meadow witnessed by a steel T-bar post

Addendum No. 6 Report

Portuguese Bend Land Movement Monitoring Survey
Full Monitoring Survey No. M44 – August 1, 2024

This is Full Monitoring Survey No. 44 Addendum Report. The field survey took place July 30, 2024 to August 3, 2024 with an average date taken as August 1, 2024, 1.02 months after the last July 1 Monitoring Survey. The survey included 98 monitoring points and 3 reference control points (RP01, RP02, PVE3RP & AB02).

Many of the monitoring points in the upper portion of the Reserve require substantial hiking for access due to the slides. An assistant provided by sub-contractor Chris Nelson & Associates (CNA) is assigned these locations.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment, as described above for the above M38 Survey Report, was processed for M44 to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point PVE3RP to verify the position at the base station point RP02 and thereby all points in the survey. A check to RP01 easterly outside the slide complex, AB02 and other nearly stable points were made as noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

Differences in Feet				
ID	dN	dE	dZ	
PVE3RP	-0.00	-0.00	-0.00	Fixed Reference at City Hall
RP01	0.03	-0.03	0.01	Check Point
RP02	-0.00	0.01	0.07	Base Station
AB02	-0.01	0.00	0.07	Check Point
AB17	0.00	0.00	0.05	Point Historically Not Moving
CW01	0.01	0.02	0.11	Point Historically Not Moving
KC16	0.00	0.01	0.10	Point Historically Not Moving

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Because AB02 has limited access do to the slides, Point RP01 is

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intended to supplement AB02 used in previous surveys to confirm recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continous Operating GPS Stations) PVE3 and PVHS are incorporated at times for additional verification of the stability and recovery of the refence frame.

2D Horizontal & Vertical Movements for 1.02 Months M43 to M44

The rate of land movement varies and averaged about 2.8 feet per average month in the last period with a maximum of 4.69 feet per month. The general change in the rate of land movement (velocity) slowed and varied from about -13% to +13% and averaged nearly zero. See the attached spreadsheet “PB MOVEMENT DATA POSTING.... .xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements is estimated to be 0.04'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10'.

Monitoring Point Monument Descriptions

See prior Reports for Point Descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING....” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Points AB71 and CR07 destroyed since the last monitoring survey by slides and construction.

Point Description: Update of Set Points

AB78	2" Magnetic Nail drilled in a concrete curb on the N. side of Vanderlip Dr., replaced AB71
CR57	½" x 4' punched rebar in concrete with T-bar witness post, replaces CR07
KC34	2" Magnetic Nail set in Stalwart Dr. East of Schooner Dr.
KC35	2" Magnetic Nail set in Xn of Schooner & Stalwart Dr.
KC36	2" Magnetic Nail set in Xn of Schooner & Admirable Dr.
KC37	Punch mark on north side Sewer MH in Admirable Dr. East of Schooner Dr.

Addendum No. 7 Report

Portuguese Bend Land Movement Monitoring Survey **Full Monitoring Survey No. M45 – September 4, 2024**

This is Full Monitoring Survey No. 45 Addendum Report. The field survey took place September 3, 2024 to September 6, 2024 with an average date taken as September 4, 2024, 1.12 months after the last Monitoring Survey. The survey included 102 monitoring points and 3 reference control points (RP01, RP02, PVE3RP & AB02).

Many of the monitoring points in the upper portion of the Reserve require substantial hiking for access due to the slides. An assistant provided by sub-contractor Chris Nelson & Associates (CNA) is assigned these locations.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M45 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was

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fixed at point PVE3RP to verify the position at the base station point RP02 and thereby all points in the survey. A check to RP01 easterly outside the slide complex, AB02 and other nearly stable points were made as noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

Differences in Feet				
ID	dN	dE	dZ	
AB02	-0.02	-0.02	0.00	Check Point
PVE3RP	-0.00	-0.00	-0.00	Fixed Reference at City Hall
RP01	-0.02	0.01	0.05	Check Point
RP02	0.01	0.00	0.02	Base Station

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Because AB02 has limited access do to the slides, Point RP01 is intended to supplement AB02 used in previous surveys to confirm recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for 1.12 Months M44 to M45

The rate of land movement varies and averaged about 2.6 feet per average month in the last period with a maximum of 4.0 feet per month. The general change in the rate of land movement (velocity) slowed and varied from about -25% to +1% and averaged -13%. See the attached spreadsheet “PB MOVEMENT DATA POSTING...M???.xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements are estimated at 0.04'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10'.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING...M???.xlsx” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Points KC27 and PB73 were destroyed since the last monitoring survey by construction. PB73 was reset nearby as new point PB76. Other new points are reported as follows: AB79, AB80, CR55A (replaces CR55), CR58, CR59, FT10, & KC38 on the offshore uplift. The uplifted area is generally about 11 feet above mean lower low water. Points KC34, KC35, KC36 & KC37 were set last month along and easterly of Schooner to assess if movement was occurring in that area. No movement was detected above the noise level of the measurements.

Point Description: Update of Set Points

AB79	Found L&T on curb of 31&34 San Clemente Dr.
AB80	2" Magnetic Nail drilled into the asphalt road on Santa Catalina Dr.
CR55A	Punch in center of square plastic marker in centerline of Valley View Dr.
CR58	Set 5/8"x 4' rebar/ plastic cap "Control Pt"
CR59	Set 5/8"x 4' rebar/ plastic cap "Control Pt"
FT10	Set 1"x 18" GIP/ plastic cap "Control Pt"
KC38	8" Spike on small bentonite rise in uplift 300' south of old shoreline

Addendum No. 8 Report

Portuguese Bend Land Movement Monitoring Survey **Partial Monitoring Survey No. M46 – September 20, 2024**

This is Partial Monitoring Survey No. 46 Addendum Report. The field survey took place September 20 2024 0.53 months after the last M45 Monitoring Survey. The survey included 19 monitoring points along PVDS and 4 reference control points (RP01, RP02, RP03 & PVE3RP).

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M46 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point RP02 and a check was made to PVE3RP and RP01 noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet			Reference at City Hall
	dN	dE	dZ	
PVE3RP	0.01	0.00	0.02	Reference at City Hall
RP01	-0.03	0.00	0.02	Check Point
RP02	0.00	0.00	0.00	Fixed Base Station

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for 0.56 Months M45 to M46

The rate of land movement for this sub-set of 19 points along PVDS varies and averaged about 1.9 feet per average month in the last period with a maximum of 2.6 feet per month. The general change in the rate of land movement (velocity) slowed and varied from about -47% to -7% and averaged -27%. See the attached spreadsheet “PB MOVEMENT DATA POSTING...M???.xlsx” for the movement Azimuths (directions clockwise from North) in degrees, the two-dimensional horizontal movements, vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period annualized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

It is estimated at the 95% Level of Confidence, the accuracy of the horizontal (2D) movements are estimated at 0.04'. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10'.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file ‘PB MOVEMENT DATA POSTING...M???.xlsx’ for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Point Description: Update of Set Points

RP03 Set 1/2"x 4' rebar in open field, bears N69-30E 44.37' from RP02 Set as a new reference point to allow for operating a second base station and for a check.

Addendum No. 9 Report

Portuguese Bend Land Movement Monitoring Survey Partial Monitoring Survey No. M47 – September 27, 2024

This is Partial Monitoring Survey No. 47 Addendum Report. The field survey took place September 27, 2024 0.23 months after the last M46 Monitoring Survey. The survey included 19 monitoring points along PVDS and 4 reference control points (RP01, RP02, RP03 & PVE3RP). See the attached spreadsheet “PB MOVEMENT DATA POSTING...M47xlsx” for the movements.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M47 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point RP02 and a check was made to PVE3RP and RP01 noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	0.00	-0.01	0.03
	Reference at City Hall		
RP01	-0.02	0.04	0.00
	Check Point		
RP02	-0.00	-0.00	-0.00
	Check Point		
RP03	0.00	0.00	-0.01
	Fixed Base Station		

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for 0.23 Months M46 to M47

In the “PB MOVEMENT DATA POSTING” spreadsheet, the measured land movements are listed for the period and also for a normalized average month of 30.42 days for comparing the rates of movement for previous periods. This survey included a sub-set of 19 points along PVDS. The movements vary and average about 1.4 feet with a maximum of 2.2 feet for an average month. The change in the rate of land movement (velocity) over the previous period slowed and varies from about -55% to -15% averaging about -30%. The attached spreadsheet “PB MOVEMENT DATA POSTING M47xlsx” lists the movement azimuths (directions clockwise from north) in degrees, the two-dimensional horizontal movements, and vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period normalized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.03 feet. The absolute value of the vertical vector residuals are estimated at 0.03 feet with a Standard Deviation of 0.04 feet.

Between two surveys, the accuracy of the measured horizontal (2D) movements is estimated, at the 95% Level of Confidence, at $0.04'$. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about $0.05'$ to $0.10'$ depending on obstructions to satellite signals. For the movements normalized to an average month, the estimated confidence interval is inversely proportional to the period (portion of the month). For example, $1 / 0.23 \text{ mo.} = 4.35 * 0.04' = 0.17'$. “Deflection Analysis” is an alternate method for estimating the confidence interval which is estimated at $-0.19'$ to $+0.20'$.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING...M??” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

Addendum No. 10 Report

Portuguese Bend Land Movement Monitoring Survey Full Monitoring Survey No. M48 – October 8, 2024

This is Full Monitoring Survey No. 48 Addendum Report. The field survey took place October 7-10, 2024, 1.12 months after M45 the last Full Monitoring Survey. The survey included 105 monitoring points and 4 reference control points (RP01, RP02, RP03 & PVE3RP). See the attached spreadsheet “PB MOVEMENT DATA POSTING M--xlsx” for the movements. Partial surveys of 19 points along PVDS were published as M46 and M47 as listed in the spreadsheet. The report for M45 to M48 is addressed here and in the spreadsheet.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M48 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point RP02 and a check was made to PVE3RP, RP01 and RP03 noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet		
	dN	dE	dZ
PVE3RP	0.00	0.00	0.02
RP01	-0.02	0.00	0.05
RP02	-0.00	-0.00	-0.00
RP03	0.00	0.00	0.02

Reference at City Hall
Check Point
Fixed Base Station

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for M45 to M48

In the attached “PB MOVEMENT DATA POSTING...” spreadsheet, the measured land movements are listed for the period and also for a normalized average month of 30.42 days for comparing the rates of movement for previous periods. This survey included 105 points. For the stated period, the normalized movements vary and average about 1.5 feet with a maximum of 2.6 feet for an average month. The change in the rate of land movement (velocity) over the previous period slowed and varies from about -63% to -19% averaging about -41%. The attached spreadsheet “PB MOVEMENT DATA POSTING... .xlsx” lists the movement azimuths (directions clockwise from north) in degrees, the two-dimensional horizontal movements, and vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period normalized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.01 feet with a Standard Deviation of 0.01 feet and range 0.00 to 0.05'. The absolute value of the vertical vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.02 feet, and range -0.06 to +0.08'..

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The accuracy or uncertainty of the measured horizontal (2D) movements between two monitoring surveys is estimated to be 0.04' at the 95% Level of Confidence. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10' depending on obstructions to satellite signals. For the movements normalized to an average month, the estimated confidence interval is inversely proportional to the period (portion of the month). For example, $1 / 0.23 \text{ mo.} = 4.35 * 0.04' = 0.17'$. "Deflection Analysis" is an alternate method for assessing uncertainties.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file "PB MOVEMENT DATA POSTING...M??" for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum

Point Description: Update of Set Points

CR60 Set 1/2"x 4' rebar with plastic cap "Control Point" in open field, northeast of the Ishibashi Trail

Addendum No. 11 Report

Portuguese Bend Land Movement Monitoring Survey **Partial Monitoring Survey No. M49 – October 13, 2024**

This is Partial Monitoring Survey No. 49 Addendum Report. The field survey took place October 13, 2024, 6 days or 0.23 months after the last M48 Partial Monitoring Survey dated October 7, 2024. The survey included 19 monitoring points along PVDS and 4 reference control points (RP01, RP02, RP03 & PVE3RP). See the attached spreadsheet "PB MOVEMENT DATA POSTING...M47xlsx" for the movements.

ADJUSTMENTS & ANALYSIS

A minimally constrained adjustment was processed for the M49 survey to develop NAD83 (2007) Epoch 2007.00 CA Zone 5 State Plane Coordinates and NAVD88 Heights. A least squares network adjustment was fixed at point RP02 and a check was made to PVE3RP, RP01 and RP03 noted below. Differences from the known fixed positions to the measured positions by this survey are listed here with their north, east and vertical components in feet.

ID	Differences in Feet			
	dN	dE	dZ	
PVE3RP	-0.01	-0.01	0.06	Reference at City Hall
RP01	-0.02	0.02	-0.01	Check Point
RP02	-0.00	-0.00	-0.00	Check Point
RP03	0.00	0.00	0.02	Fixed Base Station

Recovery and confirmation of a stable reference frame is essential to assess the actual movement of the monitoring points. The differences listed above are at the noise level of the measurements confirming a successful recovery of the reference frame. Additionally, California Spatial Reference Center CGPS (Continuous Operating GPS Stations) PVE3 and PVHS are incorporated periodically for additional verification of the stability and recovery of the reference frame.

2D Horizontal & Vertical Movements for M48 to M49

In the attached "PB MOVEMENT DATA POSTING..." spreadsheet, the measured land movements are listed for the period and also for a normalized average month of 30.42 days for comparing the rates of movement for previous periods. This survey included 19 points and four reference points. For the stated period, the normalized movements vary and average about 0.8 feet with a maximum of 1.7 feet for an average month. The

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change in the rate of land movement (velocity) over the previous period slowed and varies from about -54% to -5% averaging about -22%. The attached spreadsheet “PB MOVEMENT DATA POSTING... .xlsx” lists the movement azimuths (directions clockwise from north) in degrees, the two-dimensional horizontal movements, and vertical (elevation) changes during the period in US Survey Feet. See also the column for the rate of movement for each period normalized for an average 30.42-day month.

Accuracy Statements

The horizontal (2D) vector residuals are estimated at 0.01 feet with a Standard Deviation of 0.01 feet and range 0.00 to 0.05'. The absolute value of the vertical vector residuals are estimated at 0.02 feet with a Standard Deviation of 0.02 feet, and range -0.06 to +0.08' .

The accuracy or uncertainty of the measured horizontal (2D) movements between two monitoring surveys is estimated to be 0.04' at the 95% Level of Confidence. Movements less than the Confidence Interval are statistically indeterminate. The estimated vertical measured movement confidence is about 0.05' to 0.10' depending on obstructions to satellite signals. For the movements normalized to an average month, the estimated confidence interval is inversely proportional to the period (portion of the month). For example, $1 / 0.23 \text{ mo.} = 4.35 * 0.04' = 0.17'$. “Deflection Analysis” is an alternate method for assessing uncertainties.

Monitoring Point Monument Notes & Descriptions

See prior Reports for existing point descriptions. See the attached spreadsheet file “PB MOVEMENT DATA POSTING...M??” for California State Plane Coordinates Zone 5 in the NAD83 (2007) Epoch 2007.00 and elevations in the NAVD88 Datum.

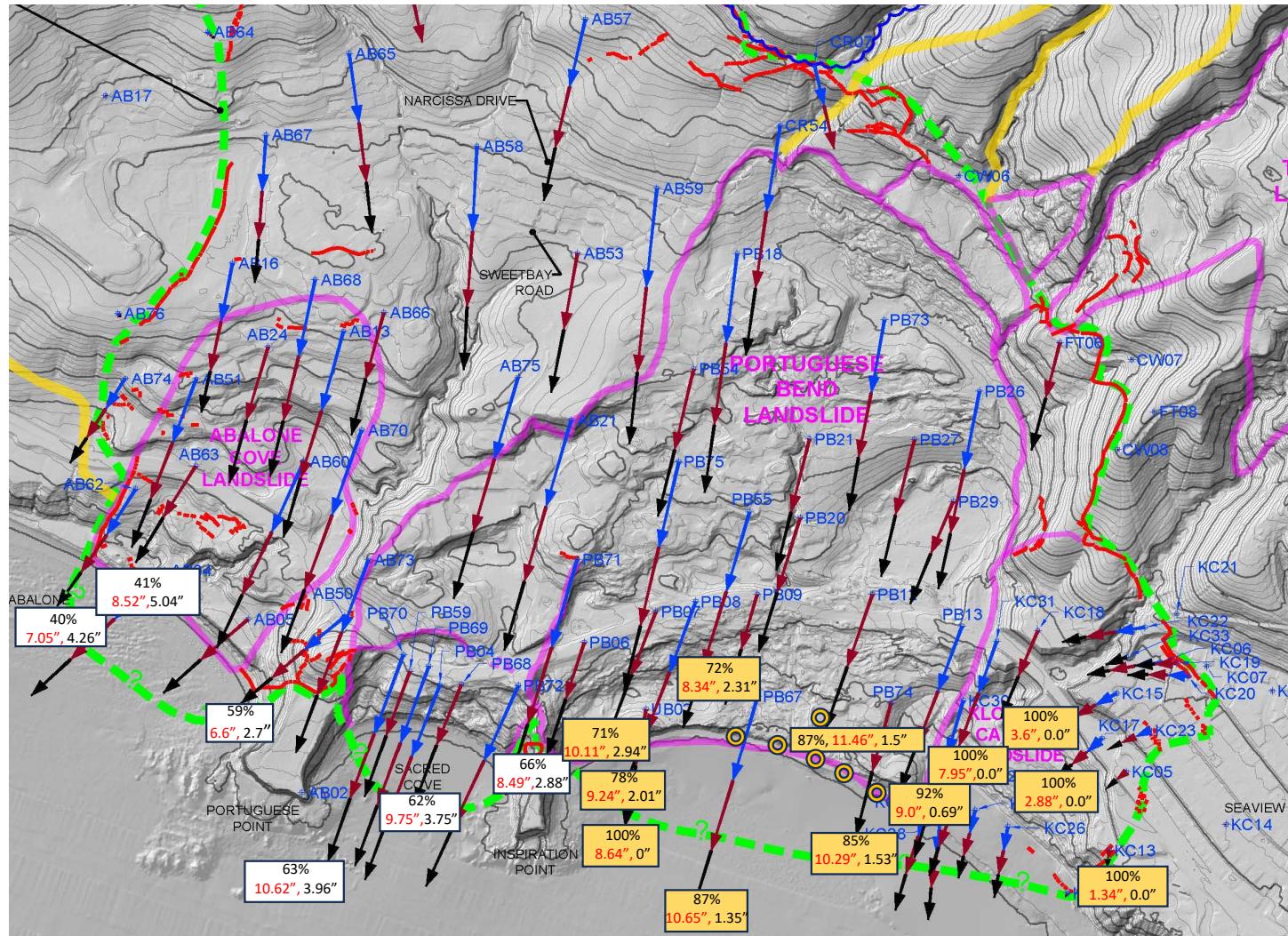
SURVEYOR'S STATEMENT

The M38 Fall October 2023 Full Survey and subsequent 2024 Surveys and Addendum Reports on the procedures, criteria, and results of the City of Rancho Palos Verdes Portuguese Bend Land Movement Monitoring Surveys were prepared by me on October 30, 2023 with updates through October 15, 2024 at the request of Ramzi Awwad, Director of Public Works for the City of Rancho Palos Verdes.


Michael R. McGee, PLS3945



Effect of Deep Dewatering Wells on Land Movement Between 9/4/24 and 10/13/24



Survey Points within close proximity of Dewatering Wells

Deep
Dewatering
Well

Numbers in boxes represent percent decrease in surface movement for the stated time period. Red = rate on 9/4/24 and Black = rate on 10/13/24 in inches per week

PORTUGUESE BEND LANDSLIDE MONITORING - MOVEMENT as of October 13 2024

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Prepared by McGee Surveying Consulting - Document Date: October 14, 2024

Monitoring Point Movements

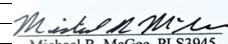
Notes:

PARTIAL PVDS MONITORING #49 (M49)

An average month is 30.42 days

* = Indicates no horizontal movement detected in the Period at the 95% level of confidence

\$ = Overall Movement is Relative to the Date of Origin, See Year



Michael R. McGee, PLS3945


October 13, 2024 Positions														Overall Movements (US Feet)						Periodic Movements M48 to M49 (US Feet)											
Point	NAD83 CA SPC Zone 5			NAVD88			Original Position to October 13, 2024										October 7, 2024 to October 13, 2024 (6 days - 0.197 Mo.)						Rate/Mo								
	North (ft)	East (ft)	Elev(ft)	North	East	Height	Azim. [°]	2D Dist.	Year	North	East	Height	Azim. [°]	2D Dist.	95%Err	Rate/Mo.	Note	% Chg													
AB01	1729427.53	6445709.60	178.69	-0.05	-0.01	0.07	192	0.05	1994	-0.01	0.00	0.03	160	0.01	0.04		*						AB01								
																							AB02								
																							AB04								
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AB50	1728070.50	6448229.55	184.02	-14.50	-18.63	2.04	232	23.61	1998	-0.12	-0.13	-0.03	227	0.18	0.04	0.90		-10					AB50								
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AB62	1728884.34	6446911.16	140.24	-26.01	-14.30	-2.77	209	29.68	2011	-0.23	-0.16	-0.04	214	0.28	0.04	1.42		-5					AB62								
AB63	1729029.34	6447290.03	171.97	-29.96	-17.01	-8.87	210	34.45	2011	-0.29	-0.16	-0.08	209	0.33	0.04	1.68		-10					AB63								
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KC13	1726576.33	6453068.89	192.05	-4.83	-0.75	0.85	189	4.89	2007	-0.01	0.01	-0.01	149	0.01	0.04		*						KC13								
KC15	1727584.41	6453111.58	284.06	-6.05	-9.52	-3.04	238	11.28	2007	-0.02	0.03	-0.03	128	0.04	0.04		*						KC14								
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KC17	1727295.89	6453019.60	212.77	-6.87	-6.83	-2.49	225	9.69	2012	-0.03	0.02	-0.03	144	0.03	0.04		*		KC17
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KC31	1727911.23	6452353.29	206.93	-13.70	-4.91	-0.57	200	14.56	2024	-0.02	0.03	-0.02	122	0.04	0.04		*		KC31
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																		KC37	
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PB04	1727627.07	6448834.44	164.40	-48.86	-17.30	-6.12	199	51.83	1994	-0.23	-0.09	0.04	203	0.25	0.04	1.25		-23	PB04
PB06	1727900.55	6449748.18	174.15	-67.90	-13.66	-8.91	191	69.26	1995	-0.19	0.00	0.02	180	0.19	0.04	0.96		-9	PB06
PB07	1728095.05	6450198.68	196.08	-80.88	-21.08	-4.14	195	83.58	1995	-0.19	-0.03	0.01	188	0.19	0.04	0.98		-17	PB07
PB08	1728162.02	6450450.71	195.66	-75.48	-19.09	1.98	194	77.86	1994	-0.13	0.00	0.01	178	0.13	0.04	0.67		-41	PB08
PB09	1728208.18	6450840.42	188.12	-80.40	-10.60	-4.40	188	81.10	1994	-0.15	0.04	0.04	164	0.15	0.04	0.77		-6	PB09
PB12	1728205.80	6451566.87	178.55	-124.68	-37.70	-14.74	197	130.26	1994	-0.10	0.01	-0.04	173	0.10	0.04	0.50		-36	PB12
PB13	1728005.72	6452133.35	205.81	-80.25	-30.99	-4.73	201	86.03	1995	-0.04	0.03	-0.03	144	0.05	0.04	0.23		-54	PB13
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																		PB59	
PB67	1727552.64	6450842.15	64.74	-86.08	-16.03	-11.27	191	87.56	2014	-0.09	-0.01	-0.06	184	0.09	0.04	0.45		-34	PB67
																		PB68	
																		PB69	
PB70	1727818.18	6448604.99	149.90	-36.72	-14.61	-6.34	202	39.52	2015	-0.25	-0.06	0.01	193	0.26	0.04	1.32		-20	PB70
																		PB71	
																		PB72	
PB74	1727510.61	6451685.73	99.54	-28.68	-7.09	-2.75	194	29.55	2023	-0.10	0.01	0.01	175	0.10	0.04	0.51		-23	PB74
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UB02	1727473.27	6450139.98	65.39	-107.85	6.20	-1.76	177	108.03	1997	-0.01	0.03	-0.06	100	0.03			*		UB02
PVE3RP	1729195.88	6438764.67	346.94	0.00	0.00	0.06				-0.01	-0.01	0.03							PVE3RP
RP01	1725591.73	6455633.56	292.71	-0.01	0.02	-0.03				0.00	0.02	-0.06		0.02					RP01
RP02	1730832.98	6445586.64	480.61	0.00	0.00	0.00				0.00	0.00	0.00		0.00	Fixed				RP02
RP03	1730848.52	6445628.20	479.96	0.00	0.00	0.02				0.00	0.00	0.00		0.00					RP03
																Av.	0.90	-22	



Rodger Schwecke
SVP & Chief Infrastructure Officer
555 W 5th Street
Los Angeles, CA 90013
tel: 213.244.2140
email: RSchwecke@socalgas.com

October 18, 2024

Dear Mayor Cruikshank,

I received your October 17, 2024, letter requesting that SoCalGas immediately restore natural gas service to the Portuguese Bend Community Association (PBCA), Portuguese Bend Beach Club (PBBC) and Seaview neighborhoods in light of the recently updated Portuguese Bend Land Movement Monitoring Survey Report prepared by McGee Surveying Consulting, which provides survey data collected from September 3, 2024, through October 12, 2024.

I would like to thank you for reaching out and we appreciate the opportunity to have an open dialogue with the City regarding the dynamic conditions created by the landslides impacting the Palos Verdes Peninsula.

As reflected in the updated Report, the decrease in surface movement recorded at the 12 survey points located within close proximity to the dewatering wells is encouraging. This data suggests that the City's water extraction efforts are effective. I hope that the ongoing land movement continues to decrease over a sustained period of time.

While the recent survey data does show a reduction in surface land movement in certain areas along the coastline, the data is representative of a relatively short period of 39 days and also represents a very localized area limited to the area around the dewatering wells, as opposed to the totality of the data obtained from the over 100 survey points included in the Report. Although promising, the localized data does not establish a trend or a predictable and sustained reduction in land movement, as unpredictable movement is still recorded at other survey points throughout the City of Rancho Palos Verdes.

Given the dynamic nature of the land movement and the significant safety risks posed by broken gas lines, the safety of the community dictates that a determination to restore gas service be based on a careful evaluation of the totality of the data obtained over a sustained period of time. Although SoCalGas does not presently know when it may be able to safely restore gas service, we are working with our Gas Engineering and Integrity Management staff, as well as outside consultants, to determine what conditions must exist and what mitigation strategies could be deployed to allow restoration of service in the impacted areas. In addition, SoCalGas is developing an operational process for safely re-pressurizing the lines where natural gas has been removed. Further, SoCalGas is collaborating with other utilities on their efforts to monitor the land movement and is incorporating that information into its analysis.

SoCalGas welcomes the opportunity to meet with the City on October 21, 2024, regarding the new and additional information, including geotechnical data, monitoring systems, and mitigation measures. SoCalGas looks forward to continuing to work with the City as we collectively navigate this dynamic situation.

Sincerely,



Rodger Schwecke

Congress of the United States

Washington, DC 20515

October 21, 2024

The Honorable Deanne Criswell
Administrator
Federal Emergency Management Agency
500 C Street, SW, 8th Floor
Washington, D.C. 20472

Dear Administrator Criswell,

Thank you for your commitment to protecting all communities before, during, and after disaster strikes. We write to you regarding the urgent landslide on the Palos Verdes Peninsula and its devastating consequences for the residents of the communities of Rancho Palos Verdes, Rolling Hills, and Rolling Hills Estates.

The Greater Portuguese Bend Landslide complex is located on the Palos Verdes Peninsula in western Los Angeles County. As a result of the 2022 and 2023 winter storms, all three cities have experienced land movement at an unprecedented pace. In the City of Rancho Palos Verdes, the amount of land movement that the city was previously experiencing over the course of an entire year is now occurring on a weekly basis.

With this accelerated movement, utility infrastructure has been significantly impacted, and many residents are now without access to basic utilities. The de-energization of the region also poses a significant threat to critical public infrastructure such as sewage service and the dewatering wells that are needed to mitigate the landslide.

Your leadership has been key in addressing this land movement. Through FEMA's Building Resilient Infrastructure and Communities (BRIC) grant, the City of Rancho Palos Verdes will be able to mitigate this crisis by eliminating excess moisture and reducing future ground movement. The City of Rancho Palos Verdes has also been working closely with FEMA and the California Office of Emergency Services (CalOES) in updating their scope of work for this project. This close partnership has allowed the City to maintain eligibility for the BRIC grant while conducting immediate work that is critical in addressing the ongoing movement.

We are thankful that federal resources are being utilized in the area. After a recent visit from Regional Administrator Bob Fenton, FEMA has requested the U.S. Army Corps of Engineers and the U.S. Geological Survey to provide technical assistance to the City of Rancho Palos Verdes as they work to stabilize the land. We urge any assistance be extended to the City of Rolling Hills and City of Rolling Hills Estates, so they too can work to mitigate the land movement and restore a sense of safety for their residents.

It is our understanding that the region faces challenges in accessing both state and federal aid because the land movement has persisted over time. We ask that FEMA work to identify any

assistance and funding, that can be made available, to the residents impacted by land movement on the Palos Verdes Peninsula.

We know you share our deep concern about the impact that this land movement is having on the residents and businesses in these communities. Like you, several of us have visited the landslide area and witnessed firsthand the devastating impact this issue has had on the community. Following the increased land movement, we have held several meetings with experts from FEMA and our state and county representatives to better understand the impacts of this movement and what resources could be deployed in response. Additionally, we are continuing to advocate for projects submitted by the Geologic Hazard Abatement Districts through the federal appropriations process.

We urge you to consider all pathways to provide support to residents impacted by land movement on the Palos Verdes Peninsula. We will continue to work with federal, state, and local officials to support these communities and their residents to ensure that any resources that can be offered to support them are available. We ask that you continue to keep our offices apprised of your work in the region and maintain communication as we work together to support impacted residents.

Thank you again for your attention to this emergency. We look forward to your response and cooperation in tackling this challenge.

Sincerely,



Ted W. Lieu
Member of Congress



Alex Padilla
U.S. Senator, California



Adam Schiff
Member of Congress



Laphonza Butler
U.S. Senator, California