SD ENGINEERING

RESIDENTIAL FOUNDATION EVALUATIONS

April 28, 2026

CLIENT: Rubicon Realty LLC

SUBJECT: Professional Service
File #260428AST
Limited Evaluation of Foundation Soundness
4254 Ampudia Street
San Diego, California 92103

Dear Client:

In accordance with the Professional Engineering Services Contract between you and SD Engineering, SD Engineering conducted a visual examination of the above property on April 28, 2026. The specific purpose of this examination was to evaluate the condition of the foundation.

> **This evaluation report incorporates by reference, as though fully set forth herein, a copy of the SD Engineering contract with you. This report is based upon all of the contractual provisions stated therein, and we remind you, among other things, that this report is solely to benefit you, and no third parties. This report is not to be relied upon by any other parties.**

The house is a single story wood frame structure with stucco siding and wood siding at the front. The dwelling is approximately 101 years old. For the purpose of this report it is assumed that the front door faces north and that the house faces east. The dwelling is situated on a lot that slopes down from northeast to southwest. Portions of the house have been added, especially the entryway at the front of the house, the master bedroom/master bathroom/dining room/living room at the south side of the house, and the kitchen nook/bedroom/bathroom at the rear of the house. This evaluation is limited to the foundation and features of the house likely to exhibit symptoms of possible foundation movement.

FINDINGS & OPINIONS

The concrete flatwork adjacent to the perimeter of the house was examined and is in satisfactory condition with only minor and hairline cracks. Gutters are present around portions of the house and are in serviceable condition. The downspouts discharge away from the foundation. There is no means for water to drain from the planter area between the north side of the house and the driveway. Irrigation should be kept to a minimum in this area. Maintaining the drainage to limit the opportunity for water to run or pond near the foundation, and thereby infiltrate the soils underneath the foundation, should reduce the probability of future movement of the foundation.

The wood siding at the front of the house is relatively flexible and is not expected to reflect long term movement of the structure typical of stucco or other more rigid siding systems.

The stucco siding was examined for significant cracking. There are mostly minor and hairline cracks noted in the stucco which are typical for this type of material. There are some diagonal cracks approximately 1/16 inch or less in width in the stucco at the west portion of the south side of the house. These cracks are possibly caused by some movement of the structure.

The ceilings and walls throughout the house were examined for significant cracking. No significant cracks were observed. The plaster type construction used in raised foundation houses such as this one is prone to cracking, especially across the ceilings and at the corners of the doors and windows. These types of cracks are usually cosmetic in nature and are not structurally significant unless showing appreciable width.

There are floor height variations in the wood framed floors. This condition is probably caused by the common sagging of the wood floor joists and wood sub-flooring or by settlement of the piers and posts in the foundation crawl spaces and is not uncommon for raised foundation houses of this age.

The doors and door frames were examined for fit and squareness. The hall door to the original back bedroom and the door between the original back bedroom and the kitchen are loose on their hinges and rub on the sides of the door frames. The door between the original back bedroom and the added bedroom at the rear of the house binds on the top of the door frame and is in need of planing. The frames for the doors described above are relatively square and there is no evidence that these conditions are structurally significant. The remainder of the doors operate freely, indicating no appreciable distortion of their frames.

The foundation consists of perimeter and interior concrete walls and interior concrete piers. The foundation walls around the outside of the house are inaccessible because of stucco and

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could not be directly examined for possible cracks, however, some cracks approximately 1/8 inch or less in width were noted in the stucco covering portions of the front and south foundation walls. These cracks are caused by cracking of the underlying portions of the foundation walls which are visible in the foundation crawl spaces. The soil adjacent to portions of the foundation wall footings in places along the south side of the house and around the southwest corner of the house has been removed, apparently by erosion of the soil. The soil has not been removed below the bottoms of the footings and there is no evidence that this condition is structurally significant at this time, however, this condition should be corrected to prevent "undermining" of the footings in the future. A hole was noted in the portion of the south foundation wall at the south side of the kitchen nook addition. This hole appears to be the location of a former sewer cleanout and there is no evidence that this condition is structurally significant, however, this hole should be filled-in to prevent small animals or pests from entering the foundation crawl space.

The foundation crawl spaces were entered and examined. There are some white powdery deposits on the foundation walls in places. This condition is caused by moisture migrating through the foundation walls and is relatively typical of raised foundation houses. There are mostly cracks approximately 1/8 inch or less in width in the foundation walls in places, which are not considered to be structurally significant. Wider cracks were noted in the following locations:

- There is a crack approximately 1/4 inch in width in the added front foundation wall located at the foundation wall step approximately 6 feet from the southeast corner of the addition foundation crawl space.

- There is a crack approximately 3/8 inch in width in the main house south foundation wall located at the foundation wall step approximately 10 feet from the southwest corner of the main house foundation crawl space.

- There is a tapered crack in the main house north foundation wall approximately 10 feet from the northwest corner of the main house foundation crawl space. The upper portion of this crack is approximately 1/4 inch in width and the lower portion is approximately 1/16 inch in width. The tapered nature of this crack is apparently caused either by uplifting of this portion of the foundation wall or by settlement of one or both ends of the foundation wall.

Houses built after approximately 1933 are required to have the sill plates anchored to the foundation walls to improve resistance to seismic (earthquake) forces. The sill plates are fastened to the tops of the added foundation walls with anchor bolts, this is proper. The sill plates do not appear to be fastened to the tops of the original foundation walls with anchor bolts.

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Portions of the perimeter of the house are supported by wood cripple walls. The cripple walls are not provided with significant shear (lateral) bracing as required by current construction standards to improve resistance to seismic forces.

The concrete piers and the wood posts, floor girders, and floor joists were examined. Some of the posts are not centered over the piers. This condition appears to be caused by workmanship variation during construction and does not appear to be caused by movement of the foundation. The floor girders in the main house foundation crawl space are of 4x4 lumber. Modern construction standards require the use of 4x6 floor girders to reduce flexing of the floor framing, however, the use of 4x4 girders was common at the time of original construction. Modern construction standards require that the spans of the 4x4 floor girder sections not exceed 4 feet to reduce flexing of the floor framing. It appears that the spans of some of the 4x4 girder sections exceed 4 feet. One of the floor joists near the hall bathroom plumbing lines in the main house foundation crawl space was noted to be cut. A "sister" floor joist has been installed alongside this cut floor joist, apparently for improved floor framing support, however, this "sistered" joist is improperly installed. This condition should be corrected to provide proper support for the floor framing.

Some water staining and deterioration were noted to the wood portions of the foundation. There is also earth/wood contact in places. This condition may cause premature deterioration of the wood. Evaluation of deterioration of the wood portions of foundations is within the purview of a licensed structural pest control company and is beyond the scope of this evaluation. It is recommended that a licensed structural pest control company be contacted for further inspection and repair recommendations.

The soil in the crawl spaces was dry at the time of the evaluation. Maintaining the drainage to limit the opportunity for water to run or pond near the foundation, and thereby infiltrate the soils underneath the foundation, should reduce the probability of future movement of the foundation.

There is no visual evidence of structural distress or excessive movement of the superstructure noted, however, some foundation repairs are deemed necessary.

Modern standards would require larger anchor bolts fastening the sill plates to the tops of the foundation walls, lateral bracing of the cripple walls, and positive attachment of the posts to the concrete piers and to the girders as well as other improvements to better resist seismic forces. While upgrading the property to meet modern standards regarding resistance to earthquake forces by taking such measures may be desirable, there is no statutory requirement to make such improvements.

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RECOMMENDATIONS

The foundation should be repaired as specified in Appendix A. The Client is advised that performing the recommended repairs will not significantly improve the ability of the foundation to resist forces which may be applied by future movement of the underlying soils.

The eroded areas adjacent to portions of the foundation wall footings in places along the south side of the house and around the southwest corner of the house should be properly backfilled with sand or decomposed granite to prevent “undermining” of the footings in the future.

The hole in the portion of the south foundation wall at the south side of the kitchen nook addition should be dry packed with cement grout or mortar to prevent small animals or pests from entering the foundation crawl space.

Any doors which rub or bind may be planed in order to improve their fit. When planing a door, sufficient space should be created between the door and the frame to allow for normal swelling and shrinking of the wood. It is recommended that the top and bottom edges of the doors be painted or sealed to minimize the absorption of moisture.

Keeping water away from the foundation is essential to reducing the probability of future movement of the foundation. Maintenance recommendations to assist in keeping water away from the foundation are provided in Appendix B.

FOLLOW-UP SERVICES

SD Engineering offers to provide certification of the completed repair work, if desired. The Client is advised that certification of repairs, as defined in the Professional Engineers Act, Section 6735.5 of the California Business and Professions Code, constitutes an expression of professional opinion and does not constitute a warranty or guarantee, either expressed or implied. Our fee for returning to the property, observing the completed repairs, and preparing a written report is $500.00. This fee is in addition to the fee for the original evaluation and is due at the time of the certification site visit. Any site visits in addition to the planned site visit shall be billed to you at a basic rate of $200.00 each. This quote is available only to the above named Client. Extension of this quote to another Client is at the option of SD Engineering and would require the new Client to execute a separate services contract.

Providing additional information which may be required in order to obtain a building permit is not within the scope of our initial evaluation. Assistance in meeting permit requirements directly related to our design is available on an hourly basis. The fee for these services is $120.00 per hour.

CLOSING

The purpose of the recommended repairs is to perform a "repair in kind" of the foundation and the repair recommendations do not include upgrading the structure to conform to current seismic (earthquake) design requirements.

The Client is reminded that the opinions and recommendations provided in this report are based upon a limited visual evaluation of structural soundness without the benefit of geotechnical investigation and that SD Engineering makes no representations or guarantees regarding future performance of the property. Remedial measures which may be recommended cannot guarantee that future movement of the foundation will not occur.

The Client is advised that raised foundation houses such as this one are more flexible than slab-on-grade houses and that nuisance/cosmetic symptoms of minor foundation movement, such as cracking of the ceilings and walls and out of squareness of the door frames, may appear in the future.

The Client is reminded that particular attention should be given to maintaining proper drainage as recommended in Appendix B.

It is recommended that this Company be retained to re-evaluate the house should any visible signs of distress appear.

We remind you that this entire report incorporates by reference, as though set forth fully herein, all of the provisions of the contract between SD Engineering and you. It is thus necessary, should you have any questions regarding the scope of SD Engineering's services and responsibilities, that you consult the subject contract. A blank copy of the contract is attached to this report for reference.

We appreciate the opportunity to be of professional service to you in this matter. Should any questions arise or should you desire to retain SD Engineering to certify the completed repairs please feel free to contact our office.

Sincerely,

Trent Burdeno
B.S.C.E., R.C.E.

The Stamping and signing of this document indicates that the engineer of record has approved the findings, conclusions, and recommendations and does not indicate the approval of the local Building Official. Obtaining any necessary building permits is the responsibility of the property owner.



4/28/26

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APPENDIX A

FOUNDATION REPAIR SPECIFICATION

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1. The foundation should be repaired as specified below.

2. It shall be noted that for the purpose of this project it is assumed that the front door faces north and that the house faces east.

3. All work shall be performed in accordance with the California Building Code (CBC) as adopted by the appropriate local building authority. The following specifications are general in nature. The contractor performing the work is expected to have a thorough knowledge of the CBC requirements.

4. Recommendation for pressure injection of epoxy is referring to the injection of high strength epoxy adhesive using automated commercial injection equipment intended for this purpose. Cracks are to be properly cleaned/prepared prior to epoxy injection. Gravity filling or other methods of placement of epoxy are not recommended as a substitute for pressure injection.

5. Unforeseen conditions may require changes to the repair recommendations. Should unforeseen conditions be encountered, SD Engineering should be contacted for possible revision of the repair recommendations. Evaluation of such conditions and modification to the repair recommendations may require an additional fee.

6. Deviation from these recommendations may jeopardize the ultimate success of the repairs. It is recommended that the contractor performing the repairs be provided with a copy of these recommendations and that the contractor be encouraged to contact SD Engineering directly for any clarification of these recommendations. Proposed deviations from these recommendations should be reviewed and approved by SD Engineering prior to accomplishment of the work. Telephone requests for clarification will normally be returned no later than the evening received.

7. The crack in the added front foundation wall located at the foundation wall step approximately 6 feet from the southeast corner of the addition foundation crawl space, as well as the crack in the main house south foundation wall located at the foundation wall step approximately 10 feet from the southwest corner of the main house foundation crawl space, should be repaired by installing a steel plate across each crack on the interior sides of the foundation walls. Each steel plate shall be installed mid way between the top of the

foundation wall and the surface of the soil. The steel plates shall be Simpson Strong-Tie HST5 or an approved equivalent. Each plate shall be secured in place with 5/8 inch anchor bolts installed in the foundation wall. The anchor bolts may be of the expansion type or of the epoxied in place type. If desired, Simpson Strong-Tie Titen HD screw anchors may be substituted for anchor bolts. The cracks shall also be pressure injected with epoxy. The cracks may be injected from both sides of the foundation wall, or, if injected from only one side, care shall be taken to ensure that the epoxy penetrates through the crack to the other side of the foundation wall.

8. The tapered crack in the main house north foundation wall approximately 10 feet from the northwest corner of the main house foundation crawl space should be repaired by installing steel plates across the upper and lower portions of the crack on the interior side of the foundation wall. The upper edge of the upper steel plate shall be installed 6 inches below the top of the foundation wall and the lower edge of the lower steel plate shall be 1 inch above the surface of the soil. The steel plates shall be Simpson Strong-Tie HST5 or an approved equivalent. These plates shall be secured in place with 5/8 inch anchor bolts installed in the foundation wall. The anchor bolts may be of the expansion type or of the epoxied in place type. If desired, Simpson Strong-Tie Titen HD screw anchors may be substituted for anchor bolts. The crack shall also be pressure injected with epoxy.

9. New piers and posts should be installed between the existing piers and posts throughout the main house foundation crawl space so that no 4x4 floor girder section span exceeds 4 feet. The new piers shall be cast-in-place concrete, shall be 12 by 12 inches square, and shall extend a minimum of 12 inches below the surface of the soil. The concrete is to be 2,500 p.s.i. at 28 days. The upper portions of the piers may be precast pier tops pushed into the wet concrete or may be cast as part of the pier. The piers shall extend a minimum of 6 inches above the surrounding soil. There shall be two metal post brackets cast into the top of each pier. The wood posts shall be of 4x4 lumber. The top of each new post shall be secured to the floor girder with two heavy gauge galvanized steel “T” brackets such as Simpson Strong-Tie 66T Strap Ties, one on each side of the floor girder. The post brackets cast into the top of each pier shall be secured to the bottom of the post. The installation of these brackets is to prevent the posts from falling out in the event that changes in the moisture content of the soil in the foundation crawl space cause a loss of vertical loading on the posts. It is not intended to upgrade the posts and piers to comply with current seismic design standards.

10. A new floor joist should be installed adjacent to and as close as possible to the cut and “sistered” floor joist located near the hall bathroom plumbing lines in the main house foundation crawl space. The new floor joist shall be of the same sized lumber as the original joists and the ends of the new floor joist shall be supported by the main house north foundation wall and the adjacent floor girder.

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APPENDIX B

MAINTENANCE RECOMMENDATIONS

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Keeping water away from the foundation is essential to reducing the probability of future movement of the foundation. The following maintenance recommendations are provided to assist in keeping water away from the foundation:

1. In maintaining and modifying the landscaping and the concrete flatwork around the house, care should be taken to ensure that the soil and the flatwork slope away from the foundation and runoff water drains freely to the street or to another proper drainage discharge area. Water should not be allowed to pond on the property, especially in the areas adjacent to the foundation. Drought resistant landscaping is recommended for areas around the foundation. In maintaining the drainage care must be taken to keep the soil level well below the bottom edge of the wood siding and well below the tops of the concrete foundation walls to prevent possible moisture intrusion into the wall assembly and deterioration of the wood siding and framing. In newly constructed homes the soil level must be a minimum of 4 inches below the bottom edges of wood siding and a minimum of 6 inches below the tops of concrete foundation walls, however, this may not have been required at the time of construction.

2. Irrigation should be kept to a minimum in the areas adjacent to the foundation.

3. The gutters should be kept clean and the downspouts maintained to ensure water is directed well away from the foundation.

4. Preventing the entry of water into the foundation crawl spaces and the timely removal of water which may enter the crawl spaces are extremely important. The foundation crawl spaces should be periodically examined for the presence of water, especially during wet weather or if plumbing leaks are suspected. If standing water or mud is present, the source of the water should be determined and corrected. Timely correction of water intrusion into the crawl spaces is essential to satisfactory performance of the foundation.

5. The water bill should be regularly monitored and any unexpected increase in consumption investigated to ensure water from an underground leak or a leak in the foundation crawl spaces does not infiltrate the soil underneath the foundation.

SD ENGINEERING

RESIDENTIAL FOUNDATION EVALUATIONS

PROFESSIONAL ENGINEERING SERVICES CONTRACT

PURPOSE:

The engineering service to be performed for the Client consists of providing a limited evaluation of the structural integrity of the dwelling foundation. The investigation will be limited to the observations made during the evaluation and any recommendations which may be provided will be based on the Engineer's opinions as well as generally accepted engineering practices. The report SD Engineering provides is neither a geological nor a geotechnical report. The engineer of record for these services is Trent Burdeno, R.C.E. #C87361. The condition of the property at any time following the evaluation may vary from the condition at the time of the evaluation and SD Engineering makes no representations or guarantees regarding future performance of the property. The evaluation report is for the sole use of the Client and is not transferable. SD Engineering does not intend that anyone other than the Client will rely upon this report, therefore, it is intended solely for the Client, to the exclusion of all others.

SCOPE:

The evaluation of the foundation will be based solely upon a visual examination of the exterior and interior of the dwelling. SD Engineering will examine the exterior siding and the interior ceilings and walls for significant cracking and other signs of movement. The doors and door frames will be examined for fit and squareness. For raised foundation dwellings, the accessible portions of the foundation crawl space will be examined. For slab-on-grade dwellings, a manometer will be used to perform a random floor level survey on the structure to determine the possibility of any differential settlement and/or movement which may have occurred. SD Engineering is not responsible for removal of carpeting or any other flooring coverings. The drainage around the perimeter of the dwelling will be visually examined.

The basic evaluation fee includes repair recommendations provided that any repairs which may be deemed advisable are relatively simple and do not require soil testing, design calculations, or the preparation of extensive specifications. If the repairs are more complex, a fee for designing repairs will be quoted in the evaluation report. Certification of the completed repair work is available for an additional fee. The Client is advised that certification of repairs, as defined in the Professional Engineers Act, Section 6735.5 of the California Business and Professions Code, constitutes an expression of professional opinion and does not constitute a warranty or guarantee, either expressed or implied. The fee for certification of any recommended repairs will be quoted in the evaluation report.

Any recommended repairs will be predicated upon the original construction meeting accepted standards at the time of construction. Discovery of sub-standard original construction or other conditions not known to SD Engineering at the time of the evaluation may require modification of the repair recommendations. Any such conditions not noted in the original report should be reported to SD Engineering for evaluation and possible modification to the original repair recommendations. Evaluation of such conditions and modification to the recommendations may require an additional fee.

The report may include recommendations which require a building permit. Obtaining any necessary building permits is the responsibility of the property owner. SD Engineering provides only the repair design and does not provide other information which may be required including, without limitation, floor plans, plot plans, legal descriptions, or any other documents. Satisfaction of all permit fees and requirements is the responsibility of the property owner.

Revised 11/19/21

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EXCLUSIONS:
The scope of this evaluation does not include any determination of permit status or code compliance for the original construction or for any additions, alterations, or repairs.

No soil samples will be taken and no soil tests will be performed. The report which will be provided will not be a geological or geotechnical report.

No visual examination or tests will be performed for asbestos, radon, mold, mildew, fungus, pests (including, without limitation insects and rodents), lead paint, pollutants, or other hazardous organic or inorganic materials or substances. This evaluation also excludes items which would normally be included in Structural Pest Control and Physical Inspections.

Determination of compliance with lot line set-backs or other zoning requirements, location of the property lines, and measurement of lot or home size or other matters pertaining to surveys are beyond the scope of this evaluation.

NO WARRANTIES OR GUARANTEES:
SD Engineering does not guarantee or warrant, expressly or impliedly, the services being provided hereunder.

LIMITATION OF LIABILITY:
In recognition of the relative risks and benefits to both of the parties, the parties have allocated their contractual and other risks such that the Client agrees, to the fullest extent permitted by law, to limit the liability of SD Engineering, its agents, employees, directors, officers, and principals for any and all claims, demands, losses, liabilities, attorney fees, or injuries, whether sounding in tort, contract, indemnity, law, equity, or otherwise, so that the total aggregate liability of SD Engineering to the Client shall not exceed $5,000. It is intended that this limitation shall apply to any and all liabilities, causes of action, or claims for relief, however alleged or arising, unless otherwise prohibited by law.

INDEMNITY:
The Client agrees to defend, indemnify, and hold harmless SD Engineering from and against any and all claims, demands, losses, injuries, or liabilities arising out of this contract to the fullest extent permitted by law.

MEDIATION:
In the event a dispute, other than one regarding the payment of SD Engineering's fee, arises between SD Engineering and the Client, the parties agree to (a) first attempt to reach an informal resolution of the dispute with a face-to-face meeting, and (b) in the event the meeting fails to be dispositive, the parties agree to mediate their dispute before the JAMS Arbitration, Mediation and ADR Services in San Diego, California with each party paying half of the JAMS mediation fee. Such mediation is a condition precedent to litigation between the parties, except with respect to a fee dispute.

CANCELLATION & SEVERABILITY:
This contract may be cancelled by either party prior to the performance of the services upon reasonable notice. Should any portion of this contract be declared void or unenforceable, the remaining portions shall remain in effect.

COMPLETE AGREEMENT:
This contract is the complete embodiment of the parties' intentions to the exclusion of any prior oral or written agreements between them respecting its subject matter.

NO THIRD PARTY BENEFICIARIES:
There are no third party beneficiaries to this contract. The contract is solely to benefit the executing parties.

CLIENT ACKNOWLEDGEMENT:
I/We hereby acknowledge that I/we understand and are in agreement with the terms and conditions of this contract and agree to pay the evaluation fee quoted below. If this contract is executed on behalf of Client by any third party, the person executing this contract expressly represents that he/she has the full and complete authority to execute this contract on Client's behalf and to fully and completely bind Client to all of the terms of this contract. Fees are due at the time of the evaluation unless other prior arrangements are made. Any additional services requested by the Client may require additional fees.

File #_____ Fee $_____

_____
Property Address

_____
City, State, Zip

_____
Client Name

_____
Client Signature Date

_____
Client Signature Date

_____
SD Engineering Signature Date

Revised 11/19/21

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