City of Arts & Innovation

City Council Memorandum

TO: **HONORABLE MAYOR AND CITY COUNCIL** **DATE: MARCH 11, 2025**

FROM: **PUBLIC WORKS DEPARTMENT** **WARD: 3**

SUBJECT: **REQUEST FOR SPEED HUMPS ON MAUDE STREET**

ISSUE:

Consider implementation of speed humps along Maude Street between Lincoln Avenue and Marguerita Avenue.

RECOMMENDATION:

That the City Council approve the proposed speed humps on Maude Street between Lincoln Avenue and Marguerita Avenue.

BOARD RECOMMENDATION:

On February 6, 2025, the Transportation Board (Board) reviewed this matter; eight of nine members were present. The Board voted unanimously to recommend approval of the proposed speed humps along Maude Street between Lincoln Avenue and Marguerita Avenue.

BACKGROUND:

The Neighborhood Traffic Management Program (NTMP) was designed to provide general guidelines for the assessment of traffic issues on local, collector, and arterial roadways throughout the City as well as outline various traffic mitigation measures which may serve as suitable solutions to demonstrated traffic issues.

As part of the Neighborhood Traffic Management Program (NTMP), the City re-instated a formal Speed Hump Policy Guidelines and Procedure on May 7, 2024, to effectively address concerns related to speeding on residential streets. The goal of this policy is to enhance neighborhood safety by implementing traffic calming measures, such as speed humps, to reduce vehicle speeds on eligible residential streets. This policy aims to unite neighborhoods and identify appropriate measures to improve travel behavior for the benefit of affected communities. Speed humps are a potential secondary option for residential designated streets. A website outlining details of the Speed Hump Program has been developed – Speed Hump Program | Public Works

A speed hump is an elongated mound in the roadway pavement surface extending across the

traveled way designed perpendicular to the traffic flow. The purpose of a speed hump is to regulate traffic speeds by providing minor vertical deflection while driving through it. Speed humps are still considered experimental roadway features; therefore, additions, alterations, or removals of all speed humps may occur at any time.

DISCUSSION:

The City received a petition from the residents on Maude Street requesting speed humps to be installed on their street. The petition and roadway conditions on Maude Street between Lincoln Avenue and Marguerita Avenue (Attachment 1 – Location Map) were reviewed for consistency with the City's Speed Hump Program. The petition received indicates support by 16 of the 18 residents (89%) on Alicante Drive for speed humps, which meets the minimum requirement of 70% of the residents. There were no signatures from residents opposing the consideration of speed humps. Staff investigated speed, volumes, and street geometrics. Comparing staff's investigation of Maude Street with the City's set guidelines for speed humps resulted in 7 out of 8 criteria being met. Based on the requirement to meet all 8 criteria, Maude Street does not qualify for speed humps per the City approved policy. A summary of the findings is provided on Attachment 2. However, based on the street's proximity to multiple schools (Gage Middle School, California School of the Deaf, Raincross High School, and Summitview School), existing traffic calming measures previously implemented, and anticipated speed reduction benefits, the city is recommending approval of the proposed speed humps on Maude Street between Lincoln Avenue and Marguerita Avenue.

Maude Street is a two-way (one lane in each direction) residential street located between Lincoln Avenue to the south, and Marguerita Avenue to the north. It is approximately 1,400 feet in length and 40 feet wide, which meets the minimum required length of ¼ mile (1,320) and does not exceed the maximum width of 40 feet. Maude Street continues as a "T" intersection to the north, a 4-legged intersection to the south and intersects two private driveways. The intersections at Marguerita Avenue and Lincoln Avenue are multi-way stop sign-controlled intersections. There are 18 homes on the west side of the street meeting the minimum requirement of thirteen (13) homes for a single loaded street. Attachment 3 illustrates the potential speed hump locations along Maude Street. There are three (3) speed humps that are shown.

The speed survey and traffic counts were conducted on Maude Street as part of staff's investigation in December 2024. The radar survey measured an 85th percentile speed of 38 mph on Maude Street which meets the 37-mph minimum required by the city program. The corresponding 24-hour two-way volume count indicated a total volume of 5,222 vehicles per day, which exceeds the maximum threshold of 1,999 vehicles per day. The estimated vertical grade is 2.7% along Maude Street which satisfies the maximum eight (8) percent vertical grade threshold. Several photos of Maude Street are included in Attachment 5.

Under the Neighborhood Traffic Management Program (NTMP), the initial traffic calming strategies have already been installed on Maude Street such as 25 MPH posted speed limit signs, centerline striping, edge-line striping, red 25MPH pavement markings, school signage and spot police enforcement. Despite all the previously utilized speed management alternatives, vehicular speeding continues to persist with an 85th percentile speed of 38 MPH (13 MPH over the posted speed limit of 25 MPH).

The Riverside Fire Department has provided a general comment regarding proposed speed humps in consideration of potential impacts to emergency response times, if any. The RFD has requested the city to consider installing Speed Bump (Type II) of Standard Plan 257 for new speed hump installations. The Type II Speed Bump has gaps in the middle to allow emergency vehicles to bypass speed humps on the roadway during an urgent emergency call. Golden Avenue between Pierce Street and Cypress Avenue currently has Type II Speed Bumps installed and there have not been any concerns with its utilization.

Staff has prepared an exhibit showing potential locations for the installation of speed humps. The locations are selected based on having adequate spacing between curves and intersections and adequate sight distance to allow for proper signing on each approach. Utility covers and driveways in the street are also avoided. Staff selected locations where signs may be placed on existing poles or streetlights to minimize the impacts of the signs on the neighborhood. A total of three (3) potential locations were found for speed humps. Each speed hump installed would potentially add an additional delay of 10 (ten) seconds. However, the usage of the Type II Speed Bumps would significantly minimize if not eliminate delays for emergency vehicles.

A review of our traffic accident records for the past three years on Maude Street from 2022 through 2024 shows three reported traffic collisions. Two of the traffic collisions occurred at the intersection of Lincoln & Maude and were due to a hazardous movement and pedestrian right-of-way violation. The third collision involved an improper turning movement from a parked car located 412 feet south of Marguerita along northbound Maude St. There were no speed related collisions.

There are parallel local streets that have similar north-south orientation to Maude Street. The proposed installation of speed humps along Maude Street may divert traffic to these streets in an attempt of drivers to avoid speed humps. The local streets of Gertrude Street, Kathleen Street, and Horace Street may be affected most by diverted traffic due to their parallel north-south orientation to Maude Street and should be monitored if the proposed speed humps along Maude Street are to be approved. The City's Speed Hump Policies, Guidelines, and Procedures are included in Attachment 6. Attachment 7 illustrates the City's Standard Plan Detail No. 251 – Speed Bump.

The Institute of Transportation Engineers (ITE) has also published some Guidelines for the Design and Application of Speed Humps. One of the guidelines worth mentioning from the ITE guidelines is the spacing for speed humps (see Attachment 8). The exhibit displays a properly designed speed hump spacing of about 150–350-foot space on each side prior to the speed hump.

The Federal Highway Administration (FHWA) Engineering Speed Management Countermeasures offers an excellent resource for speed humps studies and resulting speed reduction effectiveness (Attachment 9). As documented, speed humps can be effective at reducing speeds in the range of 5-13 mph.

Conclusion**:**

Maude Street meets 7 of the 8 criteria of the City's adopted policy for speed humps. It exceeds the maximum average daily traffic (ADT) threshold of 1,999 vehicles per day. The observed ADT was 5,222 vehicles during a typical Wednesday (12/18/24), the observed 85th percentile speed was 38 mph, and the calculated vertical grade was 2.7% percent. Based on the requirement to

meet all 8 criteria, Maude Street does not qualify for speed humps per the City approved policy. A summary of the findings is provided per Attachment 2. However, based on the street's proximity to schools, existing traffic calming measures implemented, and anticipated speed reduction benefits, the city is recommending approval of the proposed speed humps on Maude Street between Lincoln Avenue and Marguerita Avenue. Furthermore, ITE recommends that properly designed speed hump spacing within the range of 150-350 feet space on each side prior to the speed hump and FHWA studies have shown that speed humps can be effective at reducing vehicular speeds in the range of 5-13 mph.

STRATEGIC PLAN ALIGNMENT:

The proposed speed humps on Maude Street align with **Strategic Priority 2 – Community Well-Being** and **Goal 2.4** - Support programs and innovations that enhance community safety, encourage neighborhood engagement, and build public trust.

This item aligns with each of the five Cross Cutting Threads as follows:

1. **Community Trust** – As part of the Neighborhood Traffic Management Program (NTMP), the Speed Hump Program establishes community Trust through the transparent methodology and public process set forth at multiple public meetings. The proposed speed humps are based on engineering judgement, cited benefits, and public interest.

2. **Equity** – The Speed Hump Program provides safe usage of the public right of way for all roadway users including vehicles, bicycles, and pedestrians. Proposed restoration of the use of speed humps as a secondary mitigation measure option under the NTMP for local 25 MPH streets and the qualifying criteria apply to all eligible neighborhoods and street segments.

3. **Fiscal Responsibility** – The proposed speed humps technical qualifying criteria will aid in reducing potential annual project costs by targeting 25 MPH local streets experiencing both high traffic volumes and substantial speeding to provide a traffic calming and increase safety at the most impacted locations.

4. **Innovation** – The proposed Speed Bump (Type II) design will create gaps on each speed hump which minimizes, if not eliminate, impacts to emergency response times for emergency vehicles.

5. **Sustainability & Resiliency** – The use of speed humps as part of the NTMP will provide another potential traffic calming tool to reduce speeding and increase safety in residential neighborhoods. Speed humps serve as a sustainable, lasting, and physical deterrent to vehicle speeding.

FISCAL IMPACT:

The estimated total fiscal impact of this action for the cost of installation of speed humps, signage and pavement markings is $21,480. Funding is budgeted and available in the Measure A Fund, Speed Hump Traffic Calming project account number 9927230-440313, to cover this cost.

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Attachments:

1. Location Map
2. Speed Hump Criteria Checklist
3. Potential Locations
4. Traffic Count Data
5. Street View Photos
6. Speed Hump Program Policies, Procedures, and Guidelines
7. Standard Plan No. 251 – Speed Bump (Type II)
8. Speed Hump Spacing Exhibit from ITE Speed Hump Guidelines
9. FHWA Engineering Speed Management Countermeasures – Speed Humps
10. Presentation
11. Transportation Board Meeting Minutes – February 5, 2025