

EXHIBIT A

City of Commerce Speed Hump Policy



Approved by:
City of Commerce City Council
....., 2020

I. GENERAL POLICY STATEMENT

The City of Commerce (City) is committed to policies and actions that can foster and promote traffic calming measures whenever necessary to maximize pedestrian safety, to minimize nonessential vehicular traffic on residential streets, and/or to slow vehicles to an appropriate speed. One possible means to accomplish these three goals is a "roadway vertical deflection device" which is commonly known as a *SPEED HUMP*. The City of Commerce Speed Hump Policy applies to currently installed speed humps and future speed hump requests.

Speed humps, rumble strips, etc., are all considered "traffic calming" devices.

Also included in this speed hump policy is the installation of "rumble strips," which are a series of raised strips, markers, or buttons across a road, changing the noise a vehicle's tires make on the surface, thereby warning drivers of speed restrictions. The installation policy of these rumble strips will coincide with the installation policy of speed humps, as described in this speed hump policy, and ultimately, City staff will make the final determination as to which traffic calming device should be installed.

This speed hump policy is primarily aimed for the installation of speed humps in residential neighborhoods. Normally, speed humps are not installed in industrial and commercially zoned areas. However, this same policy can be also implemented if City staff determines after careful and procedural (i.e., engineering) analysis that speed humps should be installed in an industrial and commercially zoned area due to prevailing safety concerns.

As a practical matter, the City reserves the right to install or remove any traffic calming device, without public approval, if engineering or procedural analysis demonstrates that such action is warranted, and that it is in the interest of public safety.

Speed humps and other pavement undulations are not approved traffic-control devices as defined in the *California Manual on Uniform Traffic Control Devices* (CA MUTCD), which is the official document establishing which roadway devices may be readily installed on public streets. Instead, a speed hump is considered to be a geometric "design feature" within the roadway that must be designed, installed and maintained based on prudent engineering judgment and supported by a sufficient study of its need--to avoid property damage, personal injury or other possible civil liabilities. Therefore, all pertinent federal and state laws governing roadway safety will be considered in the design and positioning of any speed hump or other traffic calming measures.



II. ADMINISTRATIVE AUTHORITY

1. The Public Works Department (Department) is responsible for maintaining a list of locations where members of the public have requested the installation of speed humps. The list includes the specific street location, the name, address and phone number of the requestor, and the date of the request.
2. The Department is given the authority to conduct engineering studies and to provide technical engineering advice and services to other City departments, commissions and agencies. Such services, *upon the recommendation of the Traffic Commission and approval of the City Council*, can include traffic studies and the design, installation and maintenance of City streets, signals, signs, street lighting and other traffic devices. In addition to having the authority to install and operate official traffic control devices, the Department may place and maintain additional traffic control devices deemed necessary to regulate traffic in a safe and orderly manner under State Law, to guide and warn traffic, and to remove hazards to life or property.
3. Pursuant to this policy, the Department will study, assess, qualify and carry out the installation of speed humps based on the *Eligibility Criteria* specified herein, including other possible complementary traffic calming devices to mitigate any potential adverse impacts resulting from such installation.

III. DEFINITIONS

The following are definitions or explanations of terminology used in this report.

1. **Americans with Disabilities Act (ADA)** is federal legislation that mandates the provision of access while restricting impediments for disabled persons and establishes many criteria and standards for such access.
2. **Average Daily Traffic (ADT)** is the total number of vehicles that travel (both directions combined) along a roadway in a typical 24-hour period, usually counted on a midweek day.
3. **Collector Street** is a roadway that provides access between arterial (major) streets and local streets, typically with access to abutting properties. The Circulation Element of the Commerce General Plan identifies which streets are classified as arterials.
4. **Gutter Running** describes the situation where motorists purposely drive close to the gutter so the right-side wheels (nearest the curb) miss the end of the speed hump. This



is often done due to the perception of some motorists that, since fewer wheels cross over the speed hump, they do not need to slow for the speed hump.

5. **Local Street** is a roadway that serves individual residential and commercial blocks with direct access to abutting properties. The Circulation Element of the Commerce General Plan identifies local streets.
6. **National Pollutant Discharge Elimination System (NPDES)** is a program that addresses water pollution by regulating point sources that discharge pollutants to waters of the United States. Created in 1972 by the Clean Water Act, the NPDES permit program is authorized to state governments by the Environmental Protection Agency (EPA).
7. **Prima Facie Speed Limits** are speed limits that are automatically established by law based on roadway conditions and therefore do not require signs for enforcement. Examples include 25 miles-per-hour limits in school zones when children are present or on local streets in residential neighborhoods, and 15 miles-per-hour limits in alleys or at railroad crossings with limited visibility.
8. **Speed (85th Percentile)** is a speed measurement where 85 percent of the individually recorded vehicle speeds on the street are at or below this measurement, and 15 percent of the recorded speeds are above this measurement.
9. **Speed hump** is a moderately elevated segment of roadway pavement intended to reduce the speed of vehicles crossing over it. Sloping upward, a speed hump is usually elevated about 3 or 4 inches before it slopes downward to the original street level. The overall crossing length of a speed hump is about 12 feet wide. (Shorter, steeper speed bumps are used in private parking lots but are too extreme an obstacle for use on a public street.)

IV. ELIGIBILITY CRITERIA

To process an application for speed humps, an applicant must complete and submit a “Speed Hump Petition Form” available at the City. Each application will be reviewed following the eligibility criteria on a case by case basis and at the discretion of the Traffic Commission. The Department will determine the streets that are eligible for speed humps based on site and roadway conditions, traffic conditions and proper engineering principles including, but not limited to, the following:

1. The street must be functionally classified as a residential, local, or collector street. The street cannot be designated as an arterial or higher classification.



2. The street should be primarily residential in nature, but streets in commercially or industrially zoned areas can be eligible for speed humps, consistent with engineering analysis and safety concerns.
3. The street should not be a truck, transit (bus) route, or emergency service route.
4. The street does not have more than one traffic lane in each direction.
5. The street should have a minimum length of at least 500 feet, preferably 750 feet.
6. The street must have a posted or prima facie speed limit not exceeding 30 miles-per-hour.
7. The street must have a minimum ADT volume of 500 average daily vehicle trips and a maximum ADT volume of 4,000 vehicles per day and with additional assessment of potential impacts on streets with 4,000 to 10,000 average daily vehicle trips.
8. The street must have adequate drainage and ADA access at street entrances and intersections.
9. The street must have roadway pavement, curbs, gutters, adjoining parkways and sidewalks in good condition.
10. The street cannot have any alignment, grade or sight-distance problems that would be affected or created by speed humps.
11. Speed humps should not be spaced closer than 200 feet when two humps are installed on a single block and should not be spaced closer than 350 feet when three humps are installed on a single block. A speed hump should not be placed within 150 feet of any intersection. A speed hump shall never be installed within any intersection.
12. A speed hump should not be installed if it conflicts or interferes with:
 - Drainage features including gutters, channels, drains, catch basins and manholes.
 - Compliance with NPDES regulations for storm water run-off.
 - Fire hydrants, water valves, water meters, utility manholes or other utility facilities.
 - Traffic control devices, including in-pavement signal detector devices.
 - Driveways, crosswalks, ramps and/or other ADA facilities/regulations.
 - Bicycle lanes.
 - Horizontal or vertical curves in the street alignment or street profile.



13. The City will attempt to not place a speed hump within 35 feet of any property edge where the resident of the subject property failed to endorse the petition or had specifically submitted a written objection to the speed hump. If needed, the City will adjust the spacing in between the speed humps accordingly for optimal.
14. The installation and final locations of Speed Humps should be based on the general guidelines in the Commerce Speed Hump Policy as well as Engineering Judgment and field conditions.

V. ADDITIONAL STUDIES

The Department may also propose and commission a speed study, compliant with the CA MUTCD, to determine the prevailing speed on the subject street for speed humps. Typically, the 85th percentile speed on the street must exceed the speed limit by at least 5 miles-per- hour in a given 24-hour period.



VI. PROCEDURES

A. SCREENING AND SUBMITTAL PROCESS

The Department will make a determination of eligibility based on pertinent traffic studies and data. The procedures for such determination are as follows:

1. The Department maintains a list of locations where property residents (owners) have requested speed humps to be installed. Requests may be made formally by submitting a completed application via e-mail, mail, or hand delivered. The list will include the date each request is added to the list.
2. When a resident submits an application for the request of Speed Humps the requestors or staff must acquire a minimum of 75% of the property owners' support [proof of ownership may be required] within the affected block(s) for official consideration. The Department will verify the petition showing that a minimum of 75% of the property owners on the street support the installation of Speed Humps. Only petition forms supplied by the Department of Public Works may be used for this purpose and only one (1) signature per address will be accepted.
3. At the discretion of the City and based on available funding for speed humps, the Department will review the list, evaluate the requested locations and prioritize a fundable number of those locations that may qualify. This smaller priority list will subsequently be presented to the City of Commerce Traffic Commission for approval on the Candidate Street list. The selection of requested locations for the priority list may utilize any or all of the following criteria:
 - Traffic volume
 - Bus (non-transit) and truck traffic
 - Traffic speeds
 - Land uses along the street
 - Speed-related accidents (reported)
 - Proximity of schools and parks
 - Vehicle-pedestrian accidents (reported)
 - Evidence of support by affected residents
 - Length of street and street alignment & design
 - Availability of alternative traffic calming means

Note: the date a request is submitted will not be a factor in determining the priority of any location.



4. If the Traffic Commission has approved more than one block length as the candidate street, each block will be studied individually and separate petitions will be required for each block length (to assist in identifying if there are differing sentiments for speed humps on individual blocks).

B. ANALYSIS OF APPLICATION

1. Upon receipt of the application and petition(s) with sufficient valid property resident (owner) signatures, the Department will conduct a detailed study (or studies) of the location. The type, number and extent of the studies will be determined by the Director of the Department and can vary based upon the particular circumstances of each candidate location. Such studies may include:
 - a. ***Accident Analysis.*** Analysis of accidents before and after the installation of speed humps may be conducted to determine if accident trends justify requests for speed humps.
 - b. ***Emergency, Bus Service & Refuse Collection Analysis.*** Emergency service providers (police, fire, paramedics) and bus service providers should review speed hump locations prior to installation to assess any impacts on response times, need to alter response routes, and availability of alternative response routes. Comparable analysis may be appropriate for such non- emergency service providers as refuse collection or bus service to determine if speed humps will impact these services.
 - c. ***On-site Observations.*** Prior to speed hump installation and at selected times thereafter, observations may be made to determine motorists' behavior patterns and any unusual operating conditions (such as potential for gutter running). Observations should be made both during the day and at night.
 - d. ***Resident and Driver Surveys.*** Prior to speed hump installation and at selected times thereafter, it may be beneficial to survey residents along the subject street and other affected streets to assess their concerns and perceptions of speed hump effectiveness in slowing and/or diverting traffic. Motorists continuing to travel the street may also be selectively surveyed to assess their opinions.
 - e. ***Speed Studies.*** Speed studies may be made on the street prior to speed hump installation. After installation, speed studies should then be performed at a distance in front of the speed hump, at the speed hump, and at a distance after the speed hump to determine the overall impact on vehicle speeds.



- f. **Stop Sign Obedience.** If there is a bad compliance rate of motorists stopping at stop sign(s) on a street, observations may be made prior to and after speed hump installation to see if there is any improvement in stop sign compliance after installation.
 - g. **Traffic Diversion Studies.** Prior to installation, a study should be made of alternative routes that may be taken by motorists to avoid the speed hump(s) and the potential impact on the alternative route streets. If severe impacts are anticipated, the eligibility of the speed hump location(s) may need to be reconsidered. After installation, actual shifts in traffic routes may be identified by increased traffic volume on the alternative routes.
 - h. **Travel Time Studies.** If there is a potential that speed humps – particularly in multiples – may contribute to delaying traffic movement and/or increase congestion, it may be beneficial to perform before and after studies of travel times along the affected street(s).
 - i. **Traffic Volume Studies.** Traffic volume counts may be made on the subject street and on those streets where traffic diversion may be expected. Such counts may be made prior to speed hump installation and afterwards when traffic patterns have stabilized to determine the magnitude of any volume increases or decreases.
- 2. The Department will prepare a determination of the total design, engineering and installation costs and will determine the funding sources to finance the cost of the speed hump(s).
 - 3. Following completion of the study (studies) of a candidate location and a determination is made by the Director of the Department that the location meets applicable criteria, and that the petition exhibits sufficient property (resident) owner signatures, then the location will be submitted to the Commerce City Council for final approval prior to installation. If a location fails to meet the criteria, the requestor (contact person) will be notified with an explanation as to why speed hump(s) are not warranted, and another location will be selected from the Candidate Street list.



C. SPEED HUMP INSTALLATION AND MAINTENANCE STANDARD

1. ***Property Resident Approval.*** The City will attempt to not place a speed hump within 35 feet of any property edge where the resident of the subject property failed to endorse the petition or had specifically submitted a written objection to the speed hump. If needed, the City will adjust the spacing in between the speed humps accordingly for optimal operations.
2. ***Spacing.*** Speed humps should not be spaced closer than 200 feet when two humps are installed on a single block and should not be spaced closer than 350 feet when three humps are installed on a single block. A speed hump should not be placed within 150 feet any intersection. A speed hump shall never be installed within any intersection.
3. ***Conflicts.*** A speed hump should not be installed if it conflicts or interferes with:
 - a. Drainage features including gutters, channels, drains, catch basins and manholes.
 - b. Compliance with NPDES regulations for storm water run-off.
 - c. Fire hydrants, water valves, water meters, utility manholes or other utility facilities.
 - d. Traffic control devices, including in-pavement signal detector devices.
 - e. Driveways, crosswalks, ramps and/or other ADA facilities/regulations.
 - f. Bicycle lanes.
 - g. Horizontal or vertical curves in the street alignment or street profile.
4. ***Roadway Edge.*** A speed hump should not extend across the full width of the roadway (curb-to-curb) to permit unobstructed water flow along the curb and gutter. The end of the speed hump should be separated from the curb a distance sufficient to permit street-sweeping machinery to pass along the curb and gutter without affecting the operation of the street-sweeper and/or without causing swept debris to be left in the roadway. Each end of the speed hump must taper at a sufficiently low angle so that it will not affect the down stroke of a passing bicycle pedal.
5. ***Installation Angle.*** A speed hump must be installed exactly at a right angle to the vehicular path of travel.
6. ***Pavement Markings.*** Speed humps will be painted with distinctive painted markings so as to be readily visible to approaching vehicles.
7. ***Signs.*** Speed hump signs whose design and locations are in compliance with the CA MUTCD shall be installed to provide appropriate forewarning of the presence and location of speed humps to approaching vehicles. Additional sign plates should be installed to



indicate the recommended crossing speed to educate motorists when the speed humps are initially installed.

8. **On-street Parking.** Care should be taken to ensure vehicles parked on streets do not diminish the effectiveness of signs and/or pavement markings. The potential for "gutter running" should be considered in locating a speed hump if parking is prohibited along the curb, either permanently or for limited times (e.g. street-sweeping ng). On the other hand, curbside parking may be restricted or prohibited in the vicinity of a speed hump if parked vehicles are at an increased risk of being damaged by vehicles crossing the speed hump.
9. **Street Lighting.** Where sight distance is less than desirable and/or to improve nighttime visibility, speed hump locations should be selected with existing or planned street lighting.
10. **Pedestrian Crossings.** The positioning of a speed hump must fully comply with ADA regulations for pedestrian walkways and crosswalks. If mid-block pedestrian crossings are planned, it may be appropriate to coordinate their design with speed humps since vehicle speeds will generally be slower at speed hump crossings. The speed hump could be installed directly adjacent to the crosswalk or the crosswalk could be placed upon the speed hump. Appropriate pedestrian crossing signs need to be installed with the speed hump warning signs.
11. **Construction Materials.** A speed hump should be constructed of such materials with sufficient strength and durability as concrete or asphalt-composite materials. Other synthetic materials (e.g., recycled rubber products) should be used with caution that they are not susceptible to deformation or wear/deterioration and that they can be adequately secured or anchored to the roadway.
12. **Construction Procedures.** The construction accuracy of the speed hump profile must be maintained to ensure that the desired dimensions are attained within reasonable tolerances to avoid vehicle damage or ineffective speed control. Road surfaces must be excavated, especially at the tapering edges and ends of the speed hump to prevent "spalling" (break up or chipping). Speed humps shall not be installed on streets in need of major repairs, resurfacing improvements or reconstruction; nor shall speed humps be installed 12 months prior to any scheduled roadway repairs, resurfacing or reconstruction, or utility excavations within the roadway. If such work is planned, speed hump installation should be incorporated into the scheduled repairs or reconstruction projects.
13. **Maintenance.** Care should be taken in the initial installation and inspection of a speed hump to ensure that any edge raveling and profile deformation do not exceed established tolerances. Regularly scheduled inspections and maintenance should be performed to maintain the appropriate design relationship between the roadway surface and the speed hump to enable the speed hump to continue to perform its intended purpose. Speed hump



markings need to be regularly monitored and refreshed to maintain high visibility to motorists.

D. SPEED HUMP REMOVAL CRITERIA

Following an adequate review and analysis period, a speed hump can be removed if the Director determines that traffic circulation and public safety concerns would justify the removal of the speed hump. Any requested or proposed removal pursuant to this policy shall require the approval of the City Council. The temporary removal of a speed hump to permit the reconstruction of the speed hump or the reconstruction or resurfacing of the street, provided that the speed hump will be restored thereafter, is exempt from requiring City Council approval.

