

**CITY OF MESA**

**SPEED HUMP POLICY**

**POLICY STATEMENT**

The speed hump policy identifies warranting criteria to be used when considering speed hump and speed cushion installations. This policy also outlines the mandatory neighborhood support needed for approving installation and cost responsibilities associated with these devices.

Installation Criteria

Speed humps and speed cushions shall be considered for installation only when a location meets all of the warranting criteria. The warranting criteria are listed below:

1. The devices must be located on a paved, residential street (alleys are not eligible);
2. The street should have vertical curb abutting the proposed device locations. Devices may be placed on streets with roll curb or ribbon style sidewalk after a review to determine the best possible location. In this case, it may be necessary to take additional measures to prevent drivers from going around the devices;
3. The posted speed limit on the street shall be 30 m.p.h. or less;
4. The 85th percentile speed on the street shall be at least 8 m.p.h. over the posted speed limit;
5. Traffic volumes on the street must fall between 500 vehicles per day for full City cost participation, and 5,000 vehicles per day (the maximum traffic volume allowed);
6. The devices shall not be located within 200 feet of a stop sign or traffic signal on the subject street;
7. The street is not an arterial or major collector street;
8. Drainage on the street shall not be compromised due to the installation of the devices;
9. Streets designated as fire routes will be treated with speed cushions; other streets will be treated with speed humps. The configuration of the speed cushions will vary depending on the width of the street.
10. The Fire Department retains the right to veto any street segment.

Neighborhood Support

Affected Property Owners

Once the street has passed the warranting criteria and favorable conditions exist, the installation must then follow a neighborhood acceptance procedure (survey form). This is to assure that a majority of the property owners affected by the devices will support the installation. City of Mesa personnel will determine affected residents in the area.

The neighborhood liaison and City staff will conduct the review of possible device locations. The neighborhood liaison must then circulate a survey of acceptance to the affected property owners. The survey must confirm at least 70% approval from the affected property owners to install the device. Property owners who do not respond to the survey process or mark "no opinion" are considered opposed to the installation of the device. All property owners within 50 feet along each side of the device must approve of the installation.

#### Opinions of Other Road Users

If the street is a collector type street, the level of support from other road users must also be determined. Information signs will be posted on the subject street inviting the public to comment on the proposed installation of speed cushions. Comments will be accepted in a variety of formats (on-line survey, neighborhood meeting, telephone, email).

Results of the neighborhood survey and comments received from other roadway users will be presented to the Transportation Advisory Board for final approval.

#### Data Collection Costs

The neighborhood will be responsible for all data collection costs required to determine if the street under consideration meets the warranting criteria. Traffic volume and speed data will be collected by one of the City of Mesa's traffic counting contractors. Typically, sufficient data is collected using road tubes in one location for 48 consecutive hours. Two count locations are generally necessary for street segments over one-half mile in length or if the character of the street or adjacent land use varies considerably from one end of the street segment to the other. The cost of the speed counts are per the current Schedule of Fees and Charges.

**IMPORTANT NOTES: The neighborhood shall pay for the data collection prior to the traffic speed and volume counts being taken on the street under consideration. This payment is non-refundable once the traffic counts have been taken. This payment is strictly to determine if the street qualifies for speed humps or speed cushions and in no way guarantees that such device will eventually be installed on the street under consideration.**

#### Installation Costs

If all warranting criteria are satisfied, the City will be responsible for payment of all costs associated with installing the devices. These include the costs of material, construction, signing, striping, maintenance and removal of the devices (if necessary). If the neighborhood wishes to pursue the installation of the devices on a street with traffic volumes below 500 vehicles per day, but satisfying all of the other warranting criteria, the devices could be installed. In this case, the neighborhood would be responsible for \$500 of the material and construction costs of each device installed on the street. All neighborhood contributions must be submitted to the City of Mesa at the same time and be received in order for the street to be considered for ranking.

A typical installation on a quarter-mile long residential street consists of two devices. A minimum of two devices spaced about 500 feet apart is recommended for them to be effective.

### Prioritization of Installations

Rankings will be established for all streets that have passed the warranting criteria, have submitted the survey with at least 70% approval from the affected property owners, and submitted the neighborhood contribution, if applicable, by the first Monday in September or the first Monday in March. Qualified streets with traffic volumes of 500 vehicles per day or more will be ranked first based on their 85th percentile speeds, then on traffic volumes. Qualified streets with less than 500 vehicles per day will be ranked after qualified streets having 500 vehicles per day or more, regardless of the 85<sup>th</sup> percentile speeds.

Approximately half the annual program budget will be available for each review period.

Prioritization will be divided into two categories: speed humps and speed cushions. Of the total budget, 1/3 will be available to treat streets with speed humps, and 2/3 will be available to treat streets with speed cushions.

Available funding will be applied to eligible streets in order of priority until all funds are committed. Candidate streets not receiving funding will be carried forward to the next review period at which time they will be prioritized with all eligible requests identified by that time. Candidate streets will not be carried forward for more than two years. After two years, the survey process must begin anew. If funds are left over from either of the two categories, the funds can be applied to the next eligible candidate in the other category.

### Revision

The City Manager or designee may make adjustments to the requirements for speed hump installation as necessary. All adjustments shall be in writing and on file in the Transportation Department office.

**CITY OF MESA**

**PROCEDURE FOR REQUESTING SPEED HUMPS AND SPEED CUSHIONS**

The City of Mesa has established a mechanism by which speed humps and speed cushions can be installed to address speeding concerns on residential streets. Both devices have advantages as well as disadvantages. Some of the effects are listed below:

ADVANTAGES

Significant reduction of travel speeds at or near the devices. For effective speed reduction, a series of devices is needed along long, straight streets.

The devices provide 24-hour, year-round service in an attempt to control high travel speeds along residential streets.

May discourage cut-through traffic that is using residential streets due to congested conditions on an adjacent arterial or major collector street.

Average daily traffic volumes may decrease on residential streets thus reassigning traffic volumes to appropriate street classification usage (collector, arterial).

DISADVANTAGES

Inability to reduce travel speeds to a desired level for the neighborhood.

Will increase response times for emergency vehicles into area. Speed cushions have less of an impact than speed humps, but may still slow emergency vehicles.

Traffic diversion may cause increased volumes on other streets within the neighborhood.

Increased noise level due to vehicle shifting cargo and acceleration/deceleration at the device.

Since there are some disadvantages associated with these devices, the City of Mesa needs to assure that strong neighborhood support exists for their installation. Therefore, the following procedure has been established to guide residents through the request procedure.

1. The neighborhood must have a liaison willing to serve as a contact person with whom the City can work throughout the request process. This person should contact Transportation at 644-2160 for a preliminary inspection.
2. In the preliminary inspection, a City representative from Transportation will check for traffic conditions on the street where the devices are desired. A location may not be studied more than once in a twelve-month period, unless significant changes in traffic conditions occur. Devices shall be considered for installation only when a location meets all of the warranting criteria. The warranting criteria are as follows:

- The devices must be located on a paved, residential street (alleys are not eligible);
- The street should have vertical curb abutting the proposed device locations. Devices may be placed on streets with roll curb or ribbon style sidewalk after a review to determine the best possible location. In this case, it may be necessary to take additional measures to prevent drivers from going around the device;
- The posted speed limit on the street shall be 30 m.p.h. or less;
- The 85th percentile speed on the street shall be at least 8 m.p.h. over the posted speed limit;
- Traffic volumes on the street must fall between 500 and 5,000 vehicles per day. Devices may be installed where traffic volumes are less than 500 vehicles per day if the neighborhood shares in the cost per item 4 below;
- Devices shall not be located within 200 feet of a stop sign or traffic signal on the subject street;
- The street is not designated as an arterial or major collector street;
- Drainage on the street shall not be compromised due to the installation of the device;
- Streets designated as fire routes will be treated with speed cushions rather than speed humps. The configuration of the speed cushions will vary depending on the width of the street;
- The Fire Department retains the right to veto any street segment.

If the location meets the warranting criteria and favorable conditions exist, the neighborhood liaison along with the City Transportation representative will review possible device locations.

3. Adequate neighborhood support must be shown for the project.

i) Affected Property Owner Survey

A survey is needed for those property owners who would be directly and indirectly affected by the devices. The City Transportation representative will determine affected properties in the area. At a minimum, the affected properties will include all that abut the street on which the devices are being considered, and three properties or a minimum of 300 feet on each side of any connecting streets. If a street parallel to the subject street is encountered prior to three properties or the 300 foot distance, no additional property owners need be notified on that street unless City staff recommends additional notifications. Also, the neighborhood liaison must live in the affected area to be eligible to act as the neighborhood liaison. The neighborhood liaison must then circulate a survey of acceptance to the affected property

owners. The survey must confirm at least 70% approval from the affected property owners to install the devices. Property owners who do not respond to the survey process or mark "no opinion" are considered opposed to the installation. All property owners within 50 feet along each side of the device must approve of the installation. If there is less than 70% approval from affected residents, or if it is not possible to place the devices on the street under consideration due to opposition from adjacent property owners, no device will be installed. The completed survey should be returned to the City of Mesa Transportation Department.

ii) Opinions of Other Road Users – Additional Requirement for Collector Type Streets

If the street is a collector type street, the level of support from other road users must also be determined. This will be handled by City staff. Information signs will be posted on the subject street inviting the public to comment on the proposed installation of speed cushions. Comments will be accepted in a variety of formats (on-line survey, neighborhood meeting, telephone, email). Results of the neighborhood survey and comments received from other road users will be presented to the Transportation Advisory Board for final approval.

4. If devices are to be installed on streets with traffic volumes below 500 vehicles per day, the neighborhood will be responsible for a \$500 per device fee to be paid to the City. The neighborhood may collect monies in any manner they deem equitable but all monies submitted to the City must be submitted at the same time and be for the full amount of the required neighborhood contribution.
5. Rankings will be established for all streets that have passed the warranting criteria, have submitted the survey with at least 70% approval from the affected property owners, and submitted the neighborhood contribution, if applicable, by the first Monday in September or the first Monday in March. Qualified streets with traffic volumes of 500 vehicles per day or more will be ranked first based on their 85th percentile speeds, then on traffic volumes. Qualified streets with less than 500 vehicles per day will be ranked after qualified streets having 500 vehicles per day or more, regardless of the 85th percentile speeds.

Approximately half the annual program budget will be available for the September prioritization, and the remainder will be available in March. Prioritization will be divided into two categories: speed humps and speed cushions. Of the total budget, 1/3 will be available to treat streets with speed humps, and 2/3 will be available to treat streets with speed cushions.

Available funding will be applied to eligible streets in order of priority until all funds are committed. If funds are left over from either of the two categories, the funds can be applied to the next eligible candidate in the other category.

6. Once neighborhood support is confirmed (via the neighborhood survey for speed hump installations and via the Transportation Advisory Board for speed cushion installations), City staff will identify exact locations for the devices based on input from the survey. Shortly prior to construction, City staff will confirm that property owners within 50 feet of each proposed device continue to support the installation at that location. In the event that support is withdrawn,

staff and the neighborhood liaison will determine whether a suitable alternate location exists and whether to proceed with the remaining device installations.

7. The City of Mesa will install the devices and be responsible for their perpetual maintenance costs.

**8. If for any reason, speed humps or speed cushions are not installed on the street under consideration, the cost of data collection will not be reimbursed to the neighborhood.**

#### Removal of Speed Humps or Speed Cushions

Once devices have been in place for at least one year, a survey requesting removal may be conducted and submitted to the Transportation Department. All affected properties, which were previously identified in the neighborhood survey process, shall be involved in the removal process as well. A simple majority of the affected property owners must approve of the removal. Property owners who do not respond to the survey process or mark "no opinion" are considered opposed to the removal of the devices. Once the survey has been verified, the City of Mesa will be responsible for removal of the device(s) and all costs associated with the removal. Devices removed from a location under this process cannot be reconsidered for re-installation for three years after the devices are removed.

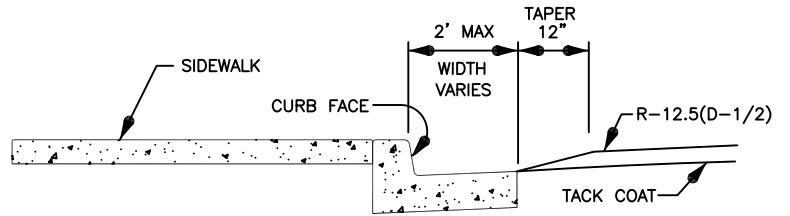
#### Design/Construction Specifications

The City of Mesa has adopted two speed hump designs; a 14-foot long speed hump for 25 m.p.h. streets and a 22-foot long speed hump for 30 m.p.h. streets. Both speed hump designs are 3 inches at their highest point and vary in width, depending on the width of the road traversing. See Details 1 and 2.

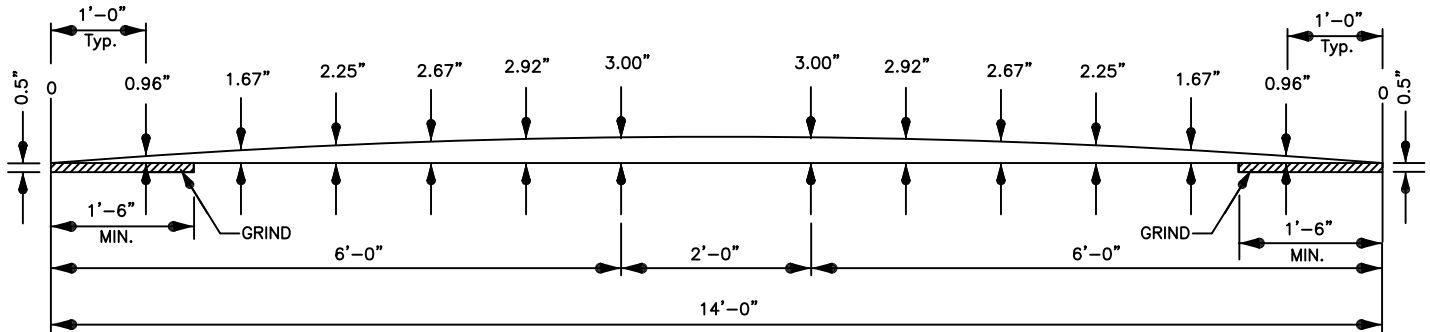
The City of Mesa has adopted a 12-foot long speed cushion design for use on fire routes. The cushions are 3 inches at their highest point, and are a minimum of 6 feet wide. See Detail 3.

# SPEED HUMP SPECIFICATIONS

IMPORTANT: Speed Humps to be 3" in height to provide maximum effectiveness, while not being overly restrictive to emergency police and fire vehicles.



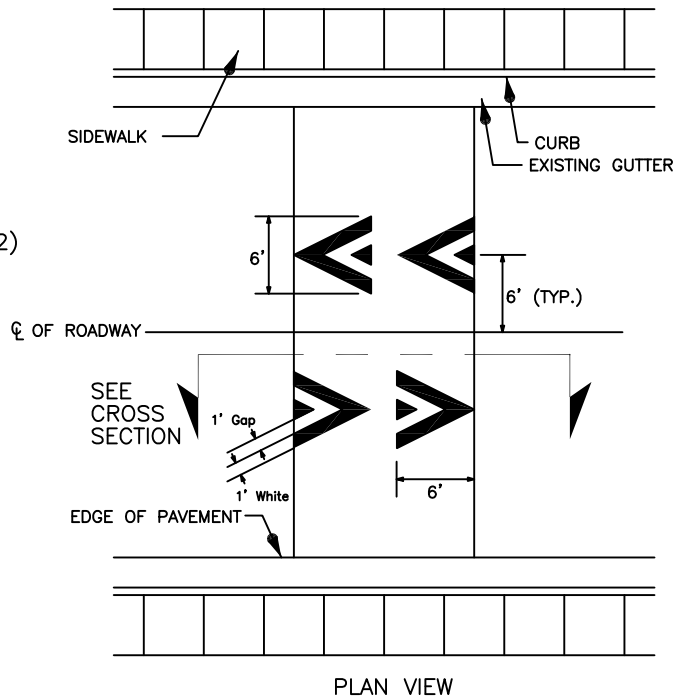
EDGE DETAIL



## CROSS SECTION

NOTES:

1. Speed humps shall not be placed over manholes, water valves, survey monuments, etc.
2. Speed humps shall not be installed in a location such that roadway drainage is compromised.
3. Speed humps to be constructed with type R-12.5(D-1/2) course (M.A.G. Spec. Section 710). A tack coat shall be applied prior to application of pavement material.
4. Striping to be installed by contractor per detail M-15.1. Contact City of Mesa sign shop one week prior to installation to coordinate placement of signs.

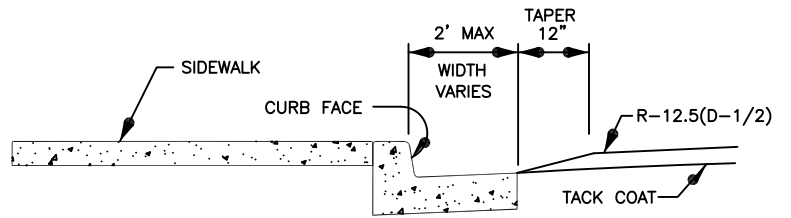


PLAN VIEW

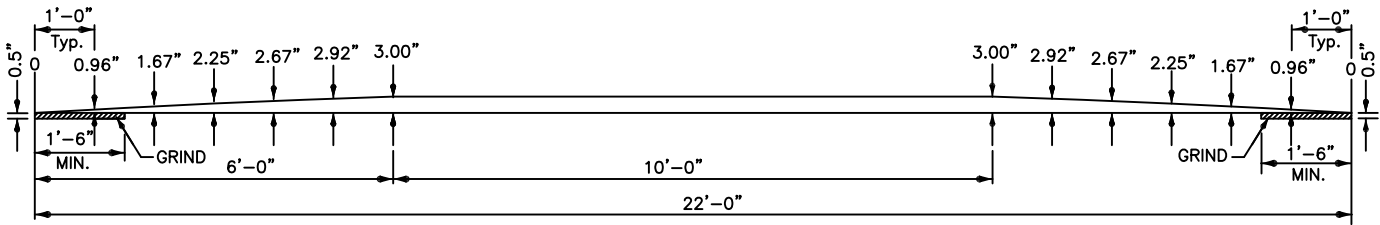
## DETAIL 1: 14' SPEED HUMP

# SPEED HUMP SPECIFICATIONS

IMPORTANT: Speed Humps to be 3" in height to provide maximum effectiveness, while not being overly restrictive to emergency police and fire vehicles.



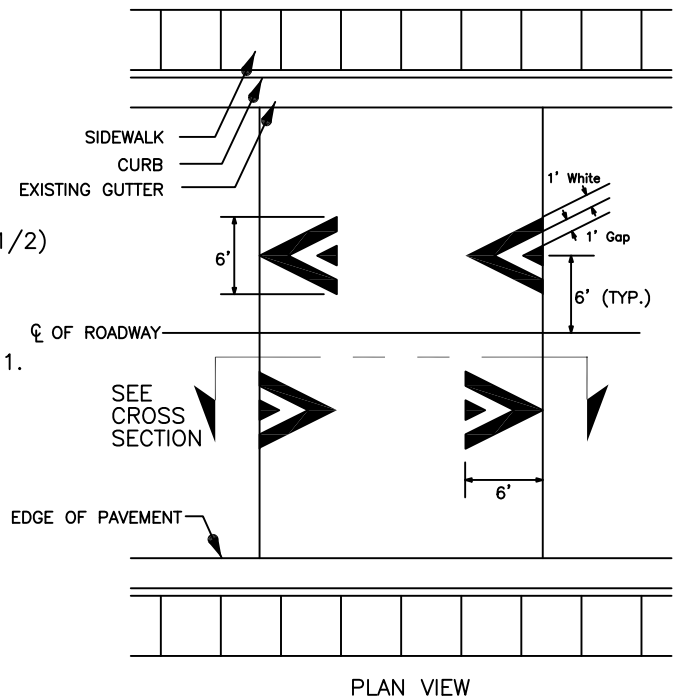
EDGE DETAIL



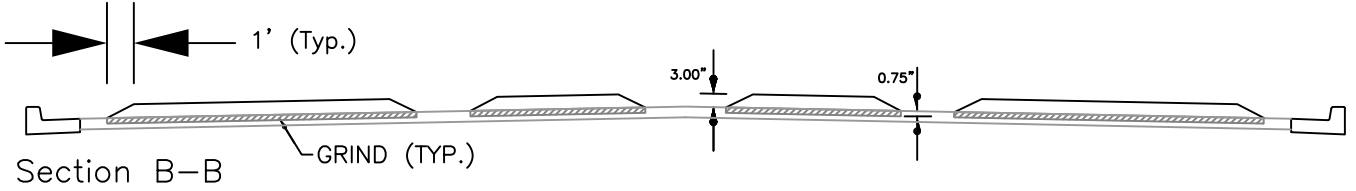
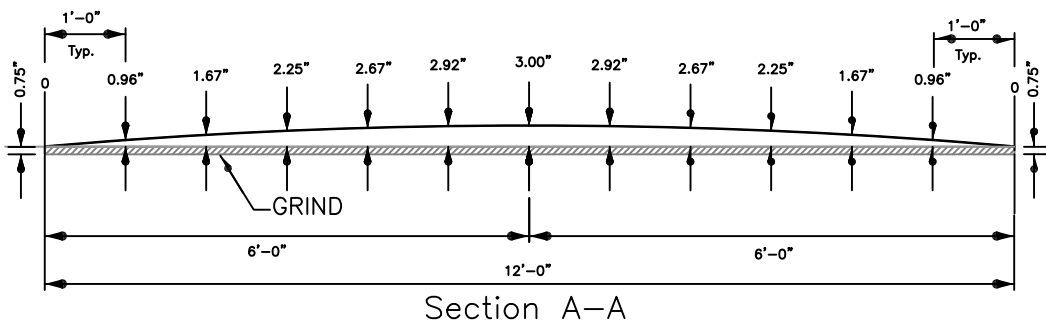
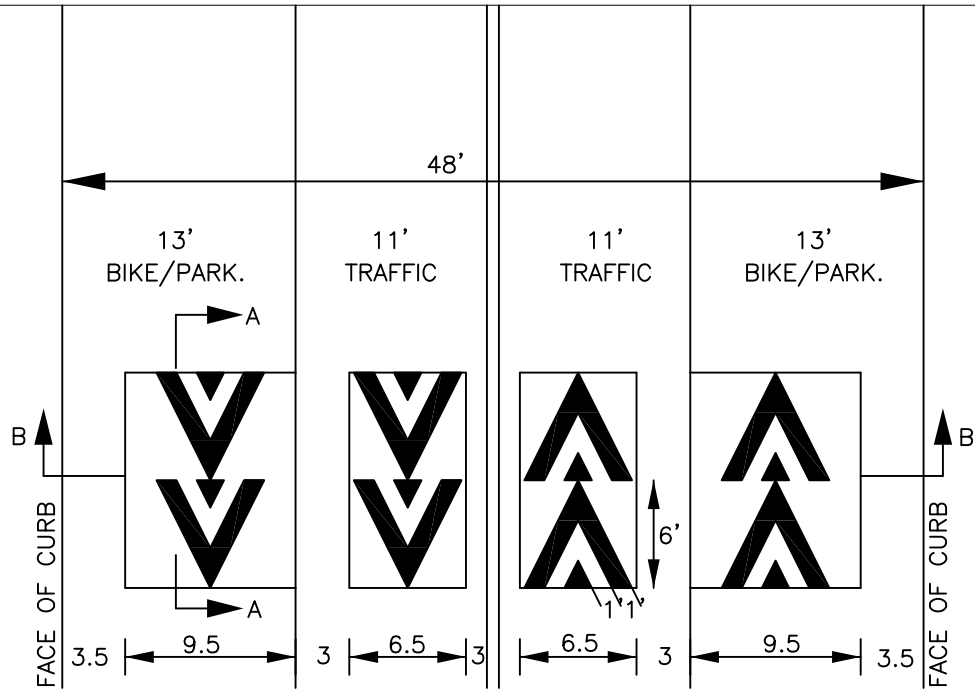
## CROSS SECTION

NOTES:

1. Speed humps shall not be placed over manholes, water valves, survey monuments, etc.
2. Speed humps shall not be installed in a location such that roadway drainage is compromised.
3. Speed humps to be constructed with type R-12.5(D-1/2) course (M.A.G. Spec. Section 710). A tack coat shall be applied prior to application of pavement material.
4. Striping to be installed by contractor per detail M-15.1. Contact City of Mesa sign shop one week prior to installation to coordinate placement of signs.



## DETAIL 2: 22' SPEED HUMP



**NOTES**

SPEED CUSHIONS SHALL NOT BE PLACED OVER MANHOLES, WATER VALVES, SURVEY MONUMENTS, ETC.

SPEED CUSHIONS SHALL NOT BE INSTALLED IN A LOCATION SUCH THAT DRAINAGE IS COMPROMISED.

SPEED CUSHIONS SHALL BE CONSTRUCTED WITH TYPE R-12.5 ASPHALT MIX PER EAST VALLEY ASPHALT (EVA) CRITERIA, 1996 EDITION AND BE APPROVED BY EVA COMMITTEE. A TACK COAT SHALL BE APPLIED PRIOR TO APPLICATION OF PAVEMENT MATERIAL.

THE ENTIRE BASE OF EACH CUSHION SHALL BE GROUND DOWN TO A DEPTH OF 3/4"

**DETAIL 3: SPEED CUSHION (48' STREET)**