

## APPENDIX E - FLEXIBLE STREET OPTIONS

The Downtown Transportation and Streetscape Study, approved in 2015, identified George and Navy Streets as well as the segment of Lakeshore Road that abuts Towne Square to be constructed as a flexible (or curbless) street. Curbless Streets use a flush curb in place of the traditional raised curb that divides the roadway from the boulevard. As part of the Lakeshore Road Reconstruction and Streetscape project, we are exploring the use of a curbless street for Lakeshore Road. This board outlines advantages and disadvantages of traditional and curbless streets. The next board shows three options for curbless segments on Lakeshore Road.

### Traditional Street with a Raised Curb



#### Advantages

- raised curbs make parallel parking easier
- utilizes existing maintenance equipment and practices
- less expensive to maintain
- stormwater system using traditional catch basins
- accommodates accessible ramps on transit vehicles
- raised curb acts as a physical barrier between roadway and boulevard

#### Disadvantages

- conventional street design that prioritizes and divides modes of travel
- only accessible at curb depressions, which are typically at corners and not mid-block
- when the street is closed for events, it does not function as a contiguous open area as raised curbs break up the space and limit use

### Curbless Street with a Flush Curb



#### Advantages

- during street closures and events, roadway transforms to an open plaza space with no physical barriers
- progressive street design where automobiles are not the dominant mode of travel
- fully accessible design - no raised curbs impeding access to and from boulevard
- the design of the street causes traffic to move slower in anticipation of more activity

#### Disadvantages

- parallel parking more challenging due to lack of curb
- may require specialized maintenance equipment and practices
- more expensive to maintain trench drains as they must be kept clear of debris at all times
- not optimized for accessible ramps on transit vehicles
- no physical barrier however some elements provide separation
- during extreme rain events, lack of raised curb reduces available water ponding area



## APPENDIX E - FLEXIBLE STREET OPTIONS - CURBLESS STREET OPTIONS

### OPTION 1 - TOWNE SQUARE (RECOMMENDED)



#### CONSIDERATIONS

- creates a unique focal point in the heart of downtown
- can utilize unit pavers in the road to enhance character of curbless segment
- reinforces the civic importance of Towne Square and George Street, which is consistent with the directions of the Downtown Streetscape Master Plan

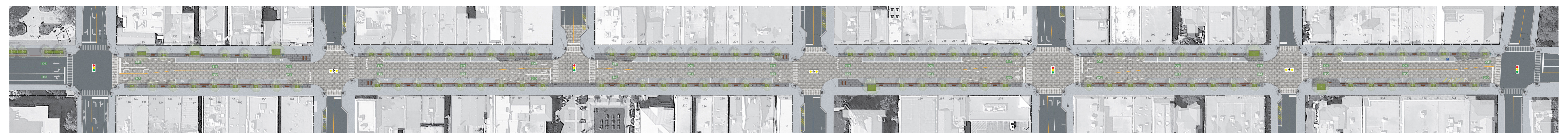
### OPTION 2 - THOMAS to DUNN



#### CONSIDERATIONS

- increases available area for event uses
- curbless segment begins at the logical road closure points for events
- could utilize unit pavers in the road with increased construction budget

### OPTION 3 - NAVY to ALLAN (all of downtown)



#### CONSIDERATIONS

- presently, only two annual events use all of Lakeshore Road East in downtown so the benefit for events would be limited
- unit pavers in the road across all of Lakeshore Road would be cost prohibitive
- would require a significant quantity of bollards, which may look visually unappealing and will add construction and maintenance costs
- a substantial increase in overall construction cost