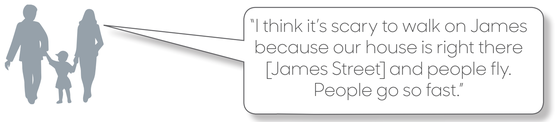
Traffic Calming

Providing solutions to assist in calming traffic and enhancing the pedestrian experience, primarily at the intersection of Main St. and E. James St., as well as along E. James St,. were identified as one of the primary goals that the community wanted the design team to address. The East James Street corridor, along with the its intersection at Main Street are both extensively used by motorists and pedestrians, especially school-aged children, all who use the corridor to access city parks, the elementary and middle school, and Y-40/70th Avenue.

The guiding principle of traffic calming is to influence the speed of motorists and their behavior through good design, rather than solely by traffic control measures such as signs. Traffic calming design tools such as raised crosswalks and raised intersections are used for the purpose of reducing speeds of motorists and enhancing pedestrian accessibility and comfort. Both applications are considered to be speed tables and both aid in making the pedestrian more visible to approaching motorists. According to the Safe Routes to School organization and various studies, raised crosswalks and intersections not only decrease the speed of motor vehicles, but they increase the vehicular yield rate to pedestrians by as much as 45 percent.

Raised intersections function similarly to raised crosswalks except that the elevated "table" extends across the entire intersection instead of just the crosswalk, which requires motorists to reduce speeds as they proceed through the elevated intersection. Unlike raised crosswalks, raised intersections extend the sidewalk via the crosswalk so no ramps are required. A raised intersection is proposed for the Main St. & E. James St. intersection, since it is located at the intersection of two main city corridors.

Raised crosswalks are proposed at the eastern end of E. James St. between Y-40/70th Ave. and N. Century St. for the two crosswalks that cross the street near the school



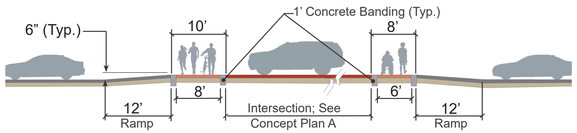
Existing image: Photo taken on Main Street looking south toward the intersection of Main Street and E. James Street. See ① on existing aerial for approximate location.

Image edit showing vision for Proposed Concept A (raised intersection). Also illustrated is the proposed continuation of decorative pedestrian lighting with banners and hanging baskets, vehicular lighting, way-finding signage, bolloard lighting, and Sharrow markings along Main St.

(see board 14). Crosswalks are also shown as part of the enhanced school circulation concept plan (see board 14) and, per the steering committee's request, are shown as one of the two concepts (Concept B) for the intersection of Main St. and E. James St. It should be noted that Concept B is not recommended by the design team beause of the fact that this is a main intersection and raised crosswalks in this area would be more of a hindrance and barrier than an improvement.

All pavement markings and signage are to be in accordance with the latest **Manual on Uniform Traffic Control Devices** (MUTCD) and the Iowa DOT MUTCD supplement. In addition, adding both pedestrian and vehicular lighting along the arterial and collector streets will improve visibility and, if decorative and in the same style as the existing decorative pedestrian lighting along N. Main St., will greatly enhance the streetscape, street scale and sense of place.

Existing aerial photo of Main St. & E. James St. intersection



Typical Section A-A': Proposed Raised Intersection

Proposed Concept Plan A utilizing a raised intersection (recommended). See Typical Section A-A' and refer to proposed concept illustration.

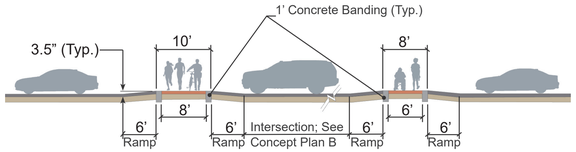
Proposed Concept Plan A Drawing Notes

1. SHARED SIDEWALK: CONSTANT WIDTH ALONG NORTH SIDE OF E. JAMES ST. AS SHOWN ON PROPOSED RECREATIONAL TRAIL PLAN; WIDTH TO BE AS WIDE AS POSSIBLE TO FIT WITHIN EXISTING PUBLIC RIGHT-OF-WAY: 6' (MIN.) TO 8' (MAX.)
2. REMOVE PORTION OF PARKING LOT TO IMPROVE SIGHT TRIANGLE
3. PUBLIC SIDEWALK DESIGNED TO DIRECT PEDESTRIANS TO CROSSWALKS; WIDTH OF PUBLIC SIDEWALKS 5' (MIN.)
4. CROSSWALK (DECORATIVE PAVEMENT WITH CONCRETE BORDER) TO MATCH DOWNTOWN AND OTHER E. JAMES ST. CROSSWALKS; CROSSWALK FLUSH WITH DECORATIVE INTERSECTION PAVEMENT, 12' (MIN.) APPROACH-WAY RAMP FROM ROAD ELEVATION TO EDGE OF RAISED CROSSWALK/INTERSECTION (6.0")
5. ADA-COMPLIANT TACTILE WALKING SURFACE INDICATORS (TWSI) IF REQUIRED
6. SHARROW AND OTHER PAVEMENT MARKINGS IN COMPLIANCE WITH MUTCD

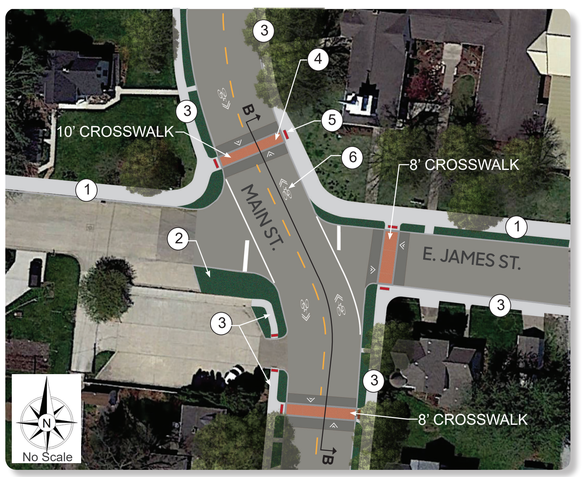
Lumec bollard

Bollard Lighting

Bollard lighting is proposed along raised intersection corners to keep motorists from crossing into the pedestrian space. The bollards will also create a gateway and aid in security. A frosted lens helps eliminate glare and create visual comfort for an enhanced user experience.



Typical Section B-B': Proposed Raised Crosswalks



Proposed Concept Plan B utilizing raised crosswalks. See Typical Section B-B'.

Proposed Concept Plan B Drawing Notes

1. SHARED SIDEWALK: CONSTANT WIDTH ALONG NORTH SIDE OF E. JAMES ST. AS SHOWN ON PROPOSED RECREATIONAL TRAIL PLAN; WIDTH TO BE AS WIDE AS POSSIBLE TO FIT WITHIN EXISTING PUBLIC RIGHT-OF-WAY: 6' (MIN.) TO 8' (MAX.)
2. REMOVE PORTION OF PARKING LOT TO IMPROVE SIGHT TRIANGLE
3. PUBLIC SIDEWALK DESIGNED TO DIRECT PEDESTRIANS TO CROSSWALKS; WIDTH OF PUBLIC SIDEWALKS 5' (MIN.)
4. CROSSWALK (DECORATIVE PAVEMENT WITH CONCRETE BORDER) TO MATCH DOWNTOWN AND OTHER E. JAMES ST. CROSSWALKS; 6' (MIN.) RAMP FROM ROAD/ INTERSECTION ELEVATION TO EDGE OF RAISED CROSSWALK (3.5" DIFFERENCE)
5. ADA -OMPLIANT RAMPS AND TACTILE WALKING SURFACE INDICATORS (TWSI)
6. SHARROW AND OTHER PAVEMENT MARKINGS IN COMPLIANCE WITH MUTCD

Walcott

Traffic Calming

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Iowa State University | Trees Forever | Iowa Department of Transportation

Iowa's Living Roadways community visioning