

JOPLIN HIGH SCHOOL CROSSWALK

For the City of Joplin

COJ Team | November 2022

AERIAL INDICATING AREA FOR THE PROPOSED CROSSWALK



CURRENT RAPID FLASHING BEACON ON 20TH STREET NEAR MURPHY BLVD.



HAWK SIGNAL



RECOMMENDATIONS

Following the review above, the City of Joplin has a variety of options available to them to improve visibility of the crosswalk, reduce speed, and ensure a safe pedestrian crossing over 20th Street at Missouri Avenue / Sunny Jim Park. It is the recommendation of the engineer that the City introduce high-visibility pavement markings for the crosswalk with zebra striping at 20th Street and Joplin High School. Advanced warning “School Zone” signs and "School" pavement marking should be introduced at the beginning and end of the school zone. Given the overall width of the roadway, a Pedestrian Refuge Island would help pedestrians cross sections of directional traffic as safe gaps between vehicles appear. Finally, it should be up to the City of Joplin to determine which beacon option they would like to consider. Both the Rectangular Rapid Flashing Beacon and the HAWK Signal produce high visibility for pedestrians. However, while the HAWK signal has higher costs associated with it, it is the most effective at creating gaps for pedestrians to safely cross the street. Table 3 below shows the effectiveness of each option combination.

Table 3: Countermeasure Effectiveness

Countermeasure	Motorist Compliance
High-Visibility Crosswalk Marking[1]	
Crosswalk Marking	25%
"School Zone" Marking	30%
Crosswalk Visibility Enhancement[1]	
Advance Warning "School Zone" signs	35%
Yield Bar	35%
Pedestrian Refuge Island[1]	45%
Rectangular Rapid-Flashing Beacon (RRFB)[2]	81%
HAWK Signal[2]	96%

[1] Percentages determined based on information derived from the *CMF Clearinghouse.*

[2] Percentages determined based on information provided by *Evaluation of Pedestrian Hybrid Beacons and Rapid Flashing Beacons.*

Staff Recommendations

Rectangular Rapid-Flashing Beacon (RRFB)

- The staff recommendation is to install a rectangular rapid-flashing beacon with refuge island.
- The installation will be similar to the existing RRFB crossing on 20th Street near Murphy Boulevard.

JOPLIN
MISSOURI

QUESTIONS?