
**VILLAGE OF SUGAR GROVE
BOARD REPORT**

TO: VILLAGE PRESIDENT & BOARD OF TRUSTEES
FROM: BRAD MERKEL, DIRECTOR OF PUBLIC WORKS
SUBJECT: PRESENTATION ILLINOIS ROUTE 47 AT PARK AVENUE
INTERSECTION IMPROVEMENTS CONCEPT STUDY-HR
GREEN
AGENDA: FEBRUARY 6, 2024, REGULAR BOARD MEETING
DATE: JANUARY 22, 2024

ISSUE

Presentation Illinois Route 47 at Park Avenue Intersection Improvements Concept Study.

DISCUSSION

HR Green will present the Illinois Route 47 at Park Avenue Intersection Improvements Concept Study.

COST

NA

RECOMMENDATION

The Village Board listens to the presentation and provide feedback to staff and HR Green.



Park Avenue at Illinois Route 47

Traffic Study and Proposed Geometry Modifications



Building Communities.
Improving Lives.

Park Avenue at IL 47

Traffic Study and Proposed Geometry Modifications



Purpose of Study



- **Primary – Safety Improvement**
 - History of serious crashes at intersection
 - Most crashes involve vehicles from Park Avenue crossing or turning onto IL 47
 - Intersection is stop-controlled on the minor approaches only (2-way stop)
 - Heavy traffic volumes and high speeds on IL 47 make entry gaps infrequent
 - Driver frustration with delay can lead to reduced gap acceptance, resulting in unsafe decisions
- **Secondary – Traffic Performance**
 - Insufficient entry gaps result in long delays on Park Avenue
 - Congestion and queuing from the delay results in substandard Level of Service (LOS)



Proposed Improvements



- Geometric Modifications

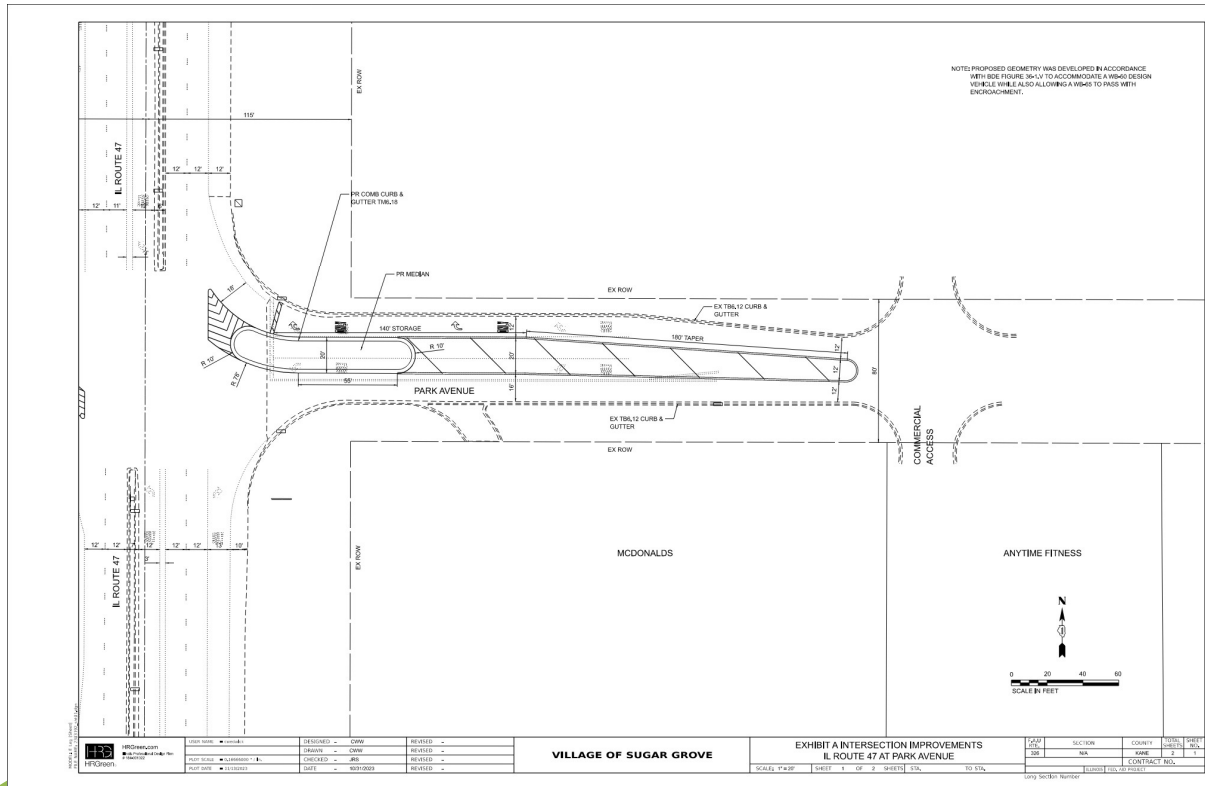
- Proposing to prohibit through movements across IL 47 and left-turns from Park Avenue
- All existing movements originating from IL 47 would remain permissible
- Install raised medians/islands on Park Avenue to physically restrict prohibited movements
- Enhanced signage and pavement markings on each approach to reinforce desired driver behavior

- Traffic Impact

- The eliminated EB and WB through movements and left turns would be redistributed as follows:
 - North to Wheeler Road / Bliss Road
 - South to Galena Boulevard
- Only right-turns would remain from Park Avenue onto IL 47



Park Avenue – East of IL 47



Park Avenue at IL 47

Traffic Study and Proposed Geometry Modifications



Traffic Impacts



- Projected Growth by 2050 (from CMAP)
 - 40% growth on IL 47 – 23,000 existing to 32,300 in 2050 (ADT)
 - 27% growth on Park Avenue east of IL 47 – 3,000 existing to 3,800 in 2050 (ADT)
 - 25% growth on Park Avenue west of IL 47 – 2,400 existing to 3,000 in 2050 (ADT)
- Results of Capacity Analysis
 - Under proposed conditions, with through movements and left turns diverted north and south:
 - Projected delays on Park Avenue in 2050 **reduced by up to 200 seconds** during peak periods – LOS A
 - No change to LOS C at Galena Boulevard, with increase in delay **no more than 1.0 sec** during peak periods
 - No change to LOS B/C at Wheeler/Bliss, with increase in delay **no more than 1.1 sec** during peak periods
 - Significant improvement at Park Avenue, with minimal negative impact to surrounding intersections

Summary



- Safety enhancements look to be feasible and maintain acceptable traffic performance
- Seeking Board approval to submit study to IDOT
- Next step would be to initiate detailed engineering, pending IDOT concurrence with the concept
- Project would be permitted through IDOT's Bureau of Traffic because IL 47 is a State Highway
- Rough cost estimate for engineering and construction is \$235,000



Questions





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THANK YOU!



Park Avenue at IL 47
Traffic Study and Proposed Geometry Modifications

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