

## Regional Consideration -Intersecting Transportation Corridors

Transportation corridors serve the City of Spokane by providing transportation facilities that have a high capacity to convey many vehicles from one part of town to another in a timely and efficient manner. The difficulty with these corridors is where they intersect with each other and allow vehicles to change their direction. As described in the previous section there is a conflict growing where the Francis Avenue corridor intersects with the Ash/Maple Couplet Corridor. The following scenario utilizes the volumes of the year 2021 with the vested Indian Trail background trips, with the project, and with Hunts Pointe. The difference is that this scenario changes the lane configurations at the intersections of corridors and creates a “turn right to go left”, or a modified jug handle movement for the westbound to southbound trips of the intersection. As shown on the photo the westbound to southbound trips that currently turn left at Ash Street (blue) would instead turn right onto Maple Street, Left onto Five Mile Road, left onto Ash Street and become a southbound through trip at the intersection of Francis Avenue (Red), rather than westbound left (blue).



### Year 2021 Horizon Year with the Project, with the vested Indian Trail Background Projects and The Hunts Pointe Development.

This scenario assumes that the development has moved forward and the background projects have been completed and adds the Hunts Pointe Development. The traffic volumes for this scenario includes the traffic volumes shown on Figures 18 & 19 and adds the Hunts Pointe development trips as shown on Figures 6 & 7. This scenario also includes the intersections of Five Mile Road onto the Ash/Maple Couplet, and redirects the westbound left turns to become southbound through trips. Please see Figures 22 & 23 for the traffic volumes used for this scenario. A summary of the level of service results are shown in the following table.

**Table 11- Alternate Year 2021 Levels of Service, with the Project, with the Background Projects, with the Hunts Pointe Development – Figures 22 & 23**

INTERSECTION	(S)ignalized (U)nsignalized	AM Peak Hour		PM Peak Hour	
		Delay (sec)	LOS	Delay (sec)	LOS
Francis Avenue & Ash Street • Add the “Jug Handle Movement”	S	<b>56.5</b> (23.4)	<b>E</b> (C)	30.8 (23.4)	C (C)
Francis Avenue & Maple Street • Add just the WB right turn lane • Add the “Jug Handle Movement”	S	17.3 (17.6) (18.5)	<b>B</b> (B) (B)	<b>77.2</b> (49.1) (36.8)	<b>E</b> (D) (D)
Five-Mile Road & Ash Street • Add the “Jug Handle Movement”	S	7.2 (13.5)	A (B)	7.5 (13.5)	A (B)
Five Mile Road & Maple Street • Add the “Jug Handle Movement”	S	6.3 (9.4)	A (A)	9.3 (9.4)	A (A)

The City of Spokane have established level of service E as the minimum acceptable level for signalized and unsignalized intersections, While WSDOT has established Level of Service D as the minimum acceptable level of service for signalized intersections. Any signalized intersection operating below LOS D should be maintained at the existing level of service.

As shown on Table 11 with the jug handle movement option, the intersection of Francis Avenue & Ash Street can be brought back to an acceptable level of service, The Jug handle option utilized the available space within the right-of way, available and adjacent City “real” property from the storm pond, and utilized duel left and right turns.

With any system change the retraining of drivers to the new path can be difficult. However, within the case of the Jug Handle. A construction detour can begin the process and with the correct signal timing can demonstrate to the drivers that the route is viable and keeps them moving as opposed to being stopped in a queue.



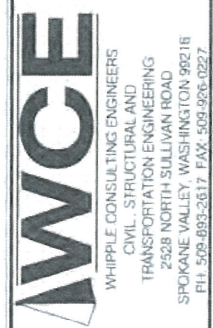


**IWCE**  
 WHIPPLE CONSULTING ENGINEERS  
 CIVIL, STRUCTURAL AND  
 TRANSPORTATION ENGINEERING  
 2528 NORTH SULLIVAN ROAD  
 SPOKANE VALLEY, WASHINGTON 99216  
 PHL 509-893-2517 FAX 509-926-0227

PROJ #: 16-1604  
 DATE: 11/03/16  
 DRAWN: RMA  
 APPROVED: TRW

TRAFFIC IMPACT ANALYSIS  
**MCCARROLLS EAST**  
 8510 N INDIAN TRAIL ROAD  
 SPOKANE, WASHINGTON  
 ALT. 2021 AM VOL. W- PROJ./HUNTS POINTE & LOS

FIGURE  
**22**



PROJ #: 16-1604  
 DATE: 11/03/16  
 DRAWN: RMA  
 APPROVED: TRW

TRAFFIC IMPACT ANALYSIS  
**MCCARROLLS EAST**  
 8510 N INDIAN TRAIL ROAD  
 SPOKANE, WASHINGTON

ALT 2021 PM VOL. W- PROJ/HUNTS POINTE & LOS

FIGURE  
**23**

impact fee is anticipated to be incorporated into each City of Spokane residential building permit.

**Year 2021, with project, with vested background projects, with Hunts Pointe Development**

- All intersections are anticipated to function at an acceptable level of service, except for the intersections of Indian Trail Road & Strong Road/Pacific Park Drive, Francis Avenue & Alberta Street, and Francis Avenue & Maple Street.
- As this is the anticipated impact of the Hunts Pointe Development on the transportation system this analysis is truly for planning information as the development is anticipated to complete its own traffic impact analysis.

**Recommendations**

As shown and concluded within this study the proposed project has been found to have no direct offsite impacts on the transportation system beyond those improvements anticipated to be needed due to background projects and the background growth of the area, or can be solved through signal timing adjustment. We recommend that the City of Spokane Include in the Transportation improvement projects the Westbound right turn lane at the intersection of Francis Avenue & Maple Street. We also recommend that the project pay the traffic impact fee at the time of permit and complete the frontage improvements of Indian Trail Road and Barnes Road. And finally, we recommend that the project complete their frontage improvements and be allowed to move forward without any further traffic analysis.



---

## CONCLUSIONS & RECOMMENDATIONS

---

### **Conclusions**

Based upon the analysis, field observations, assumptions, methodologies and results which are provided in the body of this report. It is concluded that the proposed project will generate new trips on the existing transportation system. However, these increased trips at the intersections scoped for analysis will generally not degrade the levels of service of these intersections below acceptable levels. Therefore, no offsite mitigation is required by this project. This conclusion was reached and has been documented within the body of this report.

### ***Existing Condition***

- All intersections are currently operating at acceptable levels of service.

### **Year 2017, Without Project, with vested background projects**

- With the vested background trips the intersection of Francis Avenue & Maple Street are anticipated to fall below an acceptable level of service. It was found that the intersection could be raised to an acceptable level of service by installing a westbound right turn lane and retiming the signal.

### **Year 2017, With Project, with vested background projects**

- All intersections are anticipated to function at an acceptable level of service, except for the intersections of Indian Trail Road & Strong Road/Pacific Park Drive and Francis Avenue & Maple Street.
- The intersection of Indian Trail Road & Strong Road /Pacific Park Drive can be raised to an acceptable level of service by adjusting the signal cycle length to match the cycle length of the intersection of Indian Trail Road & Barnes Road.
- As previously stated the intersection of Francis Avenue & Maple Street can be raised to an acceptable level of service by adding a Westbound Right turn lane.

### **Year 2021, without project, with vested background projects**

- With the vested background trips the intersection of Francis Avenue & Maple Street are anticipated to fall below an acceptable level of service. It was found that the intersection could be raised to an acceptable level of service by installing a westbound right turn lane.

### **Year 2021, with project, with vested background projects**

- All intersections are anticipated to function at an acceptable level of service, except for the intersections of Indian Trail Road & Strong Road/Pacific Park Drive and Francis Avenue & Maple Street.
- The intersection of Indian Trail Road & Strong Road /Pacific Park Drive can be raised to an acceptable level of service by adjusting the signal cycle length to match the cycle length of the intersection of Indian Trail Road & Barnes Road.
- As previously stated the intersection of Francis Avenue & Maple Street can be raised to an acceptable level of service by adding a Westbound Right turn lane.
- A traffic impact fee for the 5<sup>th</sup> Addition and the Remainder of McCarrolls East was calculated at \$83,910.40 for the 5<sup>th</sup> Addition and \$152,087.60 for the remainder. The