



# Staff Report

Agenda Item No. F-2

**To:** Traffic Commission

**From:** David Dale, PE, Public Services Director

**Date:** August 19, 2024

**Subject:** Modify Traffic Signal at Hwy 86 and 15<sup>th</sup> Street to Split Phase and Removal of Unmarked Pedestrian Crosswalk

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## **Background**

The Public Services Department has received requests to modify the traffic signal at Hwy 86 and 15<sup>th</sup> Street to include “split phasing”. The existing signal utilizes a “permissive turn approach”. In the permissive turn phasing, left turns are permitted to cross opposing flow when there is an appropriate gap in the opposing traffic stream. Split phasing is a signal design that gives a green phase for all vehicle movements of each direction, followed by a phase for all movements of the opposite direction. A protected turn is denoted by a green arrow, activated by a vehicle detector system. Protected turns require a separate signal phase. With the exception of this signal light, all signal lights in the City of Imperial are split phase.

## **Importance of Safe Left Turns and Pedestrian Safety**

Traffic in this intersection has increased since this signal was installed. Frank Wright Middle School (constructed 2006), McDonald’s, the Post Office, Starbucks and Quick Quack Car Wash are now located near this intersection. Traffic backs up waiting for vehicles waiting to turn left for vehicle traffic and pedestrians. There is an unmarked crosswalk on the south leg of 15<sup>th</sup> Street that has a pedestrian head and push buttons. These are proposed to be removed to enhance safety. Pedestrians will continue to use the north leg of the marked crosswalk to cross Hwy 86.

## **Impact on Surrounding Areas**

The removal of the crosswalk and changing the signal to split phasing will affect residents in the surrounding area, parents dropping off students, and pedestrians who cross Hwy 86 at 15<sup>th</sup> Street.

Key considerations include:

- 1. Infrastructure Modifications:**

- **Removal of Pedestrian Crossing on the South Side of 15<sup>th</sup> Street:** The pedestrian heads and push buttons serving the unmarked crosswalk will be removed. Pedestrians will be forced to utilize the north leg of the marked crosswalk along 15<sup>th</sup> Street. The school and commercial areas are located on the north side of 15<sup>th</sup> Street. There is no sidewalk on the south side of 15<sup>th</sup> Street east of Hwy 86.
- **Keep Crosswalk:** Currently, there is no marked crosswalk on the south leg. The cost of striping the crosswalk in thermoplastic is \$1,000.00.
- **Change from Permissive Phasing to Split Phasing:**  
Components of changing to split phasing include the following:
  - Replace the existing Green Ball LED at the Northeast corner of the intersection and replace with 12-inch Green Arrow.
  - Replace the existing Green Ball LED at the Southwest corner and replace with a 12-inch Green Arrow.
  - Remove Eastbound three light signal head at the Southeast corner and replace with a new four light signal head (one green arrow).
  - Remove westbound three light signal head at the northwest corner and replace with a four light signal head (one green arrow).

The project cost is approximately \$20,000 which includes engineering, equipment, materials and labor.
- **Keep Permissive Phasing:** There are traffic backups in this intersection partly due to the increased traffic from the school and commercial elements. Permissive phasing in this intersection creates backups due to vehicles waiting to turn left on a green light.

### **Development Review Committee (DRC) Feedback**

As part of our assessment, we have collected feedback from the DRC. The members of the DRC agreed and did not object to the proposed project.

### **Environmental Compliance**

The project is categorically exempt from the California Environmental Quality Act (CEQA) under Section 15301 (Class1)-Existing Facilities. Minor alteration to the existing street to enhance pedestrian safety.

### **Staff Recommendation**

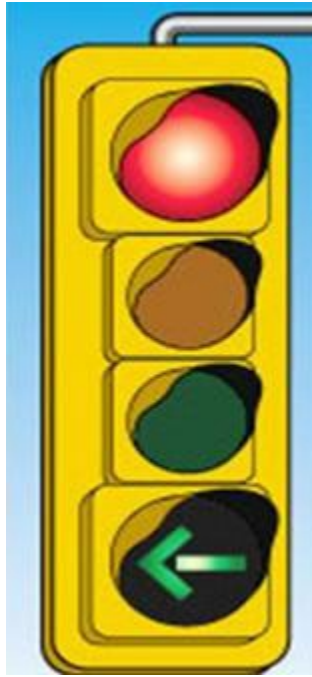
Based on these findings, staff recommends the modifications to the signal at Hwy 86 and 15<sup>th</sup> Street, to go from a permissive phasing to a split phasing approach, and remove the pedestrian crossing on the south leg crossing Hwy 86.



*Existing Conditions - Westbound on 15th Street Crossing Hwy 86*



*Existing Eastbound on Worthington Street Crossing Hwy 86 – Similar Type System Proposed for 15<sup>th</sup> Street*



*Proposed Protected Left Turns Signal Head for Westbound and Eastbound Traffic*