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SUBJECT: Traffic Safety Initiatives Update

Traffic safety is crucial to protect lives, prevent injuries, and reduce collisions. It promotes responsible behavior among drivers, pedestrians, and cyclists, ensuring smoother transportation. Continuous monitoring and improvements to public infrastructure helps fostering a safe and efficient environment for all road users.

Public Works staff presented traffic safety initiatives to City Council in February 2023, and an update in February 2024. This memo provides a summary of new and on-going initiatives since the last presentation.

Summary of 2024 Traffic Collision Statistic

A review of the 2024 traffic collision statistics revealed total reported crashes in the City increased 15% over 2023 levels. Staff cannot attribute this increase to previous safety initiative efforts but is encouraged to see overall crash rates in the City trending down based on first quarter projections of 2025. Collisions involving pedestrians increased by 13% and crashes involving cyclists increased by 36%. The 36% increase represents 16 additional reported collisions in 2024 over 2023. City traffic engineers will continue to focus on cyclist safety in 2025 to reduce the number of future collisions.

Most broadside collisions occurred at unsignalized intersections, and the majority of total collisions in the City occurred mid-block. 41% of crashes in 2024 occurred at night, significantly higher percentage than typical for an urban area. 27% of crashes occurred on the weekend, matching the typical percentage for an urban area. 22% of crashes were hit and run, and another 13% of crashes involved alcohol.

Traffic Signals & Flashing Beacons

Since 2023, City traffic engineers retimed 45 intersections to update all-red intervals, extend pedestrian clearance times, provide more green time for cyclists and reduce stops and delays. All remaining intersection in the City will be retimed with these parameter as part of the OCTA baseline project, which is expected to be completed in December 2025.

City traffic engineers implemented three new traffic signal operational technologies to improve traffic safety including two traffic signals featuring leading pedestrian intervals to give pedestrians crossing arterials a head start before the onset of green signals, the first rest-in-red operation to curb night-time speeding and the first bike signals along the Wilshire Bike Boulevard to provide cyclists with exclusive, protected movement. The City deployed each of these to address a demonstrated traffic safety concern. City traffic engineers look to expand such traffic signal operations in coming years.

City traffic engineers have developed a new sequencing operation for flashing yellow arrow traffic signals. The City has sixteen intersections with flashing yellow arrows and programmed half of those with upgraded all-red intervals and delayed yellow intervals since 2023. This slight delay



in onset of the solid yellow arrow indication should reduce motorist confusion about signal operation and significantly enhance left-turn safety.

The City upgraded sixteen uncontrolled crosswalks with new signs, markings and rapid flashing beacons. These improvements should significantly improve pedestrian visibility to motorists and reduce motorist violations of pedestrian right-of-way. The City also upgraded all traffic signals to new countdown type pedestrian indications. Countdown type pedestrian indications provide a pedestrian-friendly enhancement and can reduce crash rates up to 25%.

City traffic engineers completed engineering design for traffic signal safety projects in 2024 at Euclid and Rosecrans, and in 2025 will complete engineering design for traffic signal safety projects at Harbor and La Entrada, and Lemon and Valencia intersections. Each of the intersections will receive safety lighting upgrades in addition to the planned traffic signal work.

Crosswalk Lighting

The City traffic engineers will be conducting a before and after study with overhead solar-powered crosswalk lighting in addition to solar-powered light-up signs and rectangular rapid flashing beacons (RRFB's). The intention of this will be to confirm which technology provides the safety passage for pedestrians the highest compliance of stopping at a crosswalk for vehicles and bicycles. The goal will be to enhance all crosswalks citywide, especially those without lighting. By improving lighting at crosswalks, there may be a reduction in nighttime-related incidents.

Street and Intersection Safety Lighting

Communities across Southern California face the challenging prospect of replacing aging, high-voltage series street light systems. Series systems are operated by regulated output (RO) transformers which are only manufactured by a single company in Utah. Given the declining market for these transformers, the company will longer manufacture or support the transformers required to power series circuits. Fullerton has approximately 3,000 streetlights on series circuits throughout the City. Southern California Edison (SCE) is responsible to provide power to these systems, however, is struggling to repair/replaced failing transformers due to the scarcity of parts/replacements. As a result, transformer failures now take weeks to resolve, resulting in neighborhoods being dark at night for an extended period. SCE has recently partnered with the City to purchase/convert these circuits at no cost to the City. SCE installs new infrastructure and places the lights on a LS-1 rate structure. Staff recently identity two circuits for potential conversion in 2025.

In parallel, the City secured a Energy Efficiency and Conservation Block Grant from the US Department of Energy, which is planned to convert approximately 70 lights with solar lighting.

In addition, Staff has developed a practice to install higher lumen LED safety lighting at all signalized intersections and conditions developments to perform photometric lighting calculations fronting their businesses to determine and address lighting deficiencies.

School Traffic Safety Assessments/Improvements

City traffic engineers perform traffic safety reviews at two school sites annually, which include upgrading traffic and parking signage and pavement markings to latest safety standards, assessing additional traffic and parking control needs, reviewing crossing guard locations, and



observing traffic operations during morning arrival and afternoon dismissal periods. City traffic engineers coordinate review with the Police Department and School District staff.

Traffic Signal Backplate with Retroreflective Borders

Per the Federal Highway Administration (FHWA), backplates added to a traffic signal head improve the visibility of the illuminated face of the signal by introducing a controlled-contrast background. The improved visibility of a signal head with a backplate is made even more conspicuous by framing it with a 1- to 3-inch yellow retroreflective border. Signal heads that have backplates equipped with retroreflective borders are more visible and conspicuous in both daytime and nighttime conditions.

This treatment is recognized as a human factors enhancement of traffic signal visibility, conspicuity, and orientation for both older and color vision deficient drivers. This countermeasure is also advantageous during periods of power outages when the signals would otherwise be dark, providing a visible cue for motorists to stop at the intersection ahead.

As a way to systematically improve safety performance at signalized intersections, the City traffic engineers have considered this treatment as part of the effort which was started a few years back. Adding a retroreflective border to an existing signal backplate is a very low-cost safety treatment. This can be done by either adding retroreflective tape to an existing backplate or purchasing a new backplate with a retroreflective border already incorporated. It has been proven that the most efficient means of implementing this safety countermeasure is to adopt it as a standard treatment for signalized intersections, and the City of Fullerton has done just that.

Local Road Safety Plan (LRSP) and Highway Safety Improvement Program (HSIP) Grants

The City completed a Local Road Safety Plan (LRSP) in mid-2022 which identified the intersections having some of the highest numbers of collisions citywide. Given this information, staff proposed a project that would focus on intersection improvements, including the installation of additional vehicle indications for through movements and left-turn movements, the installation of protected left-turn phases, additional safety lighting, and upgraded signage and striping. These improvements are recognized as having high collision reduction factors and are a major focus of the HSIP.

Caltrans recently informed staff that the City's Highway Safety Improvement Program (HSIP) Cycle 12 application was selected for grant funding in the amount of \$3,218,400 and estimates a total project cost of \$3,576,000. The City's application proposes a project focused on safety improvements at six major intersections along the Orangethorpe Avenue and Harbor Boulevard corridors. These intersections include:

- Orangethorpe Avenue and Harbor Boulevard
- Orangethorpe Avenue and Euclid Street
- Orangethorpe Avenue and Brookhurst Road
- Orangethorpe Avenue and Magnolia Avenue
- Harbor Boulevard and Commonwealth Avenue
- Harbor Boulevard and Chapman Avenue

The HSIP is a federal-aid program managed by Caltrans that focuses on infrastructure projects with nationally recognized crash reduction factors. The goal of HSIP is to support local agencies in identifying and implementing cost-effective safety improvements that significantly reduce



collision risks. Funding is awarded through a competitive application process, prioritizing projects with the highest potential to improve road safety.

Safe Streets & Roads for All (SS4A) Grant

The Bipartisan Infrastructure Law provided funding for the Safe Streets and Roads for All (SS4A) Program. The SS4A is a rebranded VisionZero program and provides grant funding on a competitive basis to support planning, infrastructure, behavioral and operational initiatives to prevent death and serious injury on roads and streets involving all roadway users, including pedestrians, bicyclists, public transportation, personal conveyance and micro-mobility users, motorists and commercial vehicle operators. The City was awarded a \$200k grant to develop a "Comprehensive Action Safety Plan" (Action Plan). The City retained a consultant to prepare the plan with guidance from an Advisory Group made up of residents, commissioners, and committee members. The Action Plan will focus on identifying critical multi-modal safety projects through collision data analytics, claims data review, community input, and stakeholder interviews. The draft plan will be presented at ATC, TCC, & INRAC for comment; the final plan will be presented at Council for adoption in late 2025. The Action Plan will contain sufficient preliminary groundwork to pursue implementation grants in future cycles of the SS4A program.

Nutwood ATP Improvement Project

The City was awarded approximately \$7 million from the State Active Transportation Program to design and construct various improvements along Nutwood Avenue fronting Cal State University, Fullerton. The project closes the number one priority gap to increase connectivity on the Brea-CSUF-Santa Ana River Trail by implementing pedestrian and bicycle infrastructure along Nutwood Avenue to cross under State Route 57 (SR-57). The project removes current impediments for pedestrians, and plans for a future pedestrian and bicycle bridge crossing Nutwood Avenue.

This project will create nearly a mile of new Class I bike path, Class II buffered bike lanes, and Class IV raised bikeways on both sides of Nutwood Avenue where there are currently only Class 3 bike routes. Class I bike path and Class IV bikeways will be the first in Fullerton, allowing students, faculty, and staff to safely travel along this portion of Nutwood Avenue to connect to the Campus bike path. Project will also widen SR-57 underpass by cutting into existing slopes and installing retaining walls; constructing raised Class IV bikeways, wider sidewalks; ADA ramp improvements; and adding conflict zone markings at intersections and driveways.

The City awarded a design contract in March 2025, and has been meeting with CSUF and Caltrans regularly to keep the project moving along. Construction is tentatively expected to begin mid-2026.

Harbor Blvd Complete Streets Project

In 2024, the City was awarded a grant from OCTA for approximately \$5 million for the Harbor Boulevard Complete Streets Improvement Project. The project location is on Harbor Boulevard between Valley View Drive/Brea Boulevard and Bastanchury Road; approximately 1 mile in length. The proposed project includes lane reduction (6-lane to 4 lane); a traffic study has been performed and concluded the lane reduction is not expected to negatively affect existing or future traffic conditions. The lane reduction will provide additional space for enhanced bikeways



(buffered Class II bike lanes and Class IV bikeways) and close the sidewalk gap on both sides of Harbor Boulevard. A new signalized intersection is proposed at the Brea Dam Park entrance, which will also facilitate cyclist traversing local trails. The project also includes reduced lane widths, enhanced transit stops, ADA upgrades, upgraded street lighting, new center medians, drought tolerant landscape, and other complete streets features. This safety enhancement project would calm traffic speeds along Harbor Boulevard, improve access to recreational facilities for road users, and provide pedestrian and bicycle connectivity in the corridor.

NextSTEP

The Orange County Transportation Authority (OCTA), in partnership with the Orange County Health Care Agency (OCHCA), completed the Safe Routes to School Action Plan (SRTS AP) in 2021. The SRTS AP outlines initial goals, strategies, and actions to create and manage a countywide SRTS program. Through this process, the agencies jointly developed and supported a recommendation to establish a countywide SRTS program to support schools in need of SRTS programming. In Fall 2023, OCTA and OCHCA established a SRTS program in Orange County, continuing both agencies partnership. The SRTS AP also included the establishment of a Stakeholder Committee that will "serve as a resource to program staff and will play a central role in actively promoting and implementing this Action Plan." Committee members will cultivate relationships to foster collaboration in the SRTS community, which continues to build a culture of safety for the Countywide SRTS program along with OCTA's Next STEP (Safe Transportation Education Program) and Orange County Health Care Agency's (OCHCA) Injury Prevention for SRTS and future programs. OCTA had reached out to various cities in Orange County, and Fullerton was one of those cities selected to participate in NextSTEP. The two schools selected to participate in NextSTEP are Commonwealth Elementary and Orangethorpe Elementary. A site visit was recently conducted (March 2025) at Commonwealth Elementary school and consisted of school staff, city staff, OCTA staff, OCTA's consultant, and OCHCA staff. Staff is looking forward to conducting the NextSTEP with Orangethorpe Elementary school in the coming months.

Walkability Audit

Orange County Health Care Agency (OCHCA) has partnered with the City of Fullerton to lead the effort for walkability audits. A walkability audit is related to a Safe Routes to School plan but at a high level. Students are involved to assist in looking for deficiencies in infrastructure which in turn restrict students from walking and biking to school. Items which are commonly found during the walkability audit include sidewalk repairs, restriping of crosswalks / stop bars / channelization, repair trip hazards, graffiti removal, clean-up of vacant lots, and lighting, just to name a few. So far, walkability audits have been conducted at Maple Elementary School, Pacific Drive Elementary School, Richman Elementary School, Golden Hill Elementary School, Fisler Elementary School, with Richman Elementary School and Valencia Park Elementary School being the two most recently audits completed in 2023 and 2024, respectfully. This year, Raymond Elementary School has been selected for a walkability audit and the gears already in motion.

Fullerton PD Traffic Enforcement Update

The Fullerton Police Department Traffic Bureau partners with Traffic Engineering to maintain safety on the roads in Fullerton. The departments meet quarterly to discuss upcoming projects, plans and areas needing enforcement. This partnership will continue to grow to serve the members of the community.



MEMORANDUM

The Fullerton Police Department Traffic Bureau redeployed the Motorcycle Officer Unit in 2022, assigning three officers to the unit, primarily focusing on traffic enforcement and investigating traffic collisions. They have focused enforcement on moving violations such as speeding, red light violations and yield violations.

The Police Department added a Parking Control Officer in 2023 whom enforces parking laws and tow abandoned and illegally parked vehicles. The department has contracted with SP Plus to provide parking enforcement services for time zones in the Downtown Business District, and the early morning parking ordinance.

The department continues to partner with the California Office of Traffic Safety with grant awards to fund focused enforcement on violations that cause traffic collisions, alcohol and drug-impaired driving and DUI checkpoints.