

**Project-Level Conformity Determination Documentation
for**

State Route 120 Intersection Control Improvement Project

Caltrans EA 10-1Q010

San Joaquin County

August 2024

San Joaquin Council of Governments (SJCOG), on behalf of the California Department of Transportation (Caltrans), is providing the final documentation for PM_{2.5} and PM₁₀ Hot-spot Conformity Assessment for SR 120 Intersection Control Improvement 10-1Q010 project located in San Joaquin County.

The project consists of replacing the existing unsignalized four-legged intersection at State Route (SR) 120 and Murphy Road with a single-lane roundabout. The purpose of the project is to reduce the number and severity of broadside collisions at this location due to motorists' failure to yield.

The draft conformity material was posted on SJCOG's website (<https://www.sjcoq.org/281/Air-Quality>) and was available for the public comment period from August 9 – August 26, 2024. No comments were received during this time frame. An interagency consultation (IAC) meeting was scheduled for August 28, 2024, at 1 – 1:30 pm (PT).

The NEPA document for this project is CE (23 USC 326) and Caltrans and EPA provided concurrence that the project is not of air quality concern (non-POAQC).

The final documentation package consists of the (1) San Joaquin Valley PM hot-spot checklist, (2) slides presented at the IAC meeting, and (3) IAC meeting minutes.

San Joaquin Valley (SJV) Hot Spot Checklist for Interagency Consultation

The purpose of this form is to provide sufficient information to allow the IAC group to determine the evaluation if a project is exempt, non-exempt, and not POAQC, or non-exempt projects and POAQC (requires a quantitative project-level PM hot spot analysis).

It is the responsibility of the project sponsor to ensure that the form is filled out completely and provides a sufficient level of detail for the interagency consultation (IAC) to make an informed decision on whether or not a project requires further analysis. For example, the IAC group needs to consider the traffic impacts of the project, and thus part of the required information includes no build/build traffic data.

STEP 1: PROJECT IDENTIFICATION

A. Project Name and Number: SR 120 Intersection Control Improvement 10-1Q010

B. FTIP/CTIPS# Identification No. [FTIP: Federal Transportation Improvement Program; CTIPS: California Transportation Improvement Program System]: N/A

C. City/County: East of the City of Manteca, San Joaquin County

D. Project Description: Replace existing unsignalized four-legged intersection at State Route (SR) 120 and Murphy Road with a single lane roundabout.

E. Type of Project:

New state highway

Change to existing state highway

New regionally significant street

Change to existing regionally significant street

New interchange

Reconfigure existing interchange

Intersection channelization

Intersection signalization

Roadway realignment

Bus, rail, or inter-modal facility/terminal/transfer point

Truck weight/inspection station

At or affects location identified in the SIP as a site of actual or possible violation of NAAQS

Others, specify:

F. Hot Spot Pollutant of Concern (check both): PM_{2.5} PM₁₀

G. Lead Agency: Caltrans District

a. Contact Person: Ken Romero

b. Phone #: 559.593.5891

c. Email: ken.j.romero@dot.ca.gov

H. NEPA Assignment – Project Type (check appropriate box)

<input checked="" type="checkbox"/>	Categorical Exclusion (NEPA)	<input type="checkbox"/>	EA or Draft EIS	<input type="checkbox"/>	FONSI or Final EIS	<input type="checkbox"/>	PS&E or Construction	<input type="checkbox"/>	Other
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a. Include the scheduled date of Federal Action (if available):

I. NEPA Assignment – Project Type (check appropriate box)

<input type="checkbox"/>	Exempt	<input checked="" type="checkbox"/>	Section 326 –Categorical Exclusion	<input type="checkbox"/>	Section 327 – Non-Categorical Exclusion
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J. Is this project in a conforming Plan and Transportation Improvement Program (TIP)?

Yes No

a. If yes, indicate the federal approval date for the latest regional conformity analysis:

K. Current Programming Dates (as appropriate) [PE: Preliminary Engineering; ENG: Engineering; ROW: Right-of-Way; CON: Construction].

Date	Pre-Engineering /Environmental	Engineering	Right of Way	Construction
Start	2/9/2024	6/2/2025	4/15/2025	7/1/2025
End	6/29/26	11/27/2026	11/27/2028	7/30/2027

L. Project Description (Summary, use additional sheets as needed)

a. Purpose and Need of the project:

The purpose of the project is to reduce the number and severity of broadside collisions at this location due to motorists’ failure to yield.

The project is needed to address the number and severity of broadside collisions at this location due to motorists’ failure to yield by installing intersection improvements.

b. Route name, route number, project length, and mile point locations:

Caltrans EA 10-1Q010 on State Route 120 at PM 10.820

c. Number of current and future lanes (clearly indicate if any lanes are “turn lane only”)

Roadway	No Build <i>Existing</i>	Build <i>Roundabout</i>
SB Murphy	1	1 Transition lane
NB Murphy	1	Single-lane Roundabout
EB SR 120	2	1 through lane

WB SR 120	2	1 dedicated Right-turn lane Single-lane Roundabout
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- d. Identify as “Capacity Adding” or “Non-Capacity Adding” project.
Non-capacity adding project.
- e. Identify intersecting roads that will be impacted:
Intersection of SR 120 and Murphy Road.
- f. Project impact on surrounding land use/traffic generators (discuss especially the effect on diesel traffic)
- The Build/No Build ADT and Truck ADT for the project are the same for the Existing, Open to Traffic, and Design Years, indicating that growth in traffic/truck volumes are due to anticipated population growth, not new traffic induced by construction.
 - Construction of a roundabout would significantly lessen delay times during the PM peak hour and contribute to operational efficiency within the project limits.
 - A roundabout would eliminate the need for vehicle idling and vehicle stops, thereby reducing the amount of pollutant emissions while improving traffic flow, safety, and operational efficiency.

STEP 2: EXEMPT PROJECTS

EXEMPT PROJECT

No PM project-level conformity is required, and no further documentation is needed. Go to Step 6

Describe type of Exempt Project:

NOT AN EXEMPT PROJECT. GO TO STEP 3

STEP 3: TRAFFIC INFORMATION

Fill out only relevant traffic information B through G. For example, fill out D and E if the project is an intersection, and fill out F and G if the project is a bus, rail, or intermodal facility/terminal/transfer point. Include additional tables, maps, and other graphical representations of the projects in separate sheets.

A. Year(s) Selected for Proposed Facility:

a. Year(s) selected

Open to Traffic Year 2028, Design/Horizon Year 2048

b. Justification for Selection of Analysis Year(s):

Traffic analysis is based on Existing, Open to Traffic, and Design Years modeled by Caltrans District 10 Traffic Forecasting and Technical Analysis Branches

B. 2028 Opening Year Traffic Information for No Build and Build Scenarios of the Proposed Facility

Alternative	No Build AADT	Build AADT	Truck AADT (12%)
<i>No Build (Two Way Stop Controlled)</i>	13,900	13,900	1,640
<i>Build (Roundabout)</i>	13,900	13,900	1,640

C. 2048 Analysis Year Traffic Information for No Build and Build Scenarios of the Proposed Facility

Alternative	No Build AADT	Build AADT	Truck AADT (12%)
<i>No Build</i>	15,200	15,200	1,794
<i>Build (Roundabout)</i>	15,200	15,200	1,794

D. Describe Traffic Impacts (if appropriate) [Provide any justification if build percent traffic is greater than the no-build, large changes in AADT and trucks percent even if it is below EPA's criteria, etc.]

- Construction of the project will a positive impact by imposing consistent traffic flow along SR 120.
- A roundabout at this intersection will eliminate the need for stop-and-go traffic, resulting in a decrease of emitted pollutants caused by tailpipe emissions of stopped traffic.
- The roundabout would act as a traffic calming device by slowing vehicle speeds and lessening conflict points that would lead to collisions.

E. Describe potential traffic redistribution effects of congestion relief (*impact on other facilities*)

- By replacing the existing TWSC intersection of SR 120 with a roundabout, delay times during the PM peak hour would be significantly reduced to seconds rather than minutes and contribute to the operational efficiency of this segment of SR 120.

- The adjacent intersections of North Ripon Road/SR 120 to the west and the intersection of French Camp Road/SR 120 to the east of the roundabout would benefit from the redistribution of traffic and lessened speeds caused by the roundabout's construction.
 - The transition lane on SB Murphy Road and the dedicated Right-turn lane on EB SR 120 would reduce conflict points by funneling motorists into their desired directions after exiting the roundabout.
 - Construction of a roundabout would eliminate points of conflict and reduce the possibility of accidents.
- F. Is additional traffic information (tables, maps, other graphical representations of the project (location, project details on additional lanes or ramps) presented in additional sheets at the end of the checklist?
- Yes No

STEP 4: POAQC DETERMINATION

NOT A PROJECT OF AIR QUALITY CONCERN [Refer to EPA's 2021 guidance, EPA-420-B-21-037, and FHWA's FAQ document, for complete details.] *Quantitative analysis is NOT required. IAC review, public participation, and concurrence are required. Provide the filled-out checklist to your MPO for the next steps. [Listed in Pg. 1 under "Instructions"] Use the space to provide a detailed narrative and rationale for this conclusion.*

Project does not meet the criteria for a POAQC as defined in the final rule by 40 CFR 93.123(b)(1). The project is listed as one of the non-exempt project examples that are not a local air quality concern under 40 CFR 93.123(b)(1)(i) and (ii) stated as "Intersection channelization projects, traffic circles or roundabouts, intersection signalization projects at individual intersections, and interchange reconfiguration projects that are designed to improve traffic flow and vehicle speeds, and do not involve any increases in idling. Thus, they would be expected to have a neutral or positive influence on PM emissions".

The Build/No Build AADT and Truck AADT for the project are the same for Existing, Open to Traffic, and Design Years, showing that growth in traffic/truck volumes is due to anticipated population growth, and not to new traffic induced by construction of the project.

Construction of a roundabout would significantly lessen delay during times during PM peak hours, contribute to operational efficiency and reduce vehicle conflict points, thus increasing safety.

Go to STEP 6.

PROJECT OF AIR QUALITY CONCERN Check the following options to see if your project is one of the following options. If yes, the project could be of local air quality concern and requires quantitative hot-spot analysis based on interagency review.

Examples of POAQC that are covered by 40 CFR 93.123(b)(1)(i) and (ii)

- *New or expanded highway projects with a significant number of, or increase in, diesel vehicles (e.g., 125,000 AADT and 10,000 (8%) diesel truck traffic) Note: These metrics are examples and should not be considered as threshold levels.*
- *Project affecting intersections that are at LOS D, E, or F with a significant number of diesel vehicles, or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.*
- *New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.*
- *Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.*
- *Projects in or affecting locations, areas, or categories of sites that are identified in the PM10 and PM2.5 applicable implementation plan or implementation plan submissions, as appropriate, as sites of violation or possible violation.*

Examples of POAQC that are covered by 40 CFR 93.123(b)(1)(iii) and (iv).

- *A major new bus or intermodal terminal that is considered to be a “regionally significant project” under 40 CFR 93.101.*
- *An existing bus or intermodal terminal that has a large vehicle fleet where the number of diesel buses increases by 50% or more, as measured by bus arrivals.*

STEP 5: ANALYSIS AND DOCUMENTATION (FOR POAQC)

The following is a summary of documentation to be included for a quantitative PM hot-spot analysis. Please refer to the EPA Quantitative Hot-Spot Guidance for more information. [See EPA Quantitative PM Hotspot Analysis Guidance, EPA-420-B-21-037, October 2021; Accessed at <https://www.epa.gov/state-and-local-transportation/project-level-conformity-and-hot-spot-analyses#pmguidance>] IAC review and concurrence are required on the modeling protocol before the modeling begins. Contact your MPO representative and Air Quality Coordinator for additional guidance.

Documentation to Be Included for the Quantitative PM Hot-spot Analysis:

- Description of project
- Description of type of emissions considered in the analysis.
- Contributing Factors:
 - Air Quality
 - Transportation and traffic conditions
 - Built and natural environment
 - Meteorology, climate, and seasonal data
 - Adopted emissions control measures
- Consider the full-time frame of the area's LRTP
- Description of existing conditions
- Description of changes resulting from the project
- Description of models, methods, and assumptions
- Description of analysis years
- Types of emissions included in the analysis and the details of emissions modeling.
- Results of air dispersion modeling.
- Background concentration estimation methods and results.
- Design value calculation.
- Discussion of why the project will not cause a violation of either the annual or 24-hour standard.
- Discussion of any mitigation measures
- Conclusion on how the project meets conformity requirements.
- Documentation of any IAC decisions on the latest planning assumptions used in the analysis.
- Documentation of any public comment on the latest planning assumptions used in the analysis.

STEP 6: PUBLIC AND IAC INVOLVEMENT

Fill out this section after the checklist is sent to the MPO and the project is presented at the SJV Project Level Conformity Group Meeting.

- A. SJV Project Level Conformity Group Meeting Date: 08/28/2024
- B. Summary of IAC comments received and responses: On August 28, 2024, a teleconference call was convened from 1:00 PM to 1:30 PM Pacific Time (PT) to present project details and a project-level conformity summary for SR120 Intersection Control Improvement Project in San Joaquin County. The IAC partners

and the public were invited to participate. There were no comments from the IAC partners and the public. Following the presentation, the IAC partners concurred that the project is not of an air quality concern (not a POAQC).

C. Summary of public comments received and responses: On August 09, 2024, the hot-spot checklist and draft presentation slides for the SR120 Intersection Control Improvement Project in San Joaquin County were made available for public review on the SJCOG website. The public comment period concluded on August 26, 2024, at 5:00 PM. No comments were received from the public during this time frame.

D. IAC Concurrence Date(s): 08/28/2024

Additional Information on Traffic Data

Attach traffic data tables, maps, and other graphical representations of the project to supplement information in Step 3.

SR 120 Intersection Control Improvement

SR 120/Murphy Road Intersection
Improvement - San Joaquin County

Project Overview

Project Description

Project Location

Purpose and Need

Project Listing in the FTIP/CTIPS

Project Alternatives

Traffic Data and a Summary of Traffic Findings

Project Schedule

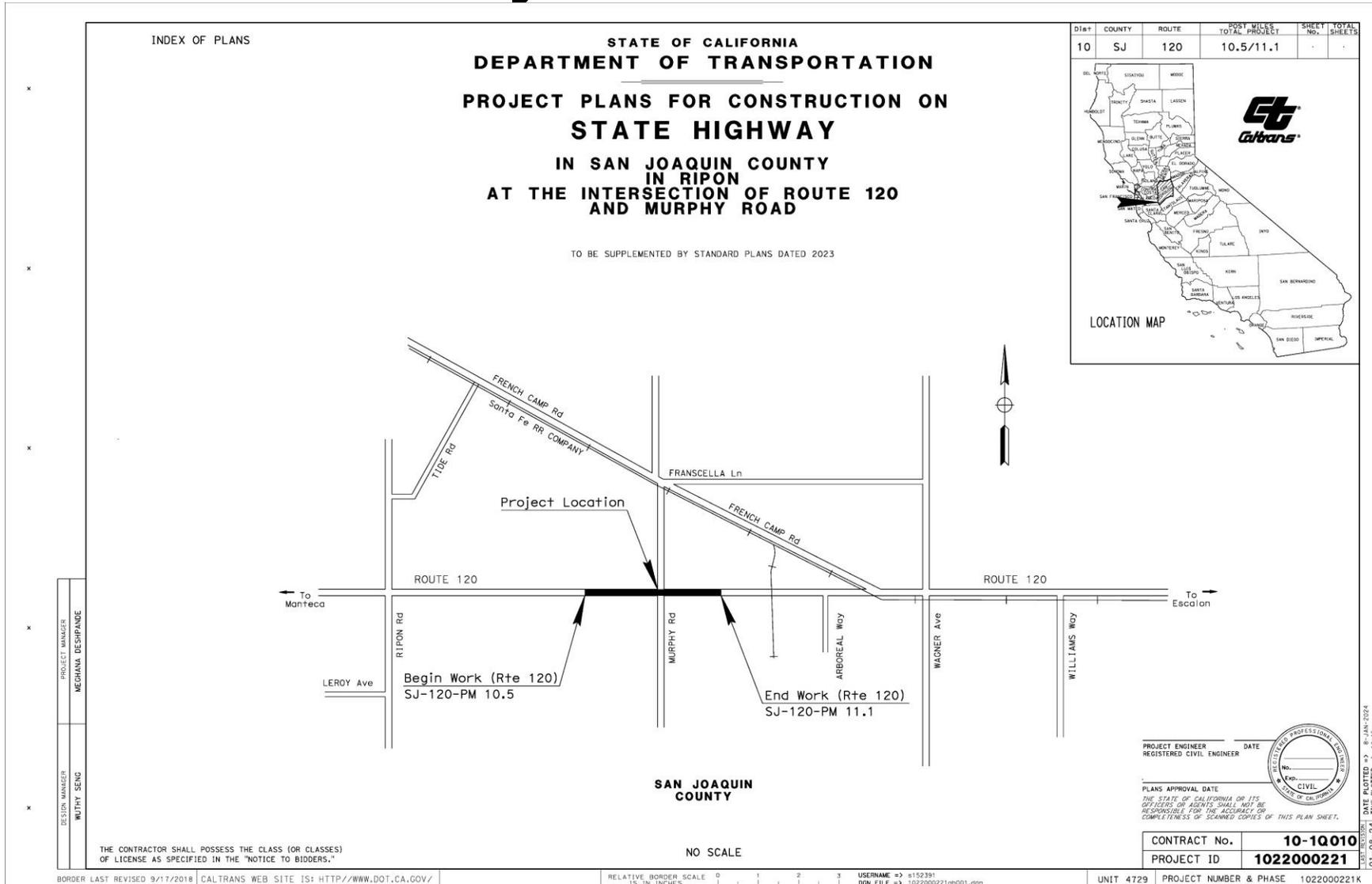
Project-level Conformity Summary

Project Description

Caltrans EA 10-1Q010, San Joaquin County

- Project will improve intersection control at PM 10.82 at the intersection of SR 120 and Murphy Road east of the City of Manteca.
- Current configuration is a four-leg unsignalized intersection with stop-controlled access on Murphy Road and a shared through-right-turn lane onto SR 120

Project Location



Purpose and Need

- The purpose of the project is to reduce the number and severity of broadside collisions at this location due to motorists' failure to yield.
- The project's need is motorists' failure to yield by installing intersection improvements.

Project Listing in the FTIP/CTIPS

- This project is not regionally significant; therefore, it does not appear in the San Joaquin Council of Governments (SJCOG) 2023 Federal Transportation Improvement Program (FTIP) or the SJCOG 2022 Regional Transportation Plan (RTP).

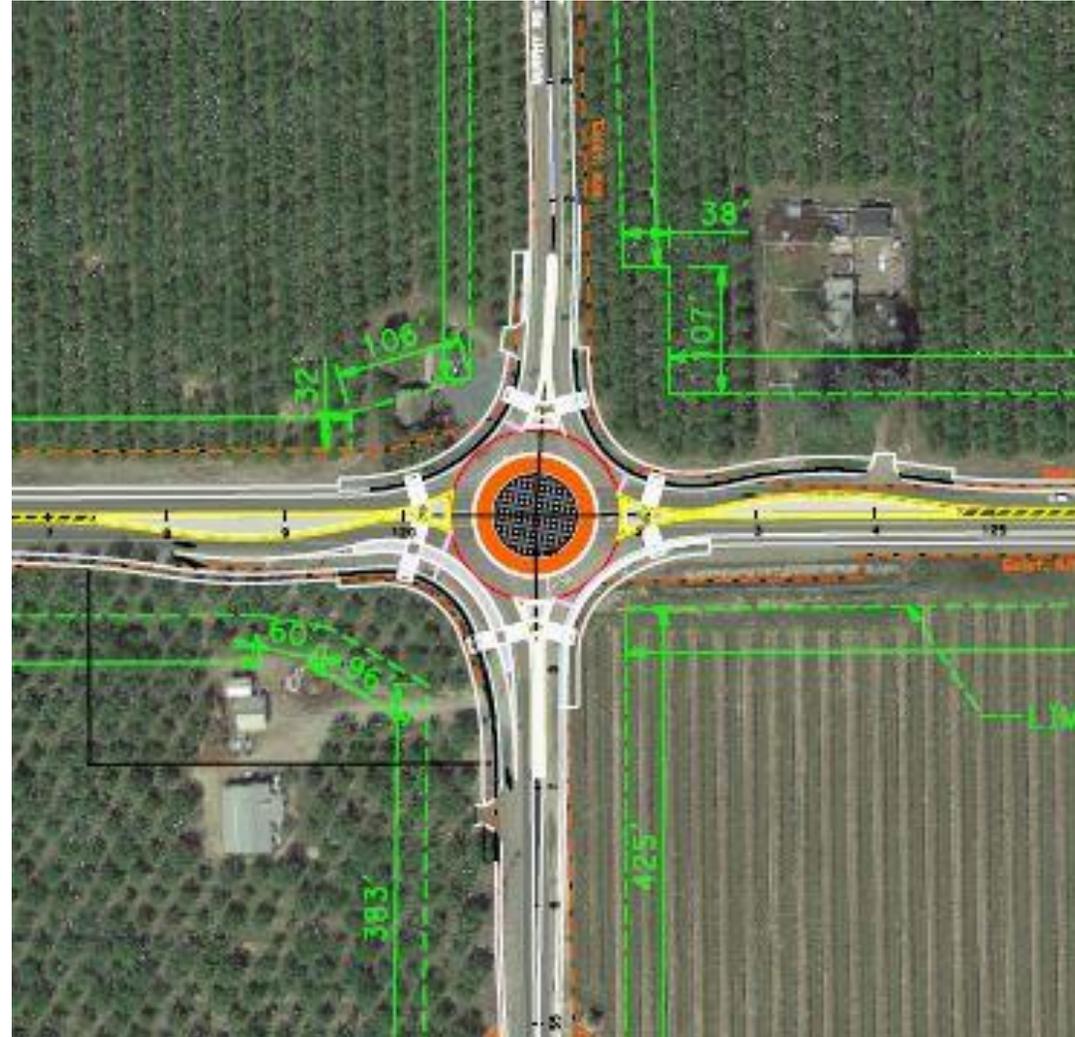
No Build Alternative

- The existing two-way stop-controlled intersection configuration will remain throughout Design Year 2048.
- Open to Traffic (2028) and Design Year (2048) PM delay times will substantially increase, causing delay times of up to several minutes.
- Idling times of several minutes will contribute to greater amounts of emitted pollutants.

Build Alternative

- A single-lane roundabout would be built to accommodate Surface Transportation Assistance Act (STAA) trucks.
- Each approach will have a splitter island, pedestrian crossings, ADA elements, and curbs and gutters.
- The eastbound approach leg will have a through lane and a 300-ft dedicated right-turn lane.
- The southbound departure leg will have an additional 300-ft transition lane.
- Idling/delay times will decrease significantly during PM peak hour.

Build Alternative – Roundabout Location



Traffic Data, Models, and Methodology

- AADT was provided by Caltrans
- Sidra Version 9.0 and HCS Version 7.0 were used for the intersection analysis.
- Traffic forecast for AM and PM peak hours were prepared by the Caltrans Technical Planning Office.
- Heavy vehicle percentage was based on actual traffic counts at the intersection.
- The study analyzed the traffic scenarios for 2028 Build (Opening year) and 2048 Build (20-year design life).
- The lane approaches and intersection level of service (LOS) method for the roundabout was based on the All-Way Stop Control LOS, which is based on control delay and volume per capacity (V/C) ratio.

Traffic and Traffic Findings

Table 1. Existing and No Build/Build AADT and Truck AADT

Alternative	Year	AADT	Truck AADT (12%)
<i>Existing</i>	2023 Existing	13,600	1,605
<i>No Build Two-Way Stop- Control</i>	2028 Opening	13,900	1,640
	2048 Design	15,200	1,794
<i>Single-Lane Roundabout</i>	2028 Opening	13,900	1,640
	2048 Design	15,200	1,794

Traffic and Traffic Findings

Table 2 – AM/PM Delay Times and LOS

Alternative	Year	AM Delay Time (s)	PM Delay Time (s)	AM LOS	PM LOS
Existing TWSC	2023	24	394	C	F
No Build TWSC	2028 Opening	26	422	D	F
	2048 Design	38	715	E	F
Single-Lane Roundabout	2028 Opening	6	7	A	A
	2048 Design	6	7	A	A

Traffic Findings Summary

- Construction of the project would have a modest reduction in AM peak hours delay times and a significant reduction in PM peak hour delay times.
- The roundabout alternative would significantly improve LOS in comparison with the Existing/No Build alternative.
- A roundabout would eliminate the need for vehicle idling and vehicle stops, thereby reducing the amount of pollutant emissions while improving traffic flow, safety, and operational efficiency.
- A roundabout would eliminate points of conflict and reduce the possibility of accidents.
- Growth in traffic between Open to Traffic and Design Years is due to general growth in the area, not to construction of the roundabout.

Schedule

- Begin Environmental: 2/9/24
- Begin PA&ED: 4/4/25
- Begin Design: 6/2/25
- RTL: 6/29/26
- Begin Construction: 7/1/2025

Project-level Conformity Conclusion

The SR 120 Project does not meet the criteria for a POAQC as defined in the final rule by 40 CFR 93.123(b)(1).

- The SR120 is a non-exempt project that is not a local air quality concern under 40 CFR 93.123(b)(1)(i) and (ii), which states that “Intersection channelization projects, traffic circles or roundabouts, intersection signalization projects at individual intersections, and interchange reconfiguration projects that are designed to improve traffic flow and vehicle speeds, and do not involve any increases in idling. Thus, they would be expected to have a neutral or positive influence on PM emissions”.

Project Level Conformity Summary

Caltrans asks that the IAC Group concur that the project is not a Project of Air Quality Concern of Air Quality Concern due to:

- The Build/No Build ADT and Truck ADT for the project are the same for Existing, Open to Traffic, and Design Years.
 - Growth in traffic/truck volumes are attributed to anticipated population growth, not new traffic induced by construction of the project.
- Construction of the Build alternative would significantly lessen delay during times during PM peak hours and contribute to operational efficiency with the project limits.
- Construction of a roundabout would eliminate vehicle idling and the need for vehicle stops altogether, thereby reducing harmful emissions.

Questions?



[Contact -Ken.J.Romero@dot.ca.gov](mailto:Ken.J.Romero@dot.ca.gov)

San Joaquin Valley Project-Level Conformity Working Group

Project-Level Conformity Determination for SR120 Intersection Control Improvement 10-1Q010, San Joaquin County

Meeting Minutes

August 28, 2024, 1:00 pm – 1:30 pm

The meeting was held via Zoom teleconference.

Attendees

- SJV AQ Coordinator (Trinity Consultants): Suriya Vallamsundar
- SJCOG: Ty Phimmasone, Nick St Cook
- Caltrans District 6: Ken Romero, Maya Hildebrand
- Caltrans HQ: Erika Vaca, Erika Espinosa Araiza, Emma Maggioncalda, Karishma Becha
- Caltrans District 10: Sriram Iyer
- EPA: Lindsay Wickersham
- Others: Elisabeth Hahn (StanCOG)

Meeting Summary

- Introductions
Commencing the meeting, AQ Coordinator provided opening remarks and conducted a roll call to establish the attendance of all participants.
- Review of Non-Exempt Projects for the Project-level Particulate Matter (PM) Conformity
 - Introductions and Project Overview: AQ Coordinator introduced Caltrans's SR120 Intersection control improvement project.
 - Project Presentation: Ken Romero presented the project details and the reasoning behind the proposed project-level conformity determination. Since this is an intersection channelization project that improves the level of service of the intersection and no traffic increase is expected, Caltrans concluded that this project is not a POAQC.
 - Public Comment Period: SJCOG informed the group that all project-level materials were available for public review on the COG website from August 09 – August 26, 2024. No comments were received during the designated public comment period. No comments were received from IAC partners during the draft conformity review.
- Discussion
No comments or questions were received from the attendees.
- Determination
EPA and Caltrans concurred that the project is not a POAQC.
- Closing Remarks and Adjournment
AQ Coordinator informed the group that the final hot spot materials and meeting minutes will be posted to the SJCOG website. SJCOG will then send a final email to IAC documenting the concurrences received. The next project-level conformity meeting is scheduled for September 25, 2024.