
Technical Memorandum

TO: Jeff Lerud, P.E., NDOT

DATE: Nov. 12, 2019

FROM: Jack Sjostrom, CA Group, Inc.

SUBJECT: Memorandum Subject

COPIES:

Phasing/Utility Assumptions

To minimize the effect on traffic operations, Phase 0 focuses on utility relocation and additional road widening. It is assumed that critical utilities and I-15 widening areas are completed before Phase 1:

- In-n-Out food establishment electrical relocations must be completed before Phase 1 begins
- T-Mobile electrical relocations must be completed before Phase 1 begins
- Assume detours routes include use of Flamingo Rd and Russell Ave interchanges
- Assume I-15 closures utilize I-215 and I-515 as detours routes

Once these utility relocations and widenings are complete, traffic-impacting construction commences.

Closures of I-15

The following are anticipated closures for the given activities:

- Demolition of Tropicana bridge over I-15 (TR/I-15)
- Demolition of Flyover (TR-5)
- Erection of the girders of Tropicana bridge over I-15 (TR/I-15)
- Erection of girders of Flyover bridge (TR-5)

Traffic Impact

- The favored traffic control method closes the North half of Tropicana Ave bridge with the North On/Off ramps for 12 months and then close the South half of Tropicana Ave bridge with the South On/Off ramps for an additional 12 months. The Flyover ramp is closed for the bulk of the 24 months.
- This method maintains access across Tropicana Ave at all times.
- Significant traffic impact begins after the critical utility relocations are complete.
- Complete closure of Tropicana Ave, On/Off Ramps in that sector, was considered, albeit briefly. This method was unfavorable for the following reason:



- Stake owner backlash
- Local businesses would significantly suffer
- No significant reduction in the overall schedule

Phase 0 Traffic Control Plan

- Minor shoulder closures on both I-15 and Tropicana Ave, resulting in no significant impact.

Phase 0 – Impacted Utilities

- Nevada Energy relocation at Dean Martin Dr
- Nevada Energy relocation at T-Mobile Arena
- Nevada Energy relocation at Frank Sinatra Dr
- Southwest Gas relocation on Tropicana Ave at T-Mobile Arena
- Water relocation at Tropicana Ave Flyover Touchdown
- Water relocation at Harmon Ave
- Century Link relocation at Dean Martin Dr
- Construct storm drain RCB on I-15 Southbound from Flamingo Rd to Tropicana Ave
- Road widening on I-15, Southbound from Flamingo Rd to Tropicana Ave Exit ramp with shoulder closures.
- Road widening on the I-15, Northbound from Tropicana Ave to Flamingo Rd Entrance ramp with shoulder closures.
- Road widening at Tropicana Ave Eastbound near Flyover touchdown

Phase 1 Traffic Control Plan

- North half of the Tropicana bridge (TR/I-15) is barricaded and closed. This enables three Westbound lanes and two Eastbound lanes on the South half of Tropicana Ave.
- Southbound I-15 has inside lane closures with Southbound exit ramp (TR-3 and TR-5) closed. This enables four lanes open for traffic flow Southbound on I-15 under Tropicana Ave.
- Northbound I-15 inside closures with Northbound entrance ramp (TR-2) closed. This enables four lanes open for traffic flow Northbound on I-15 under Tropicana Ave.
- Frank Sinatra Dr exit is closed and has intermediate closures for demolition and construction of the bridge.
- Maintain the pedestrian path on the Southside of Tropicana Ave in the condition equal to or better than existing.
- Maintain protected and lighted pedestrian path under Tropicana Ave in the condition equal to or better than existing on Frank Sinatra Dr.



- Maintain a pedestrian path at all times on Harmon Ave
- A right-turn and left-turn pockets Westbound Tropicana at Dean Martin Dr must be maintained.
- Two through lanes and a through left turn lane Westbound lane at Southbound I-15 ramp must be maintained.
- Designated left on Eastbound NYNY driveway must be maintained.
- Signalized intersections at TR-1 ramp, TR-4 ramp, NYNY entrance, and Dean Martin Dr must be maintained.

Phase 1 – Demolition

- Demolition of North half of Tropicana bridge (TR/I-15) over I-15.
- Demolition of North half of Tropicana bridge (TR/FS) over Frank Sinatra Dr.
- Demolition of Tropicana Northbound On-Ramp (TR-2)
- Excavation of Tropicana Southbound Off-Ramp (TR-3)
- Demolition of Flyover (TR-5)
- Remove and replace billboard at Southeast and Northwest quadrants

Phase 1 – Bridge Construction

- Construct North half of Tropicana bridge over I-15 (TR/I-15)
- Construct North half of Tropicana bridge over Frank Sinatra Dr (TR/FS)
- Construct Tropicana Northbound On-Ramp (TR-2)
- Construct Tropicana Ave Southbound Off-Ramp (TR-3)
- Construct Harmon HOV Connection
- Construct Tropicana Flyover (TR-5)

Phase 1 – Roadway

- Reconstruct RCB's on North half of Tropicana Ave by NYNY driveway
- Reprofile Tropicana Ave road from East of NYNY driveway to Dean Martin Dr
- Construct North half of Tropicana Ave road
- Construct pedestrian walkway by Frank Sinatra Dr
- Mill and fill Harmon Ave road

Phase 2 Traffic Control Plan

- Transition barricades and traffic control to South half of Tropicana Ave
- North half of Tropicana is opened.
- Northbound entrance ramp (TR-2) is opened



- Southbound exit ramp (TR-3) is open
- Harmon HOV connection is now open
- The south half of Tropicana Ave is closed once traffic switch is complete
- I-15 Northbound has inside lane closures and has exit ramp (TR-1) Frank Sinatra Dr exit ramp closed. This enables four lanes open for traffic flow Northbound on I-15
- I-15 Southbound has inside lane closures and has ramp (TR-4) Southbound On-ramp closed. This enables four lanes open for traffic flow Southbound on I-15
- Frank Sinatra Dr exit ramp remains closed with additional intermediate closures for demolition and construction of the bridge.
- I-15 Northbound and Southbound have center lane and shoulder closures
- A protected and lighted pedestrian path under Tropicana Ave must be maintained in the condition equal to or better than existing on Frank Sinatra Dr
- Once Tropicana Ave North half is open, the final configuration of the Northern pedestrian path must be completed.
- Maintain 3 Eastbound through lanes and 3 Westbound through lanes open on Tropicana Ave
- Right and left turn pocket lanes Tropicana Westbound at Dean Martin Dr must be maintained.
- Left turn pocket lane Eastbound at Southbound I-15 ramp must be maintained.
- Left turn pocket lane Eastbound at NYNY entrance must be maintained.
- Must have signalized intersections at TR-1 ramp, TR-4 ramp, NYNY entrance, and Dean Martin Dr

Phase 2 – Demolition

- Demolition of the South half of Tropicana bridge (TR/I-15) over I-15
- Demolition of the South half of Tropicana bridge (TR/FS) over Frank Sinatra Dr.
- Demolition of Tropicana Southbound On-Ramp (TR-4)

Phase 2 – Bridge Construction

- Construct South half of Tropicana bridge over I-15 (TR/I-15)
- Construct South half of Tropicana bridge over Frank Sinatra Dr (TR/FS)
- Construct Tropicana Southbound On-Ramp (TR-4)
- Construct second pedestrian walkway by Flyover Off-Ramp (TR-5)
- Construct Frank Sinatra Exit Ramp
- Finish construction of Flyover (TR-5)



Phase 2 – Roadway

- Reconstruct RCB's on I-15 Southbound near On-Ramp (TR-4)
- Reconstruct RCB's on South half of Tropicana Ave near NYNY driveway
- Construct South half of Tropicana Ave road

Phase 3 Traffic Control

- Intermittent closures of driveways throughout Dean Martin Dr

Phase 3 – Reconfiguration of Dean Martin

- Construct and open Dean Martin Dr through movements and intersections

EXHIBITS