

# H-1 (EB) Improvements

## Ola Lane to Likelike Highway Off-Ramp



# Project Purpose:

- Improve Safety
- Relieve Congestion



Table 3-5. Travel Time Benefits Summary

Peak Period	2023 Travel Time			2035 Travel Time		
	Current Configuration	With Improvements	Benefit	Current Configuration	With Improvements	Benefit
Morning (6 a.m. to 9 a.m.)	8 – 10	5.5 – 7	2.5 – 3	8.5 – 10.5	6 – 7	2.5 – 3.5
Midday (9 a.m. to 3 p.m.)	2 – 3	1.5 – 2	0.5 – 1	2 – 3	1.5 – 2	0.5 – 1
Afternoon (3 p.m. to 7 p.m.)	8 – 10	5.5 – 7	2.5 – 3	8.5 – 10.5	6 – 7	2.5 – 3.5

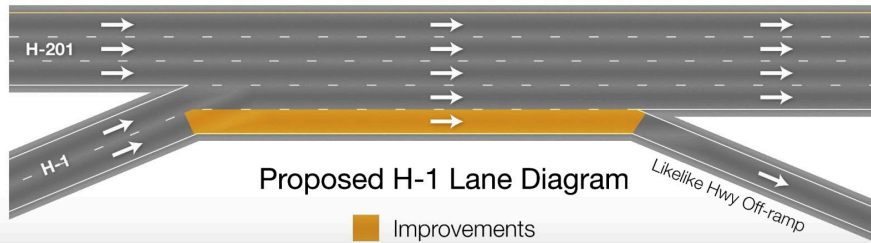
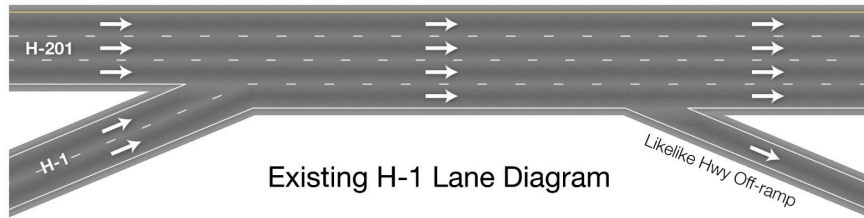
Note: Travel time ranges are reported in minutes.





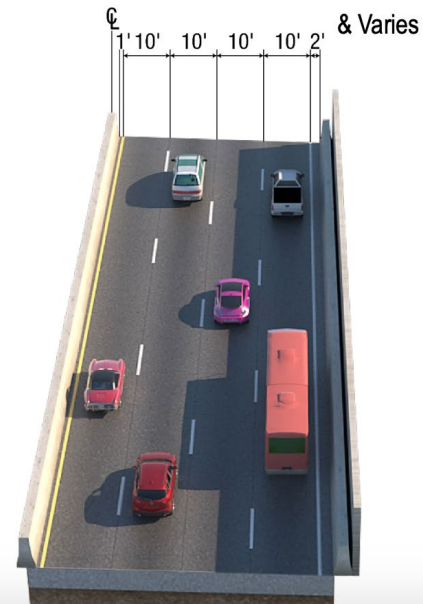


## H1 Improvements – Saving Time



## Typical Section

### Incorporate Design Improvements





# Widen H1 Eastbound on Makai side



- Add inside and outside shoulders, increase lane width to 11'
- Construct retaining walls
- Lengthen Gulick Bridge on the makai and mauka sides





**Widen H1 over Richard Lane  
and Kalihi Valley Stream**



# Current Closures

- ▶ H-1 eastbound between Ola Lane and Likelike Highway
  - ▶ 2 lanes closed within the project limits on Sunday nights through Thursday nights, from 8 p.m. to 4:30 a.m., and two lanes closed on Friday nights and Saturday nights from 8 p.m. to 7 a.m.
- ▶ Gulick Avenue Overpass
  - ▶ 1 lane closed on Gulick Avenue overpass bridge between 8 a.m. and 3:30 p.m. Monday through Friday.
  - ▶ Flaggers monitor and maintain alternating traffic control. They are aware of the Kalihi Waena pick ups around 2:20 p.m.



# Gulick Avenue Overpass



- Lengthen existing bridge and move abutments on the WB and EB sides about 15.5' each
- Build retaining walls on the WB and EB side



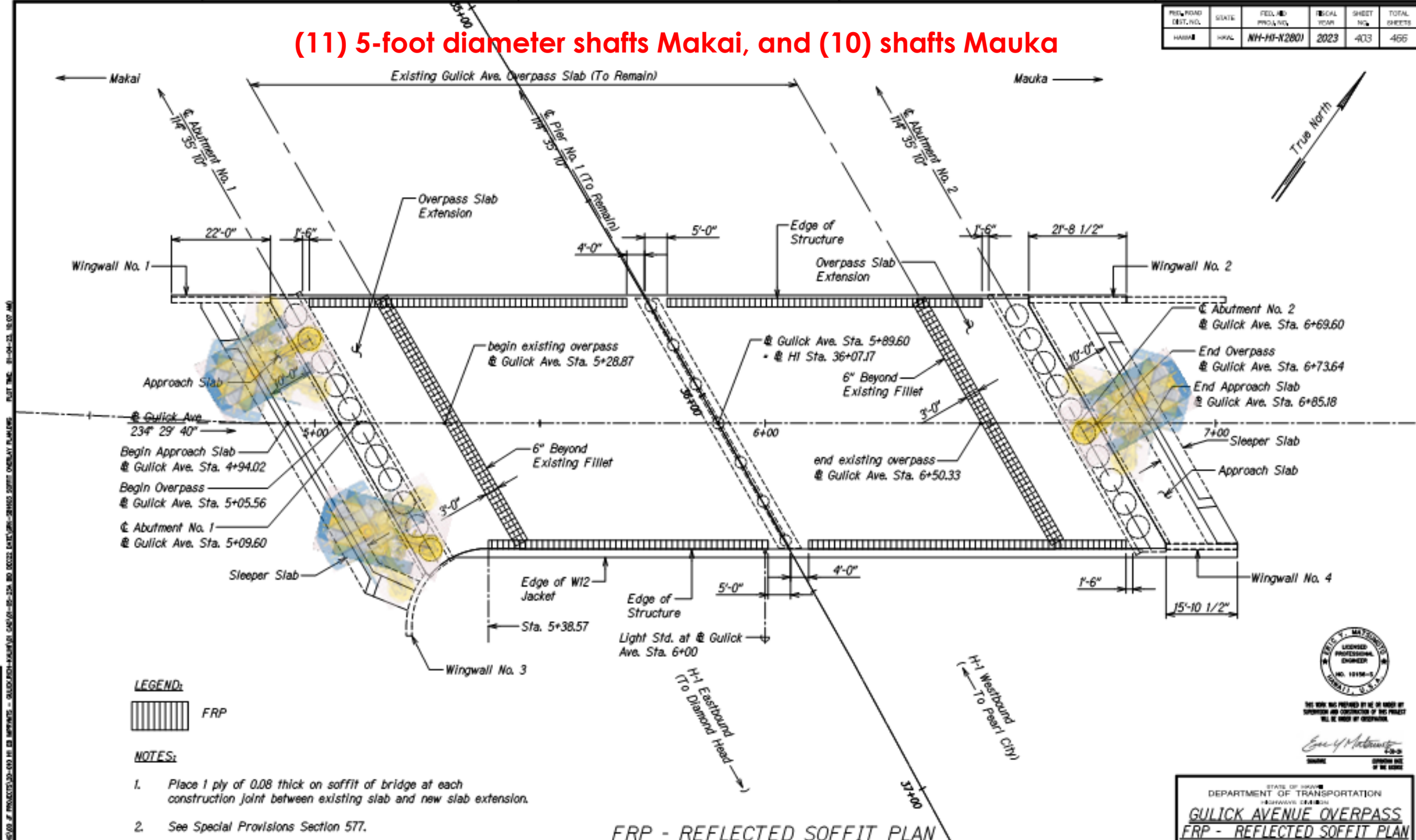
# Work at Gulick Avenue





# (11) 5-foot diameter shafts Makai, and (10) shafts Mauka

PROJ. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAWAII	HH-HI-V2801	2023	403	466



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE MADE BY ME OR UNDER MY SUPERVISION.

Travis V. Matsumoto  
Professional Engineer  
No. 10158-H  
State of Hawaii

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
ROADWAYS DIVISION  
**GULICK AVENUE OVERPASS**  
FRP - REFLECTED SOFFIT PLAN



- ▶ Partial lane closures starting from February between 7a-4p. A lot of utility relocation work to start that will require single lane closures that will alternate directions for the next year.
- ▶ Temporary ACROW pedestrian bridge will be installed around the end of January 2025.
- ▶ Partial Closure (24-hour lane closures) anticipated March 2025, road and bridge partial demolition.
- ▶ Full Closure for drilled shaft installation April through May 2025.
- ▶ Back to Partial Closure May through June 2025 for P/T duct installation work.
- ▶ Back to partial closures during day from June through October 2025.
- ▶ Then full closure of bridge from October 2025 through Feb 2026 for structural elements of the bridge work.
- ▶ After this major work, we will be back to the 7-4p to finish up paving/close-out, etc through July 2026.







Detour while  
Gulick OP is  
closed (Apr-  
May 25 & Oct  
25 – Feb 26)

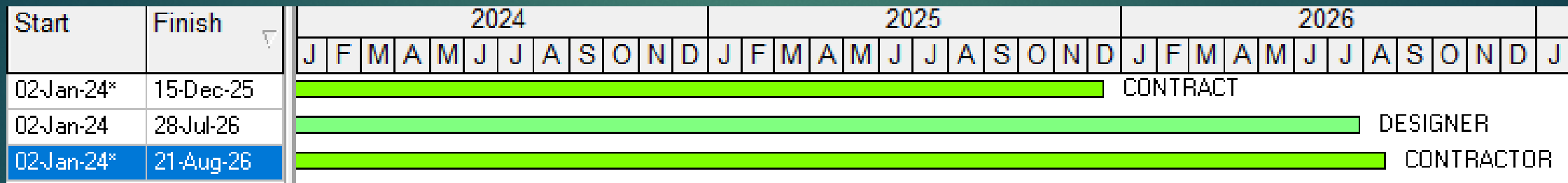
*Note time  
frames are  
estimated and  
may change.*



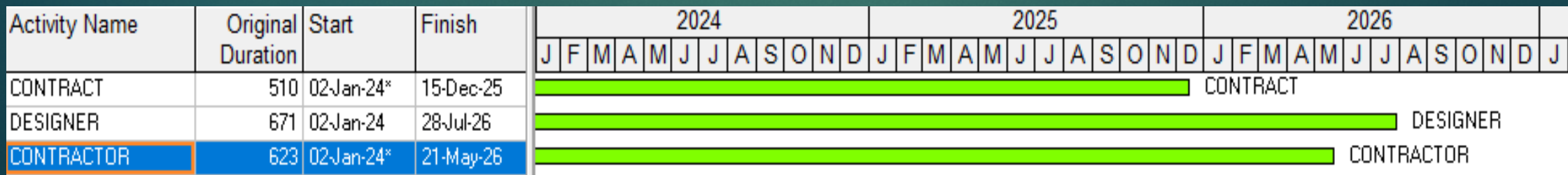
# Baseline Schedule Duration Variance

- By allowing the drilled shafts full closure, overall schedule goes from 32 months to 29 months.

Before:



After:





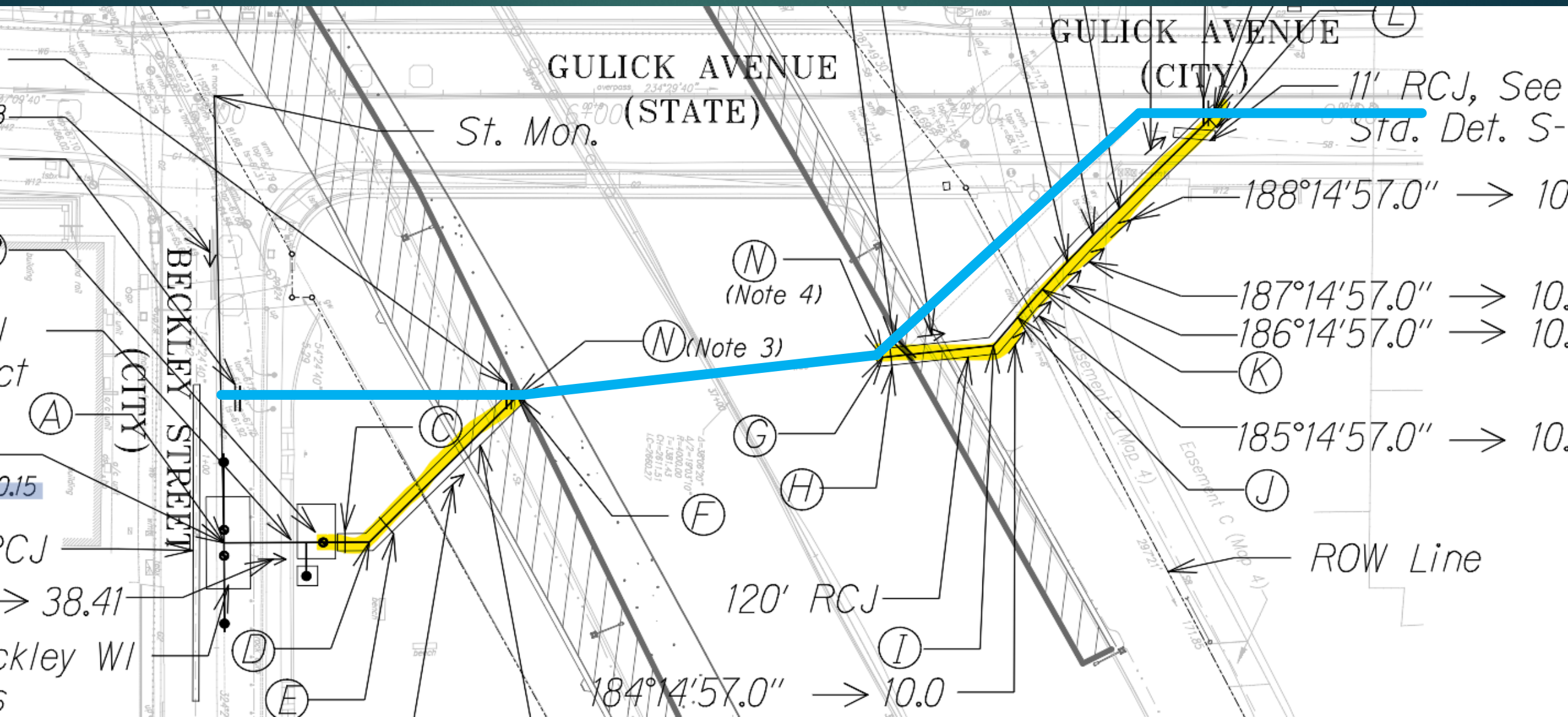
# H1 EB & WB Weekend Lane Closures for Waterline Work

- We are not allowed any lane closures on the H1 during the day

<i>Allowable H-1 Nighttime Lane Closure Times (Eastbound and Westbound)</i>				
	<i>Shoulder</i>	<i>1 Lane Closed</i>	<i>2 Lanes Closed</i>	<i>Full Closure (all lanes)</i>
<i>Monday to Thursday</i>	<i>24 hours</i>	<i>8:00 pm - 4:30 am</i>	<i>9:30 pm - 4:30 am</i>	<i>Not allowed</i>
<i>Friday</i>	<i>24 hours</i>	<i>8:00 pm - 7:00 am</i>	<i>10:00 pm - 7:00 am</i>	<i>Not allowed</i>
<i>Saturday</i>	<i>24 hours</i>	<i>8:00 pm - 7:00 am</i>	<i>10:00 pm - 7:00 am</i>	<i>8:00 pm - Midnight</i>
<i>Sunday</i>	<i>24 hours</i>	<i>8:00 pm - 4:30 am</i>	<i>9:30 pm - 4:30 am</i>	<i>Midnight - 8:00 am</i>

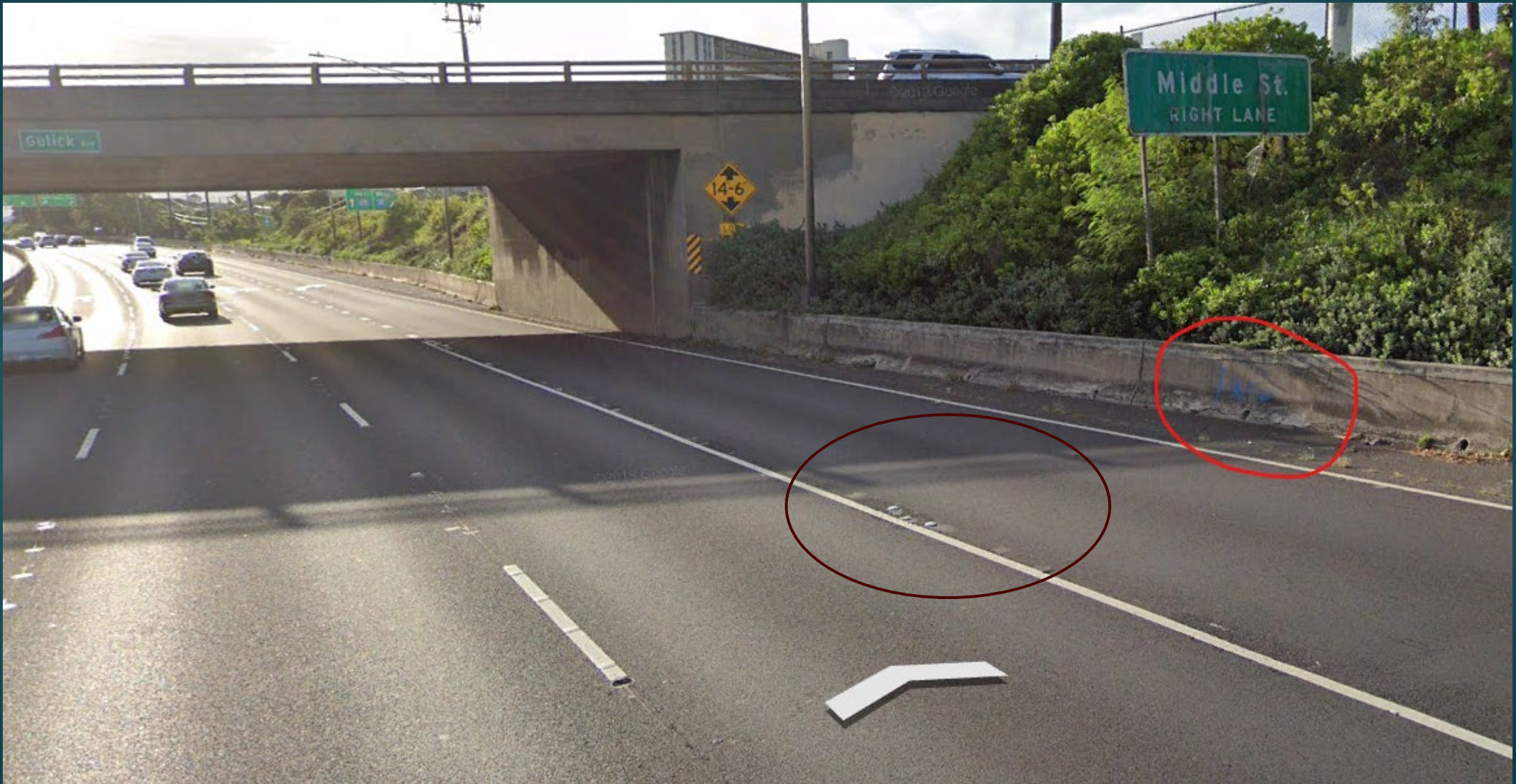


# 36-inch Waterline under H1 Freeway:



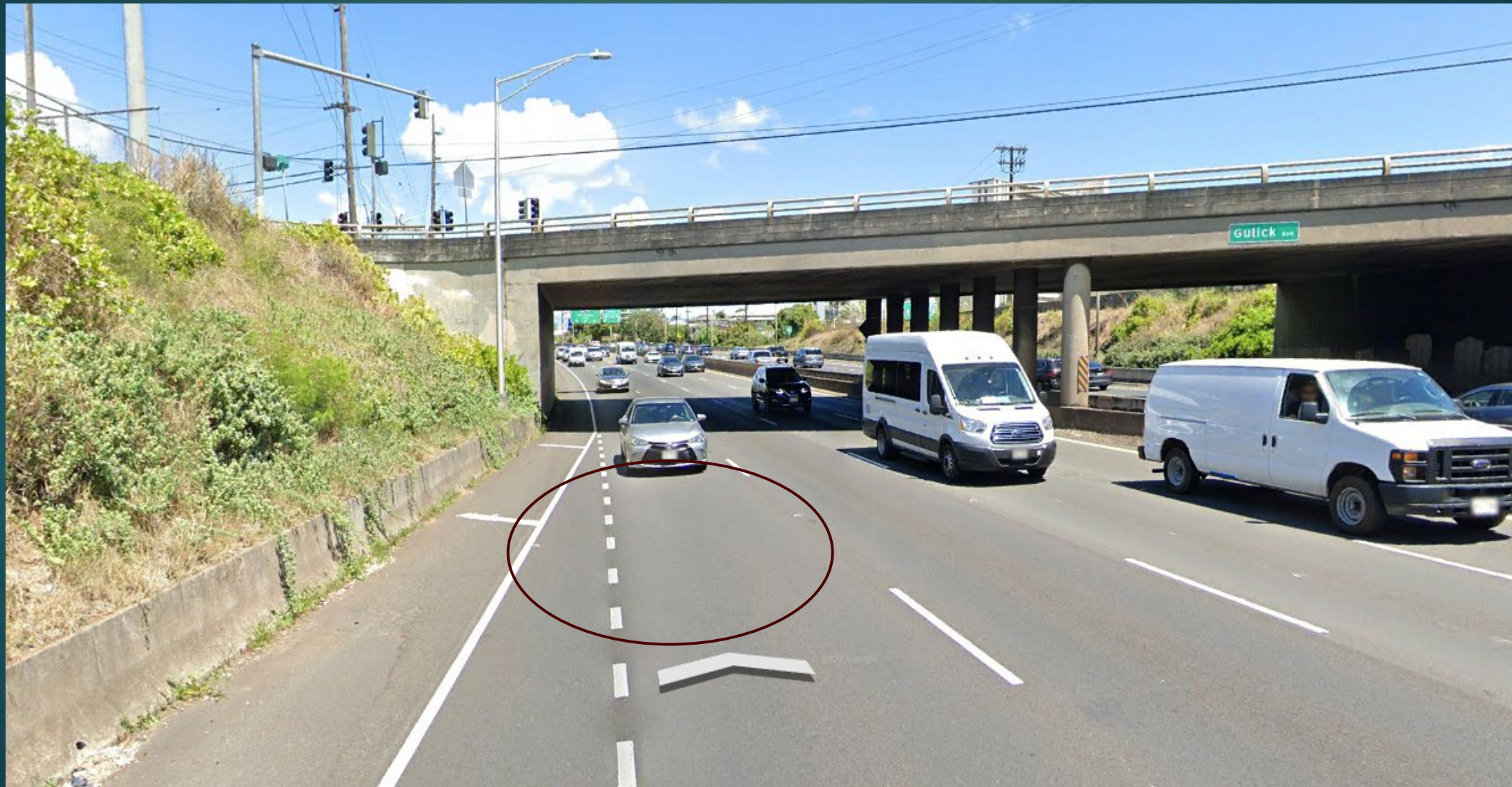


# H1 Westbound:





# H1 Eastbound:





# H-1 lane closures for the waterline tie-in work:

24-hour 1-2 lane closures on the H1 over (6) weekends in late 2024 to complete 36-inch waterline tie in (3 weekends EB, 3 weekends WB).



# Work sequencing: Total of 6 weekends Friday night through Monday Morning late 2024

## ► H1 EB Direction (Makai):

- First Weekend (5 10-hour shifts): expose existing jacket, partial demo, pour reaction block, cure concrete
- Second Weekend (5 10-hour shifts): Shutdown and tie in 36" waterline, cure concrete
- Third Weekend (1-2 shifts): Backfill, pave, stripe

## **2-week gap piping install, hydrotest, chlorinate Mauka side**

## ► H1 WB Direction (Mauka):

- First Weekend (5 10-hour shifts): expose existing jacket, partial demo, pour reaction block, cure concrete
- Second Weekend (5 10-hour shifts): Shutdown and tie in 36" waterline, cure concrete
- Third Weekend (1-2 shifts): Backfill, pave, stripe

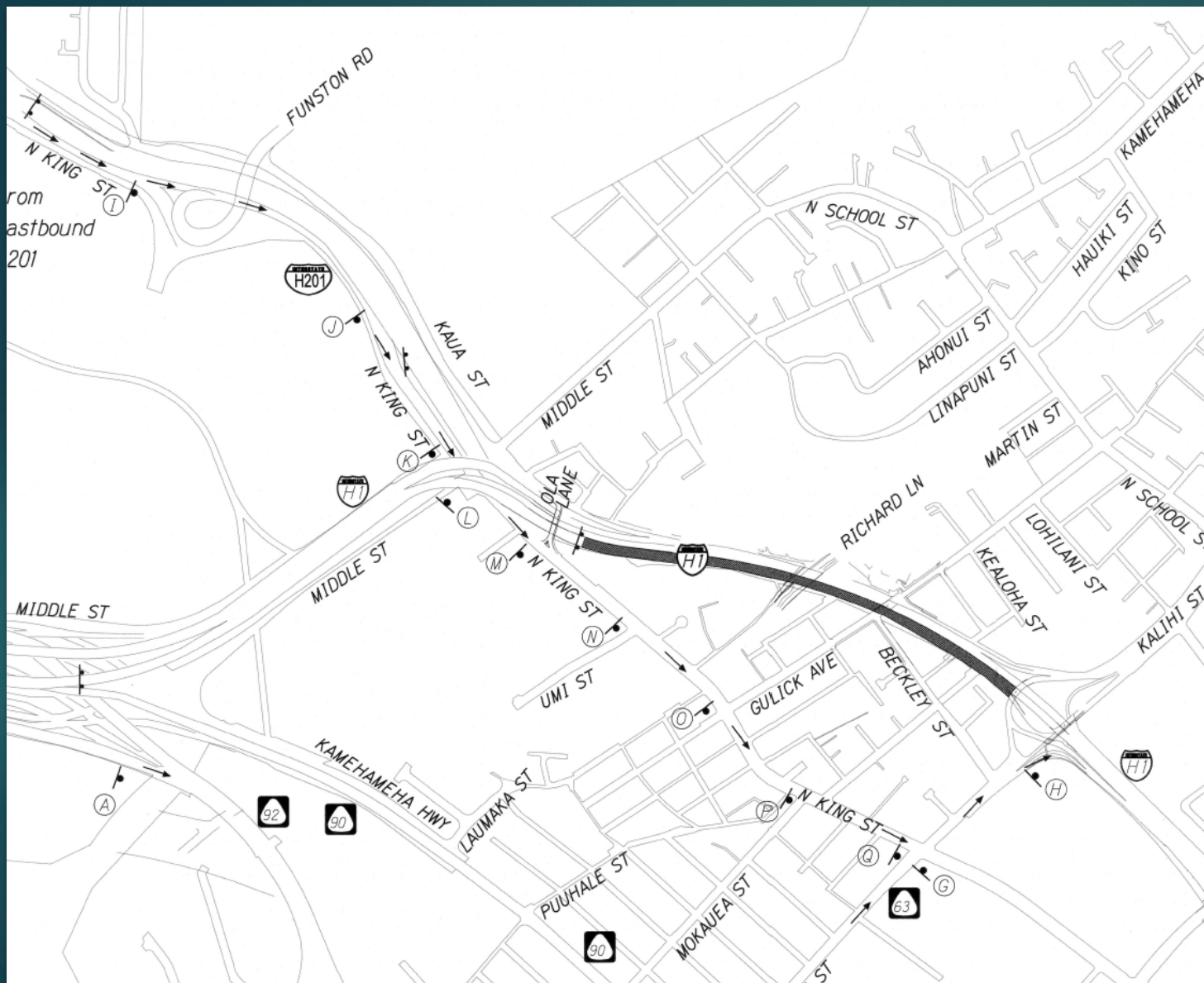


# H1 Full Closures

- ▶ Two weekend full closures will be needed for installation and removal of the temporary pedestrian bridge.
- ▶ Times for the weekend full closures:
  - ▶ Saturday 8 p.m. to midnight
  - ▶ Sunday midnight to 8 a.m.
- ▶ Gulick OP, Kalihi Stream Bridge, and H1 paving/stripping will be done with 1-2 lane closures at night + 24/7 shoulder closure.

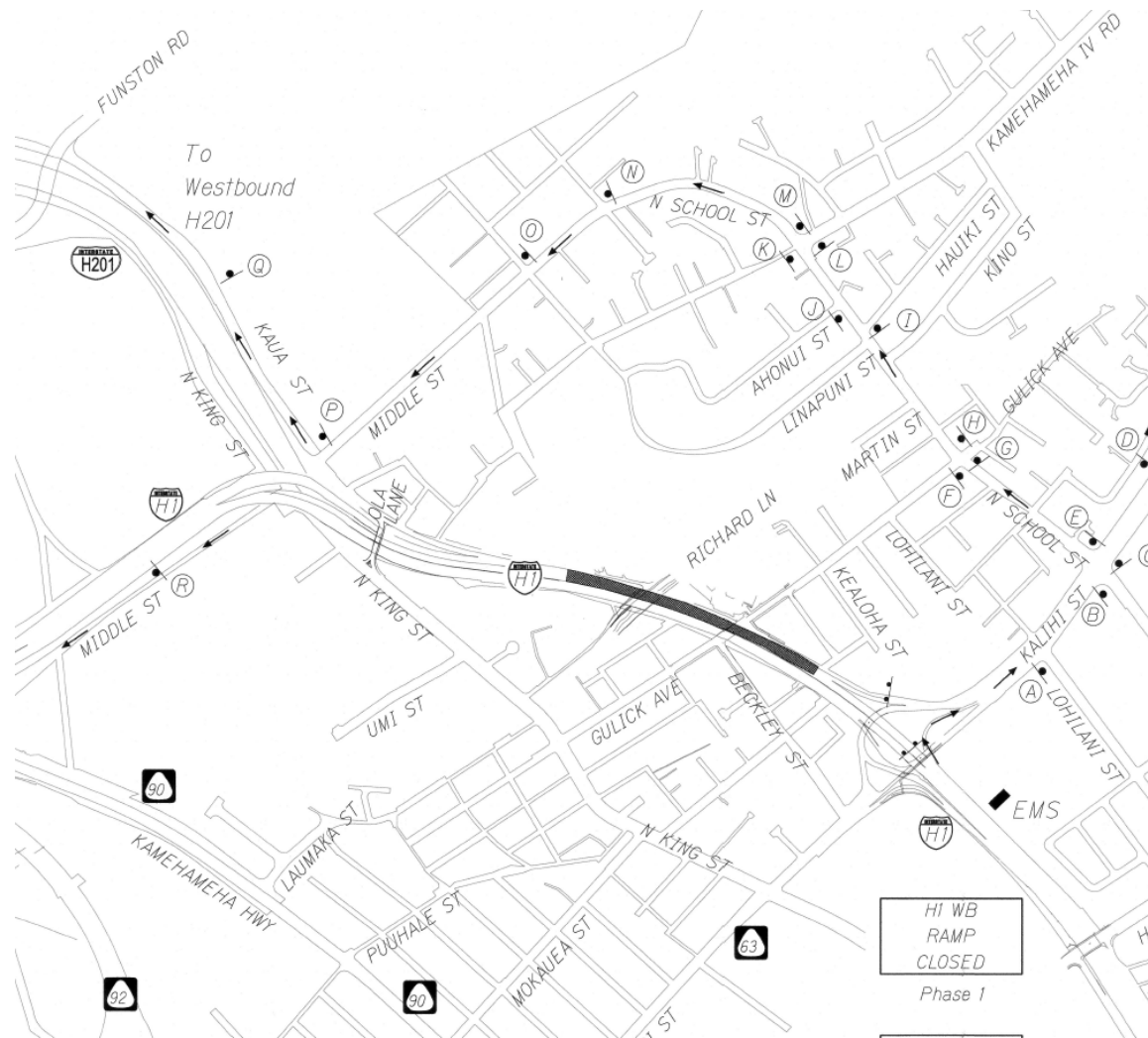
PHASING SCHEDULE						
PHASE	PHASE DESCRIPTION	MAJOR ACTIVITIES	CORRESPONDING DETOUR PLAN	SURFACE STREET CLOSURES	H-1 LANE CLOSURES	TRAFFIC CONTROL PLAN SCHEME
1	H-1 EB Widening Plan	Roadway widening, retaining walls, lighting, cantilever sign structures, and drainage structures along H-1 (except in the vicinity of Gulick Avenue Bridge)			H-1 EB Shoulder	Figure 1
2A	Temporary Pedestrian Bridge and Temporary Relocation of Utilities Plan	Temporary traffic signal at Gulick Avenue/Beckley St. Install temporary pedestrian bridge and lighting, relocate utilities, and pedestrian connections.	H-1 EB Closure H-1 WB Closure Beckley WB Closure	Gulick Avenue (1 lane closure during non-peak and nighttime hours with police officer) Beckley Street WB Closure	H-1 EB Shoulder  H-1 EB Full Closure H-1 WB Full Closure	Figure 1  H-1 Eastbound Closure H-1 Westbound Closure
2B	Temporary Pedestrian Bridge and Temporary Relocation of Utilities Plan	Relocate existing gas and sewer on Gulick Bridge.		Gulick Avenue (1 lane closure during non-peak and nighttime hours with police officer)		Figure 2
3A	Gulick Bridge Plan	Adjust temporary traffic signal at Gulick Avenue/Beckley St. Install pedestrian crossing of Gulick Avenue to temporary pedestrian bridge. Construct bridge work per Gulick Avenue Bridge Construction Sequence, Steps 1 through 9. H-1 center pier work.		Gulick Avenue (1 lane closure during non-peak and nighttime hours with police officer)	H-1 EB Lane Closure (up to 2 lanes) H-1 WB Lane Closure (up to 2 lanes)	Figure 2, 3, 4 # 5
3B	Gulick Bridge Plan	Construct bridge work per Gulick Avenue Bridge Construction Sequence, Steps 10 through 23.	Gulick Bridge Full Closure Pedestrian Bridge			
3C	Gulick Bridge Plan	Remove existing bridge abutments and wingwalls per Gulick Avenue Bridge Construction Sequence, Step 24.	Gulick Bridge Full Closure Pedestrian Bridge		H-1 EB Lane Closure (up to 2 lanes) H-1 WB Lane Closure (up to 2 lanes)	Figure 3, 4 # 5
3D	Gulick Bridge Plan	Construct facing at new abutments per Gulick Avenue Bridge Construction Sequence, Steps 25 through 42. Install drainage infrastructure and H-1 roadway pavement under bridge. Install Westbound barrier wall.	Gulick Bridge Full Closure Pedestrian Bridge		H-1 EB Lane Closure (1 lane) H-1 WB Lane Closure (1 lane)	Figure 3 # 5
3E	Gulick Bridge Plan	Remove temporary pedestrian bridge. Install permanent traffic signal and remove temporary signal infrastructure.	H-1 EB Closure H-1 WB Closure	Gulick Avenue (1 lane closure during non-peak and nighttime hours with police officer)	H-1 EB Full Closure H-1 WB Full Closure	H-1 Eastbound Closure H-1 Westbound Closure
4	Kalihi Stream Bridge Plan	Relocate existing sewer and gas line on Richard Lane. Relocate existing utilities on bridge. Construct bridge work per Richard Lane/Kalihi Stream Bridge Construction, Steps 2 through 14.		Richard Lane (1 lane closure during non-peak and nighttime hours with police officer)	H-1 EB Shoulder (up to 2 lanes) H-1 WB Lane Closure (1 lane)	Figure 1, 2, 3, 4 # 5
5	H-1 EB Final Paving and Striping Plan	Pave final lift of pavement. Install final striping and pavement markings. Restore park property, private property, driveways and sidewalk.			H-1 EB Lane Closure (up to 2 lanes)	Figure 3 # 4





# H1 Eastbound Detour

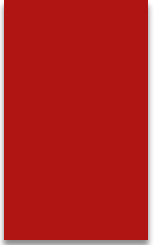




# H1 Westbound Detour



Questions?



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Project Start: January  
2024

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Cost: \$112 million

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Substantial Completion:  
Summer 2026