



October 28, 2020

Mr. Erik Lundquist
Hogan Land Services
1702 4th Street
Santa Rosa, CA 95404

Emergency Vehicle Access Analysis for the 5575 Lovall Valley Road Project (P20-00269)

Dear Mr. Lundquist;

As requested, W-Trans has reviewed relevant design plans for the proposed residence to be located at 5575 Lovall Valley Road in the County of Napa. As part of the project, a new access road would be constructed that would vary in width between 14 and 22 feet and would have an asphalt concrete (AC) surface with gravel shoulders. The proposed layout includes a Firesafe Turnout per Napa County Road and Street Standards and space for a future Firesafe Turn Around at the terminus of the drive aisle.

The AutoTURN application of AutoCAD was used to simulate the travel path of a typical Napa County fire truck in order to evaluate the adequacy of emergency vehicle access for the proposed access roadway layout at the two horizontal curves that have a radius of less than 50 feet, as required by the County's Road and Street Standards. Specifications for a typical Napa County fire truck were obtained from the County's Fire Marshal and used in the simulation. Note that Sonoma County trucks have the same specifications, so the analysis ensures that fire trucks from this agency could also negotiate the roadway if mutual aid by other agencies were required.

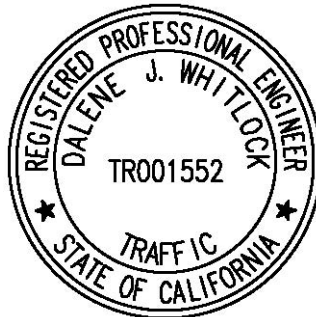
As designed, a typical fire truck with a length of 29.5 feet would be able to navigate the curves with all wheels on the AC surface of the roadway. Further, the body of the vehicle as well as the required front and rear clearances would remain within the space designated as either the roadway surface or shoulder. Access for emergency response vehicles is therefore expected to function acceptably. Two access exhibits, one simulating inbound access to the project site and the other simulating outbound access, are enclosed for reference.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,

Kimberly Tellez
Assistant Engineer

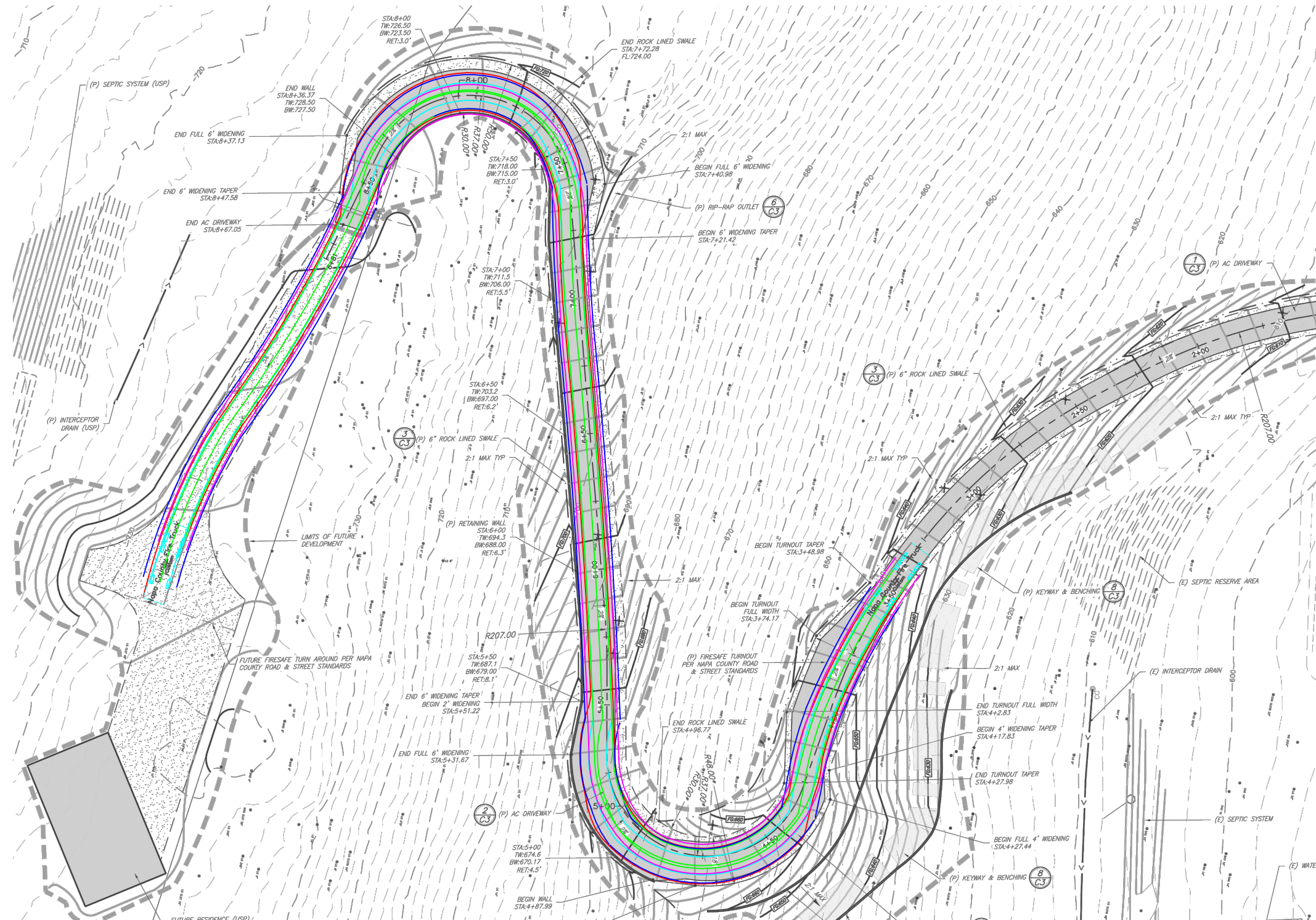
Dalene J. Whitlock, PE, PTOE
Senior Principal



Cameron Nye, EIT
Associate Engineer

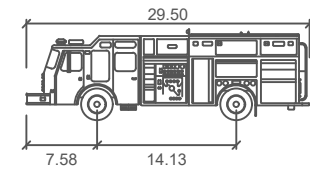
Enclosures: AutoTURN Exhibits

DJW/cn-kt/NAX168.L1



LEGEND

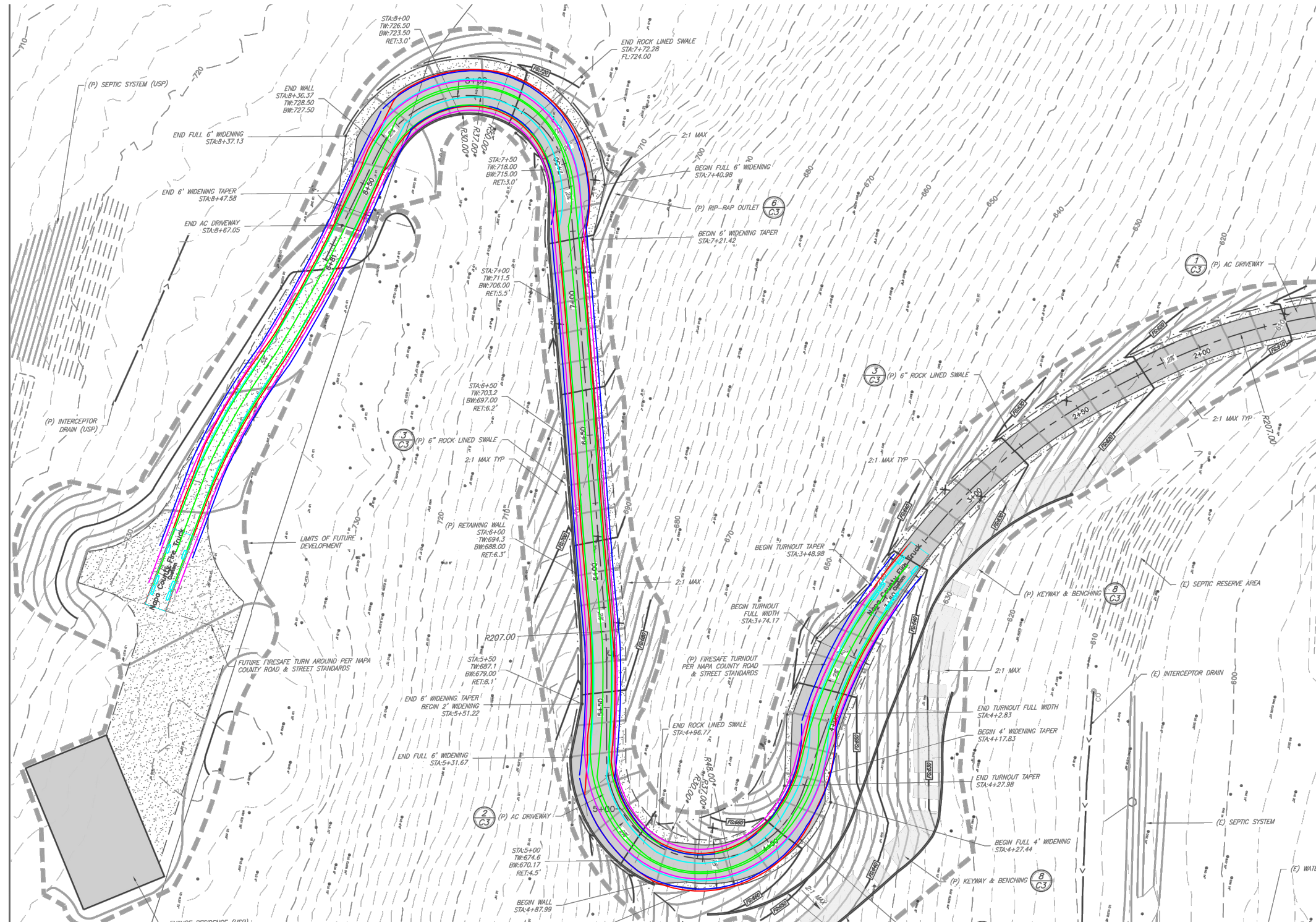
- Vehicle Body
- Front Tires
- Rear Tires
- Front Clearance (3 ft)
- Rear Clearance (2 ft)



Napa County Fire Truck

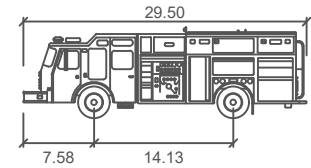
	feet
Width	: 8.00
Track	: 6.91
Lock to Lock Time	: 6.0
Steering Angle	: 38.8

Entering the Project Site



LEGEND

- Vehicle Body
- Front Tires
- Rear Tires
- Front Clearance (3 ft)
- Rear Clearance (2 ft)



Napa County Fire Truck

	feet
Width	: 8.00
Track	: 6.91
Lock to Lock Time	: 6.0
Steering Angle	: 38.8

Exiting the Project Site