



A Tradition of Stewardship
A Commitment to Service

MEMORANDUM

To: Charlene Gallina, Planning Division	From: Jeannette Doss, Engineering and Conservation Division <i>JD</i>
Date: October 29, 2015 <i>Revision on November 25, 2015</i>	Re: Phelan Residence Road Exception Request 100 Hennessey Ridge Rd, St. Helena, CA P12-00265 APN 025-440-007

Road Modification Request

The Engineering and Conservation Division received a request (the request) for an exception to three residential driveway/common driveway design criteria as outlined in the Napa County Road and Street Standards (RSS) as part of an application for Use Permit Exception to the Conservation Regulations for the construction of a new main dwelling and other associated improvements within the creek setback area. The new residence is located at 100 Hennessey Ridge Road. Hennessey Ridge Road is a private shared road that currently serves as primary access to approximately fourteen parcels and seven existing dwelling units and is approximately 14,400 linear feet from the connection with Chiles Pope Valley Road to its terminus at the gated entrance to 100 Hennessey Ridge Road. The existing private shared access road varies in width from 14 feet to 20 feet. The nature and constraints for the road exception are to minimize environmental impacts by reducing earth disturbances on steep slopes and preserving heritage trees. The details of the request are as follows:

EXCEPTION #1 ROADWAY TURNOUT EXCEPTION:

A reduction to the number of required turnouts as outlined in Table 15.1 of the RSS along a portion of the shared driveway.

Between road STA 0+00 to 83+00 the shared driveway serves more than six existing dwelling units and requires 34 turnouts to be placed approximately every 250 feet. The applicant is proposing to provide 25 turnouts for this section of driveway. The number of turnouts would be reduced by 9 in this section of driveway with a maximum distance between turnouts varying from 100 feet to approximately 775 feet.

Between road STA 83+00 to 102+00 the shared driveway serves between two to three existing dwelling units and requires 7 turnouts to be placed approximately every 300 feet. The applicant is proposing to provide 8 turnouts for this section of driveway. No exceptions to the number of turnouts are requested for this section of shared access driveway. The maximum distance between turnouts in this section of the shared access driveway varies from 150 feet to approximately 375 feet.

Between road STA 102+00 to 140+00 at the terminus of the shared portion of the access driveway, the shared driveway serves one existing dwelling unit and requires ten turnouts to be placed approximately every 400 feet. The applicant is proposing to provide 10 turnouts for this section of driveway. No exceptions to the number of turnouts are requested for this section of shared access driveway. The maximum distance between turnouts in this section of the shared access driveway varies from 120 feet to approximately 725 feet.

EXCEPTION #2 ROADWAY HORIZONTAL CURVE RADIUS EXCEPTION:

A reduction to the inside radius of curvature for a horizontal curve at the following 9 stations when the RSS requirement is 50 ft:

1. Station 47+00 – Radius = 45 feet
2. Station 56+50 – Radius = 40 feet
3. Station 70+00 – Radius = 25 feet
4. Station 78+00 – Radius = 40 feet
5. Station 81+50 – Radius = 15 feet
6. Station 107+00 – Radius = 40 feet
7. Station 130+00 – Radius = 20 feet
8. Station 132+00 – Radius = 20 feet
9. Station 136+00 – Radius = 30 feet

EXCEPTION #3 ROADWAY MAXIMUM SLOPE EXCEPTION:

An increase in the allowable maximum centerline slope of the shared access road at the following 2 sections when the RSS requirement is 20% maximum:

1. Station 19+20 to 20+00 – An 80 foot section of road with slope = 23%
2. Station 52+10 to 53+90 – An 180 foot section of road with slope = 22%

Engineering and Conservation Division Evaluation and Recommendation:

Engineering and Conservation Division staff have discussed the request noted above with Cal Fire/Napa County Fire Department and the applicant. With respect to Section (3) of the RSS as adopted by Resolution No. 2011-95 by the Board of Supervisors on August 9, 2011, this division has determined the following:

- The exception request has provided the necessary documentation as required by RSS Section 3(A). The request is in connection with a Use Permit Exception application for the construction of a new residence, and has received the appropriate environmental review from the Planning Division, therefore the approving body shall be the Planning Commission.
- The reduction to the number of turnouts, reduction to the horizontal inside radius of curvature, and increase in the maximum centerline slope at the above identified road stations will minimize

earthwork on slopes exceeding 30% in order to preserve the existing environmental features and are justified based upon existing topographic conditions of the site.

- With respect to the findings for compliance with current RSS, the trees defined above of at least 6 inch diameter breast height and steep slopes are consistent with the definition of unique features of the natural environment as described in RSS Section 3(D)(1). The Engineering Division along with Planning Division staff have discussed the constraints presented in the road exception request and find they meet the intent of RSS Section 3(D)(1) – preserving unique features of the natural environment.
- The applicant is proposing to improve or add a total of approximately 25 turnouts and widen the travel lane in the areas with a reduction to the number of turnouts and to improve or add approximately 40 turnouts over the entire length of the shared roadway, which is commensurable to the request to construct a new single family dwelling. With the addition of these new turnout areas the applicant is providing a roadway that is capable of supporting safe ingress and egress of two vehicles.
- The areas with a reduction to the inside radius of curvature have been shown to be able to support emergency apparatus and have been authorized by Cal Fire/Napa County Fire Department as proposed. Additional roadway widths have been proposed in these areas to facilitate the turning radius for emergency apparatus.
- The applicant is proposing to microgrind the asphalt concrete surface along the sections of steep roadway (areas identified above with maximum centerline slope greater than 20%) to provide better traction for emergency apparatus.
- With respect to the findings for compliance with current RSS Section 3(E), the Engineering and Conservation Division and Cal Fire/Napa County Fire Department have discussed the improvements proposed and determined that their implementation would serve as an alternate method by which adherence to the RSS may be achieved and would provide the same overall practical effect as the RSS towards providing defensible space, preserving the natural environment and protecting the life, safety and welfare of the public.

The Engineering and Conservation Division supports the approval of the exception request as proposed with the following conditions that are in addition to any and all conditions previously placed on the project as part of the discretionary application:

1. The roadway shall be constructed and maintained to the approved condition prior to residential use and occupancy and throughout the life of the parcel or until such time the County deems that future road design changes or changes in use of this roadway beyond the use proposed shall require re-

evaluation of the roadway to comply with the requirements of adopted codes, standards and regulations and may require additional conditions.

2. Applicant shall improve the existing roadway to the maximum road width achievable to preserve the existing natural features (minimum of 10-foot travel lane and varying shoulder width).
3. Access road shall meet the road surfacing requirements as described in the RSS for the entire length of the roadway.
4. The private road surface shall be periodically maintained by the property owner to assure sufficient structural section for loading conditions equivalent to the H20-44 criterion and the design Traffic Index and to ensure the upkeep of the microgrind surfaces.
5. The property owner shall install warning/cautionary signage along the portions of the roadway where the turnout spacing exceeds 400 feet.
6. The property owner shall also install signage alerting vehicular traffic of the tight turns in the areas where the horizontal inside radius of curvature is less than 50 feet.
7. The property owner will implement a horizontal and vertical vegetation management plan consistent with California Department of Forestry and Fire Protection requirements along the entire length of the driveway to provide defensive space and improve sight distance. The vegetation management plan shall be reviewed and approved by the Napa County Fire Marshal.
8. Any/all future road design changes or changes in use of this roadway beyond the existing use shown on the above noted request dated February 20, 2015 and *revised on November 25, 2015* shall require re-evaluation of the roadway to comply with the requirements of adopted codes, standards and regulations and may require additional conditions.

EXHIBIT A

PHELAN RESIDENCE
SUMMARY OF PROPOSED ROAD IMPROVEMENTS

The following is a list of the proposed turnout stations and proposed improvements along the entire length of the shared access drive:

- Turnout # 1 @ Station 1+00 – provide new turnout that meets RSS standards
- Turnout # 2 @ Station 3+50 – improve area with additional 14 ft of surfacing to accommodate a full 10 ft turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 3 @ Station 8+25 – remove the existing curb and add new gabion retaining wall to provide a full standard turnout
- Turnout # 4 @ Station 10+00 – improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 5 @ Station 12+00 – utilize an existing trash storage area and improve area with additional surfacing to accommodate a full standard turnout.
- Turnout # 6 @ Station 14+50 – improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 7 @ Station 17+00 – improve area with additional surfacing to accommodate a full standard turnout
- Station 19+20 to 20+00 - microgrind the asphalt concrete surface along this section of steep roadway to provide better traction for vehicular access
- Turnout # 8 @ Station 19+50 – improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 9 @ Station 23+00 – utilize a connection with an existing dirt road and improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 10 @ Station 25+00 – improve area with additional surfacing to accommodate a full standard turnout

- Turnout # 11 @ Station 28+50 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 12 @ Station 32+50 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 13 @ Station 36+75 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 14 @ Station 39+75 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 15 @ Station 41+75 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout #16 @ Station 44+75 – improve area with additional surfacing to accommodate a full standard turnout
- Station 47+00 – provide additional road surfacing along the travel lane to the maximum extent practical to accommodate the turning of emergency apparatus
- Turnout #17 @ Station 50+50 – improve area with additional surfacing to accommodate a full standard turnout
- Station 52+10 to 53+90 - microgrind the asphalt concrete surface along this section of steep roadway to provide better traction for vehicular access
- Turnout # 18 @ Station 52+50 – improve area with additional surfacing to accommodate a full standard turnout and the

additional 4 feet width required for an inside turning radius between 50 ft to 100 ft

- Turnout # 19 @ Station 56+25 – improve area with additional surfacing to accommodate a full standard turnout
- Station 56+50 – provide additional road surfacing along the travel lane to the maximum extent practical to accommodate the turning of emergency apparatus
- Turnout # 20 @ Station 59+50 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 21 @ Station 62+25 – improve area with additional surfacing to accommodate a full standard turnout
- Turnout #22 @ Station 64+50 – improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 23 @ Station 67+50 – improve area with additional surfacing to accommodate a full standard turnout
- Station 70+00 – provide additional road surfacing along the travel lane to the maximum extent practical to accommodate the turning of emergency apparatus
- Turnout # 24 @ Station 75+25 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Station 78+00 – provide additional road surfacing along the travel lane to the maximum extent practical to accommodate the turning of emergency apparatus
- Station 81+50 – provide additional road surfacing along the travel lane to the maximum extent practical to accommodate the turning of emergency apparatus

- Turnout # 25 @ Station 83+00 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 26 @ Station 85+00 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 27 @ Station 86+50 – improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 28 @ Station 90+25 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 29 @ Station 92+00 – utilize connection with existing residential driveway to accommodate a full standard turnout
- Turnout # 30 @ Station 94+50 – improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 31 @ Station 97+00 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 32 @ Station 100+00 – improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 33 @ Station 102+00 – utilize the connection with an existing residential driveway connection and improve area with additional surfacing to accommodate a full standard turnout
- Station 107+00 – provide additional road surfacing along the travel lane to the maximum extent practical to accommodate the turning of

emergency apparatus

- Turnout # 34 @ Station 109+00 – utilize an existing turnout
- Turnout # 35 @ Station 113+50 – utilize an existing connection with a private gravel driveway and improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 36 @ Station 116+00 – improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 37 @ Station 120+00 – utilize connection with an existing dirt access road and improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 38 @ Station 121+50 – utilize an existing turnout
- Turnout # 39 @ Station 126+00 – improve area with additional surfacing to accommodate a full standard turnout
- Station 130+00 – provide additional road surfacing along the travel lane to the maximum extent practical to accommodate the turning of emergency apparatus
- Station 132+00 – provide additional road surfacing along the travel lane to the maximum extent practical to accommodate the turning of emergency apparatus
- Turnout # 40 @ Station 133+25 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft
- Turnout # 41 @ Station 134+50 – improve area with additional surfacing to accommodate a full standard turnout and the additional 4 ft width required for an inside turning radius between 50 ft to 100 ft

- Station 136+00 – provide additional road surfacing along the travel lane to the maximum extent practical to accommodate the turning of emergency apparatus
- Turnout # 42 @ Station 138+50– improve area with additional surfacing to accommodate a full standard turnout
- Turnout # 43 @ Station 140+00 – utilize an existing connection with a private gravel driveway and improve area with additional surfacing to accommodate a full standard turnout

EXHIBIT B

PHELAN RESIDENCE
ROAD EXCEPTION REQUEST AND IMPROVEMENT PLANS



#4111067.0

November 25, 2015

Charlene Gallina

Nate Galambos

Jeannette Doss

Napa County Department of Planning, Building & Environmental Services

1195 Third Street

Napa, CA 94559

RE: Phelan Residence – 100 Hennessey Ridge Road. APN 025-440-007
Application #P12-00265
Request for Exception to Standards for Hennessey Ridge Road

Dear Nate, Charlene and Jeanette:

Thank you for meeting with Jeff Redding and me on February 5, 2015 to discuss the improvements required to Hennessey Ridge Road to satisfy the Napa County Road and Street standards as they apply to the Phelan Residence and to discuss our request for any exceptions to these standards. The context for our discussions were the plans filed with your office in December 2014.

From this meeting, it is our understanding the owner will not be required to widen Hennessey Ridge Road as part of the current project. Nor will he be required to seek an exception for widening, since the widening requirements are addressed by the provision of turnouts. However, the remainder of current county road standards will be applied; or an exception request will be necessary.

Following our meeting, we reviewed the December 2014 plans. Upon further examination, we determined we will not be seeking an exception to turnout surfacing or the minor geometric deviations. This letter is a formal request for an exception to current county road standards to portions of Hennessey Ridge Road relating to driveway slope, radii, number and spacing of turnouts.

The Hennessey Ridge Road is a shared private road 14,000 feet long serving approximately 10 parcels and 7 existing residences. This private road runs from Chiles-Pope Valley Road and terminates as a shared private road at the entry gate to the Phelan property. The county has permitted developments served by the existing shared private road since 1996. The Phelan driveway extends from the terminus of the shared road to the Phelan residence and has been designed to meet current county road standards. No exception is required for this driveway.

Exception Request #1—Number and Spacing of Turn Outs

The shared private road does not currently meet Napa County Road and Street Standards (RSS) requirements for turnout number and spacing as shown in Table 15.1. This is a formal request for an exception to the RSS.

Currently informal turnouts exist at 13 locations. The client proposes to add 30 turnouts to provide a total of 43 turnouts on the shared driveway portion of Hennessey Ridge Road. Locations for the proposed turnouts have been selected to minimize grading and environmental impacts. In addition to the proposed turnouts the client proposes to widen the pavement to the maximum extent practical at 8 locations. Improving the 13 existing turnouts and adding 30 that meet current county road standards would significantly improve safety and access for both residents and emergency vehicles when compared to existing condition under which previous development was permitted. Hennessey Ridge Road is very lightly traveled with ADT expected to be $70 \pm$ trips per day. With the 3-fold increase in turnouts to be provided, widening in 8 other locations, and that fact that the current project does not add use intensity to the road but represents an expansion of a residence that has been on the property since it was permitted in the 1970s, it is RSA's opinion the project will have a net benefit to the safety and access for all of Hennessey Ridge Road users. Furthermore it is RSA's opinion these improvements provide the same practical effect as required by the RSS.

Uphill and downhill slopes along the shared driveway and in the areas where turnouts would be provided are often 2:1. Most slopes appear to have been created by construction of the road decades ago. They have long since stabilized and vegetation has become well established. Downhill slopes continue down steep natural faces to existing drainage courses tributary to Lake Hennessey. Extensive grading on these steep slopes would be required to attain the width for additional turnouts. In some locations large, heritage oak trees would also need to be removed.

Napa County Road and Street Standards requires turnouts to be spaced according to Table 15.1 Analysis provided by Napa County shows that 51 turnouts are required for the 14,400 feet of Hennessey Ridge Road before the client's property line.

The Hennessy Ridge Road Review plans show 43 previously unidentified turnouts. RSA+ considers the increase in the number of existing turnouts from 13 to 43 represents a significant improvement to access for residents and emergency vehicles and represents a significant improvement of the previously constructed private roadway which has been relied upon for permitting of previous projects. The significant improvements are in substantial conformance with the RSS despite the challenging terrain and will benefit all residences served by the private road while minimizing environmental impacts. The average spacing of turnouts is 334 feet. The combination of the additional turnouts, shortened distances between turnouts as well as locations with additional widening when compared to the existing conditions not only provides superior access and safety but provides the same practical effect as required by full compliance with the RSS.

Exception Request #2

Sections of the shared private road do not meet the Napa County Road and Street Standard Section 15 requirement for minimum inside radius. Curves identified as having inside radius less than 50 feet are located at:

1. Station 47+00 – Radius 45 feet
2. Station 56+50 – Radius 40 feet
3. Station 70+00 – Radius 25 feet
4. Station 78+00 – Radius 40 feet
5. Station 81+50 – Radius 15 feet
6. Station 107+00 – Radius 40 feet
7. Station 130+00 – Radius 20 feet
8. Station 132+00 – Radius 20 feet
9. Station 136+00 – Radius 30 feet

Similar to Exception Request #1, grading on steep slopes would be required to realign Hennessey Ridge Road to provide minimum inside radius of 50 feet. Environmental impacts would be significant as the road would need major realignment. It is also likely that large oak trees would also need to be removed to realign the road.

As a mitigation measure we propose installing standard warning signs for curves either side of the identified curves.

We request an exception to the Road and Street Standards for these sections of Hennessey Ridge Road that do not meet minimum inside radius requirements.

Exception Request #3

Sections of the shared private road do not meet the Napa County Road and Street Standard Section 15 requirement for maximum grade of 20%. Sections identified as having grade greater than 20% are located at:

1. Station 19+20 to 20+00 – slope 23%
2. Station 52+10 to 53+90 – slope 22%

Similar to Exception Request number's 1 and 2 grading on steep slopes would be required to reduce the grades below 20% in these areas.

To provide similar practical effect asphalt concrete surface in these sections will be treated with microgrinding as shown on Sheet 9 of the Hennessey Ridge Road Review Plans.

We request an exception to the Road and Street Standards for these sections of Hennessey Ridge Road that do not meet maximum grade requirements.

Summary

In summary, RSA+ believes that the findings necessary to grant the requested exceptions can be made because of the presence of steep slopes adjacent to the existing shared road. Meeting the current road standards would require extensive grading on steep slopes and tree removal. Furthermore, meeting the RSS would require earthmoving to occur within the watershed of Lake Hennessey, a water supply for the City of Napa. Avoiding the cut and fill necessary to construct additional turnouts beyond those proposed would better protect the water quality of this drinking water source.

Hennessey Ridge Road is very lightly traveled with ADT expected to be $70 \pm$ trips per day, and the current project would not be expected to add additional trips. With the 3-fold increase in turnouts to be provided by the 30 new turnouts, by improving the 13 existing turnouts, by additional widening in 8 locations, by installing curve warning signs, and by microgrinding the identified road sections exceeding 20%, the project would significantly improve safety and access for both residents and emergency vehicles. RSA+ considers that the improvements proposed would provide the same practical effect as required by full compliance with the RSS.

Please do not hesitate to contact me should you have any questions regarding the above.

Respectfully,



Bruce Fenton, PE, MBA
Project Manager

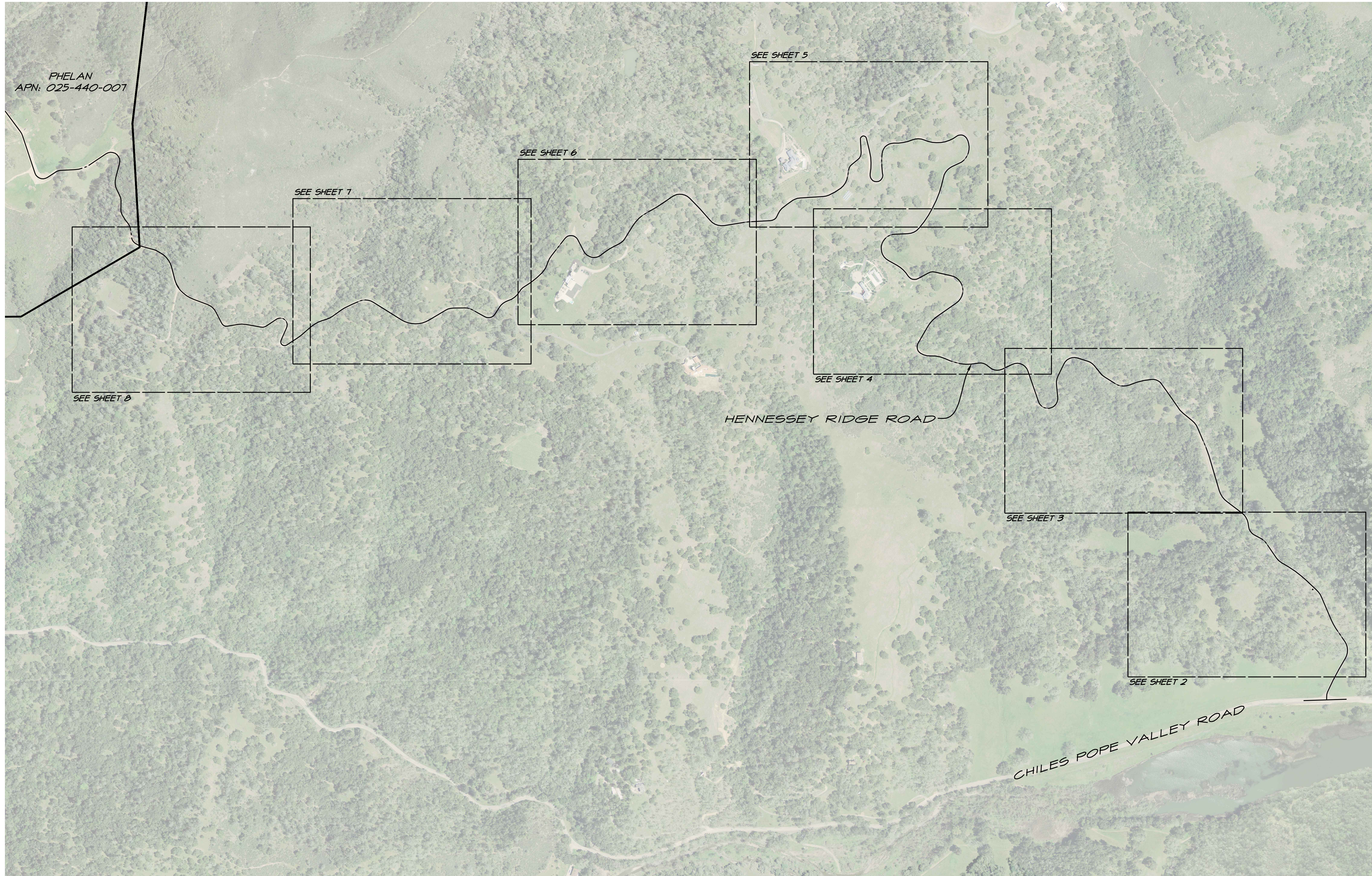
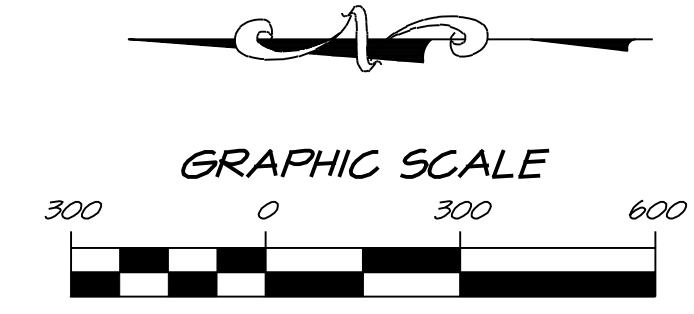


Enclosures:


- Hennessey Ridge Road Review Plans
- Phelan Residence Driveway Improvements Plans

cc: Jeff Phelan
Jeff Redding

HENNESSEY RIDGE ROAD REVIEW



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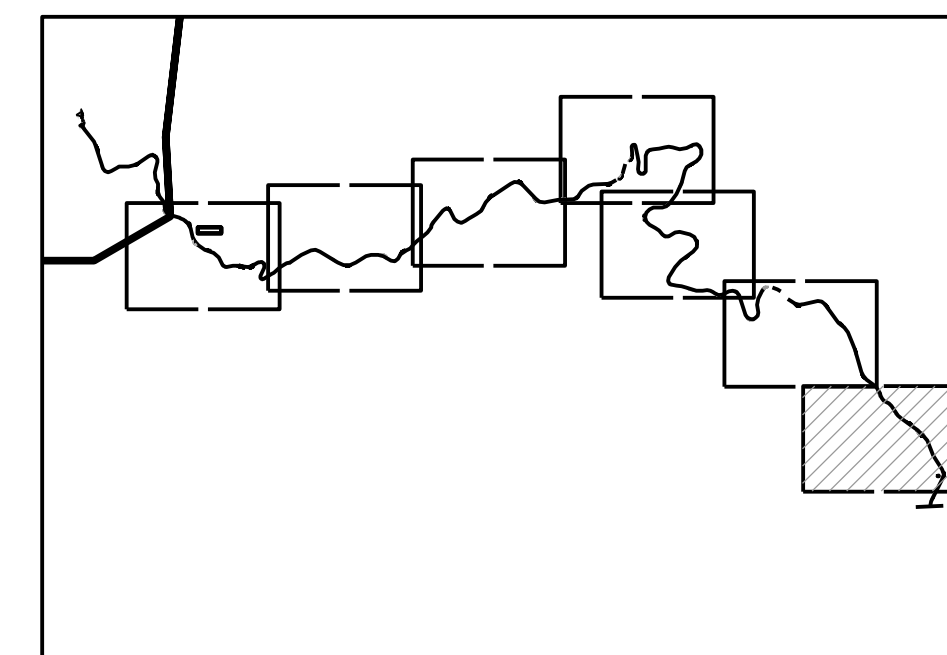
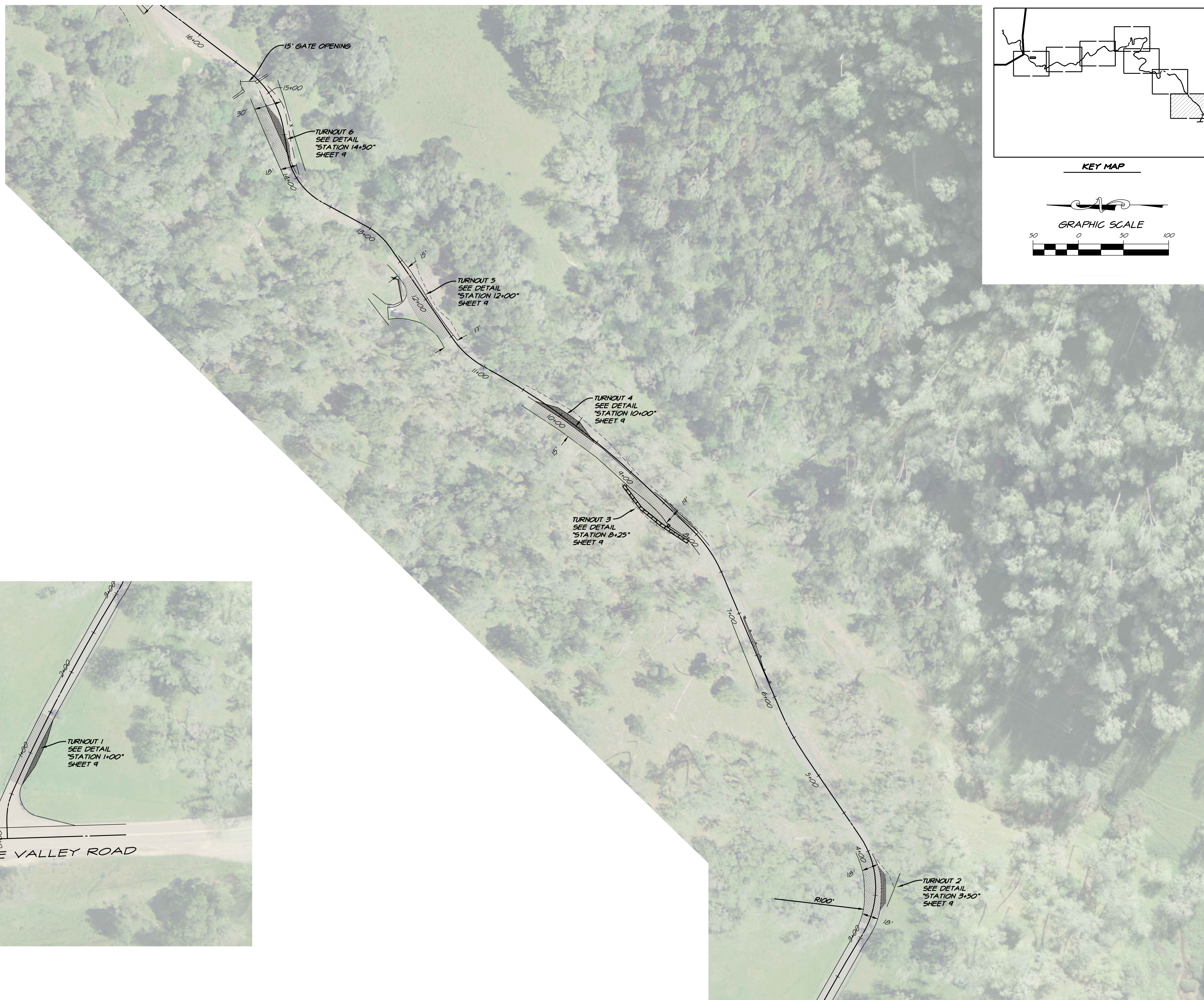
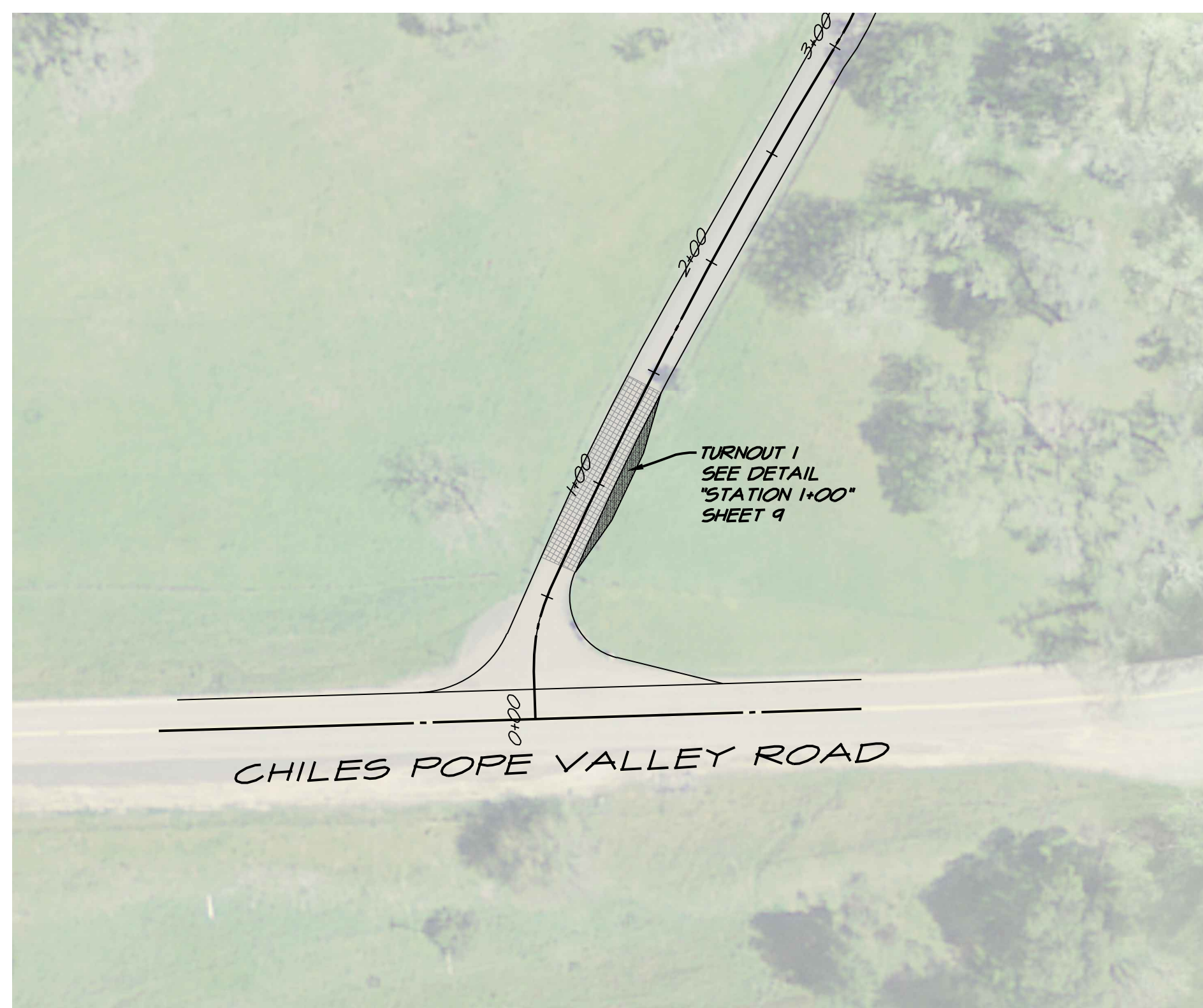


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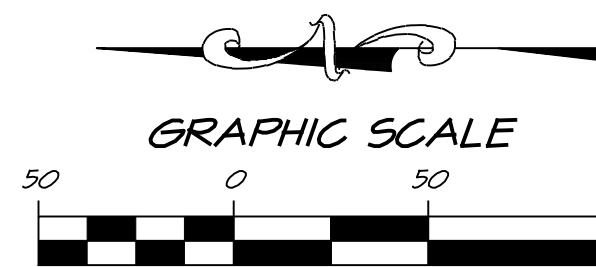
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KEY MAP

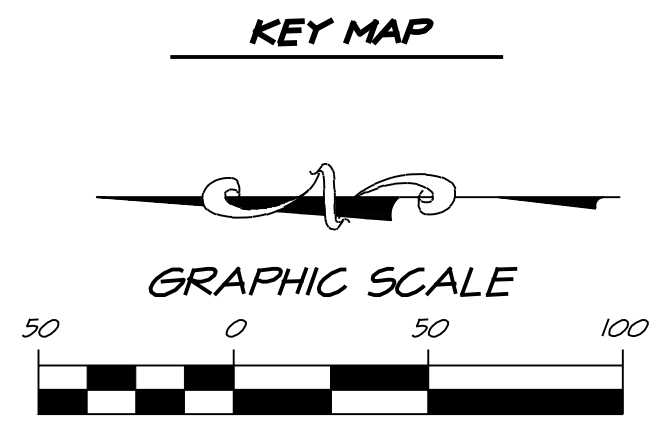
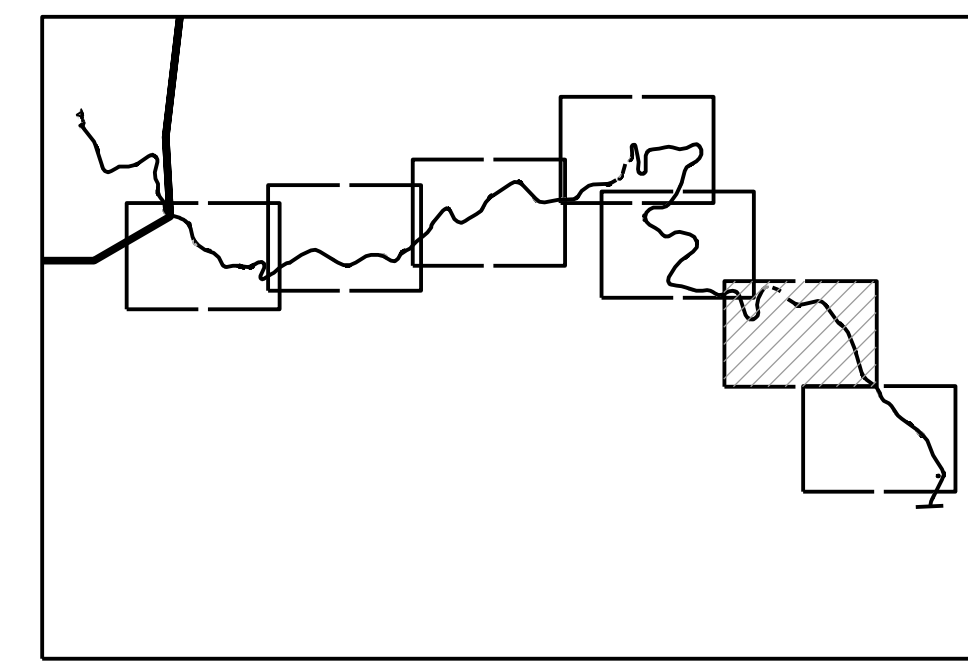


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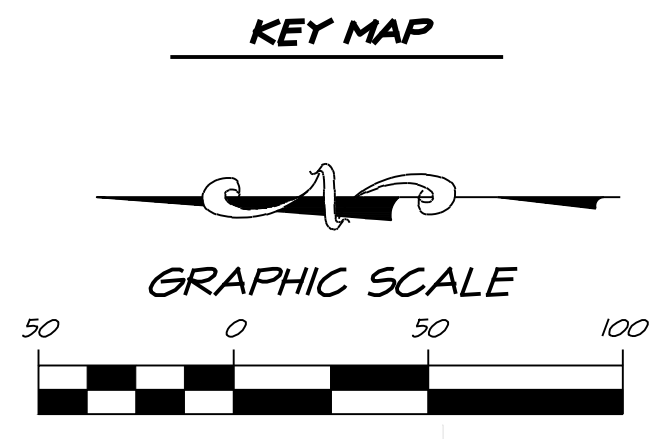
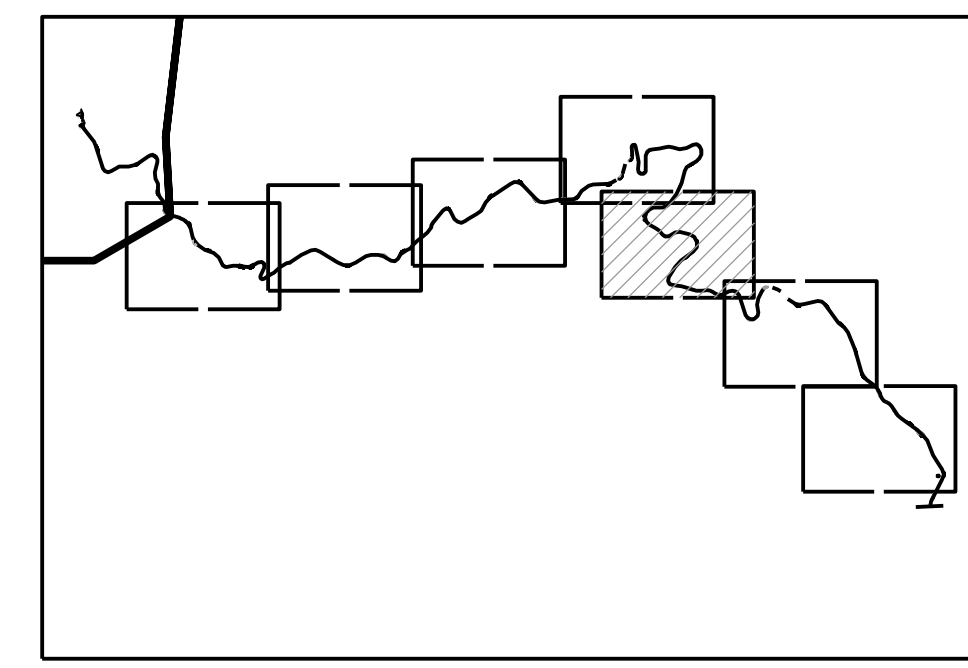
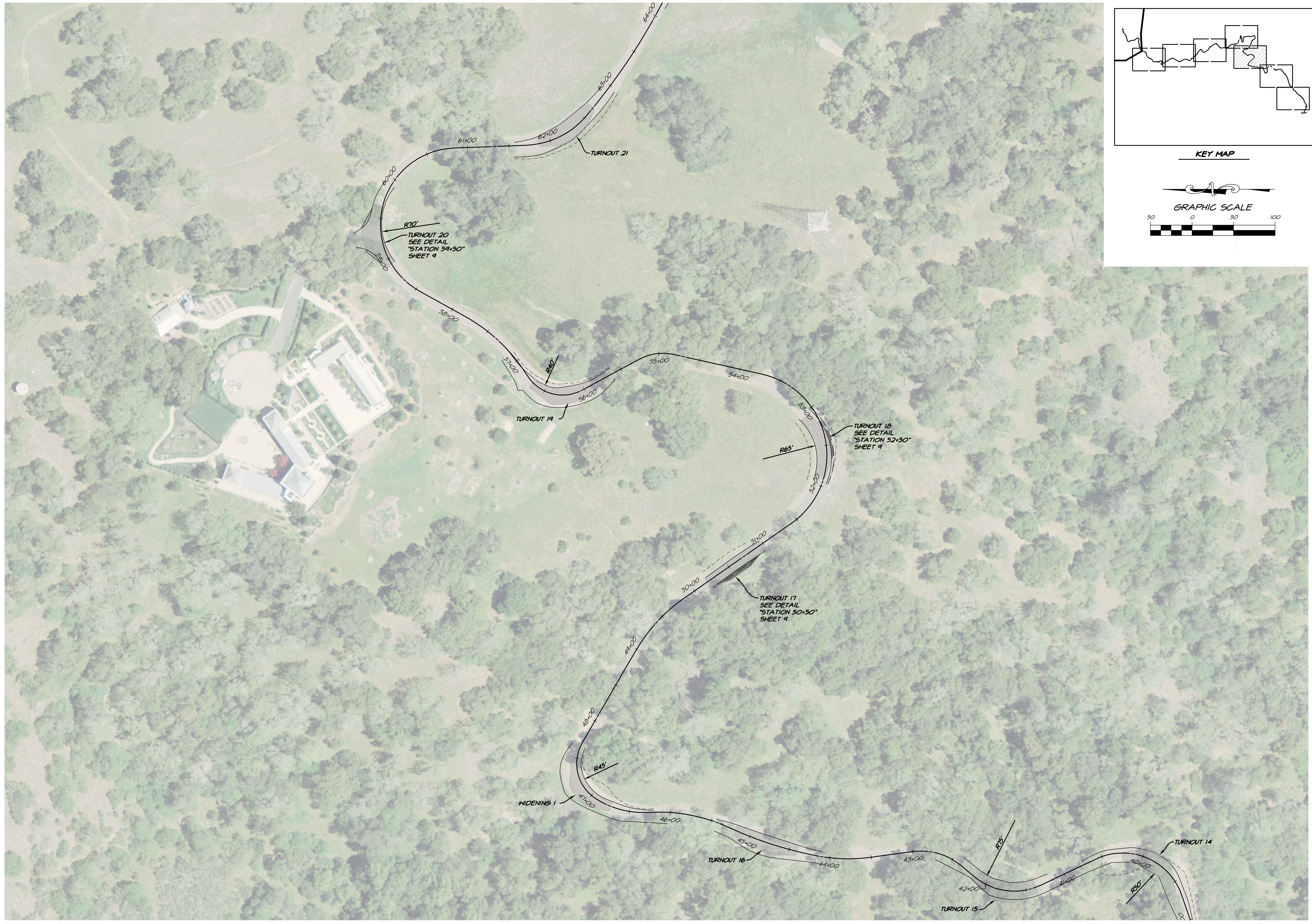


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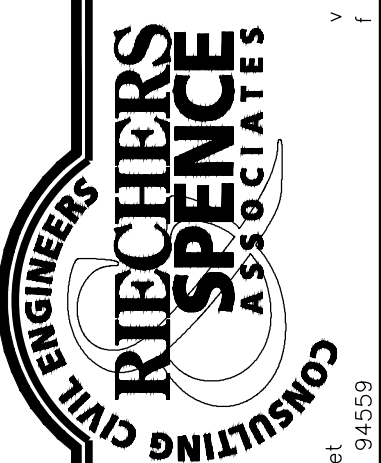
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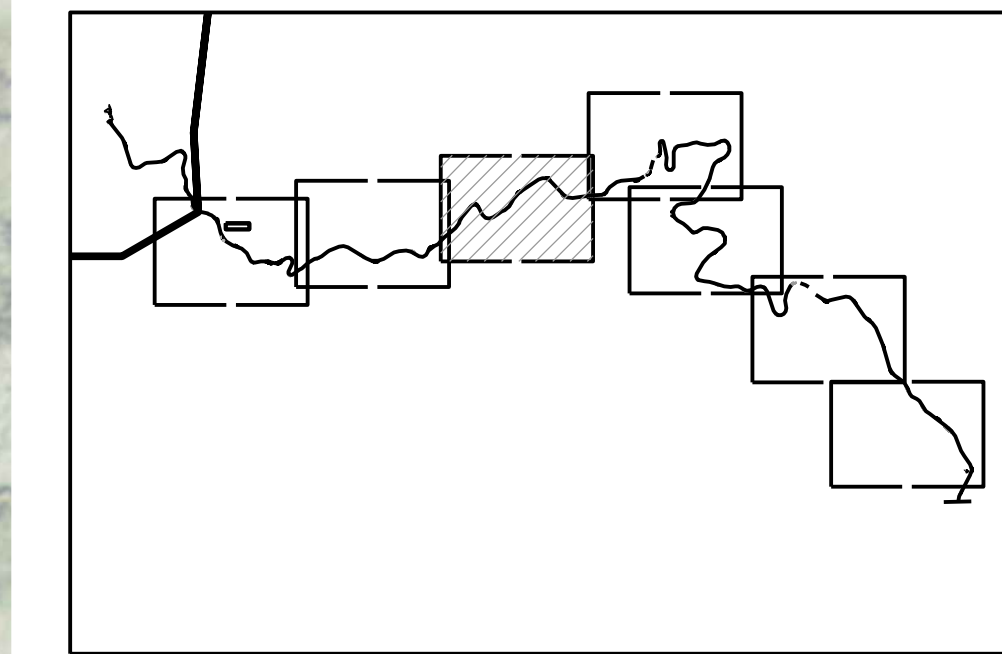
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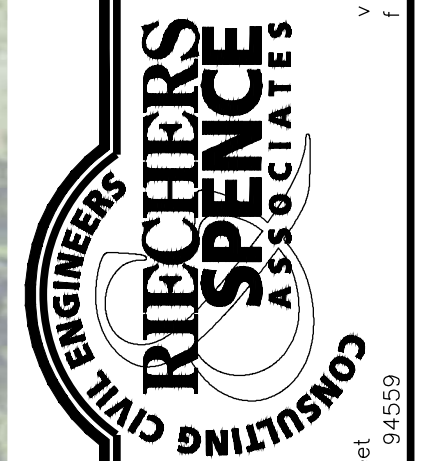
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KEY MAP



GRAPHIC SCALE

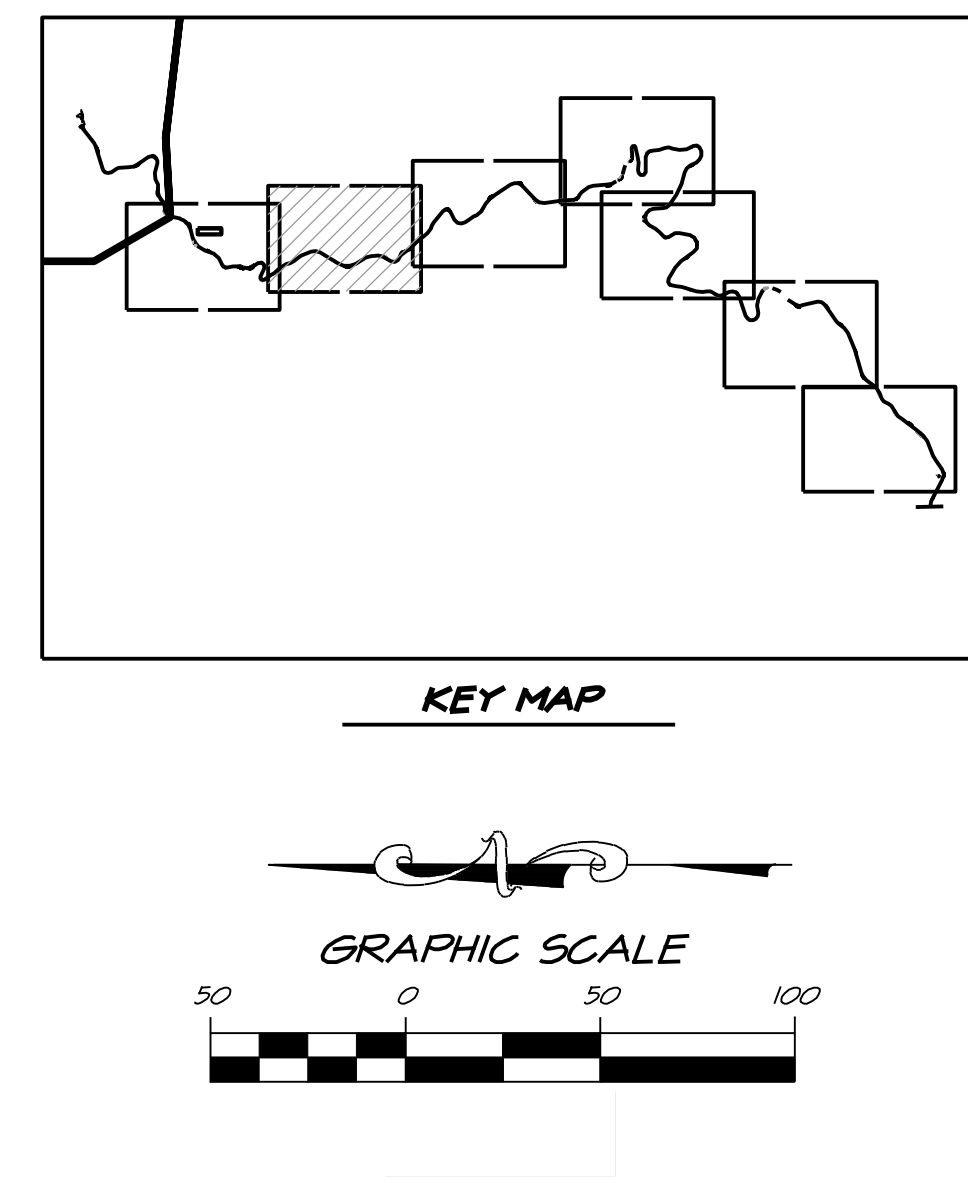


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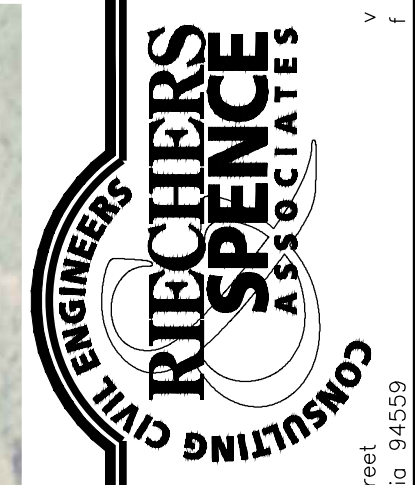
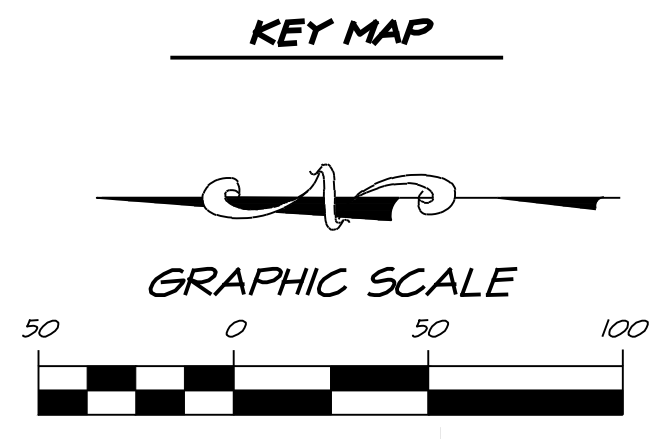
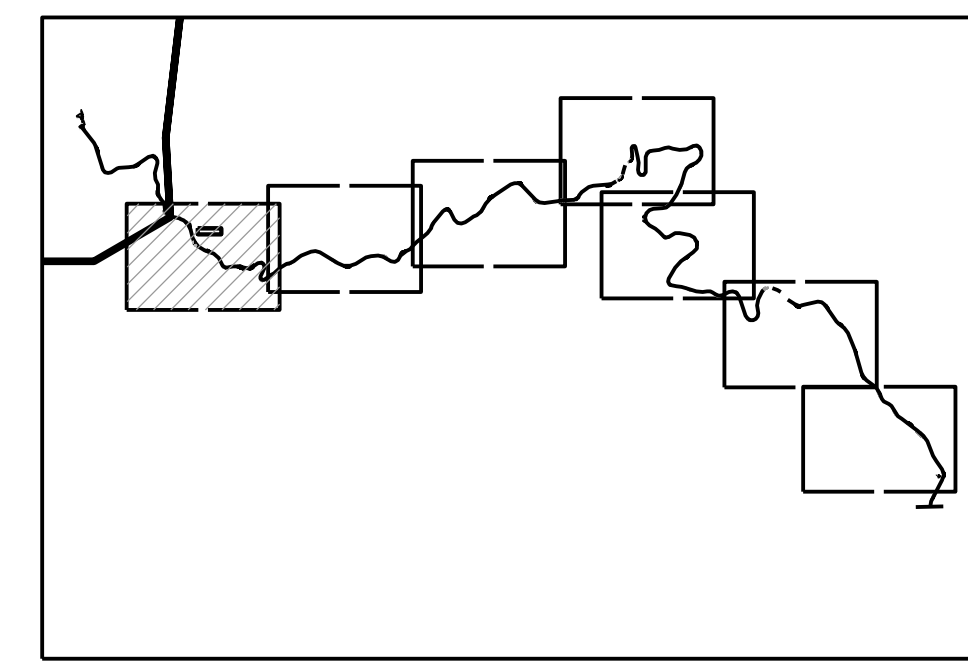


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SHEET NO.	7
OF 10 SHEETS	

NO.	DATE	REVISIONS	BY



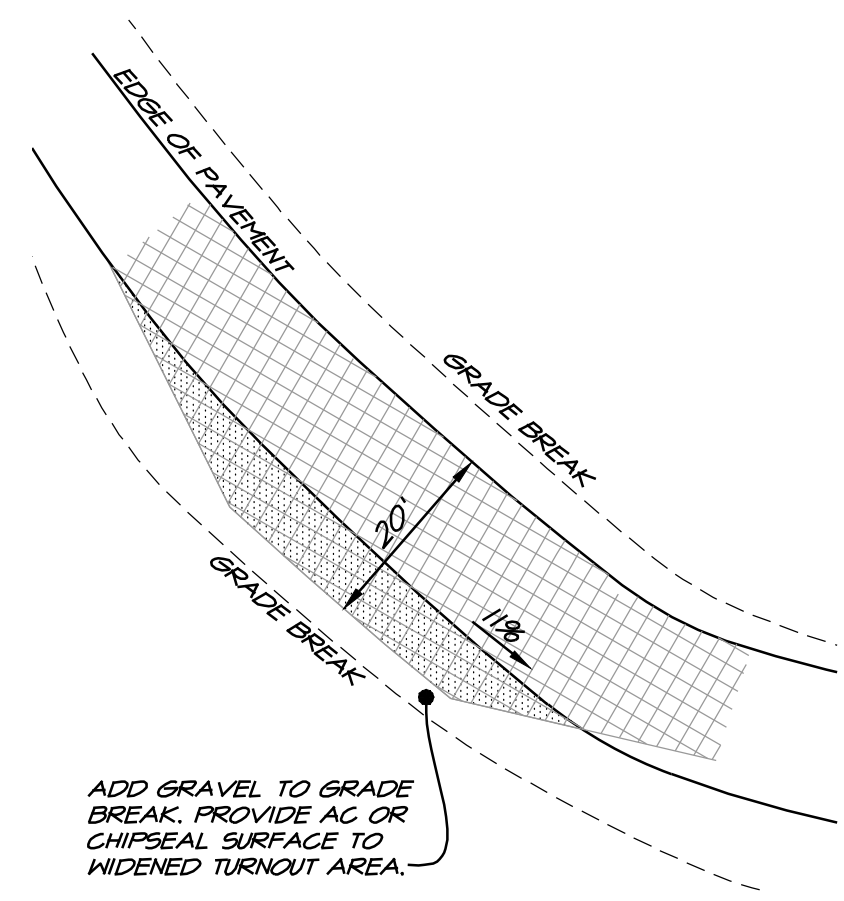
1541 Third Street
 Novato, California 94945
 P 707.252.4966
 F 707.252.4966

**HENNESSEY RIDGE ROAD
 REQUIREMENTS TO MEET CODE**
 ST. HELENA CALIFORNIA

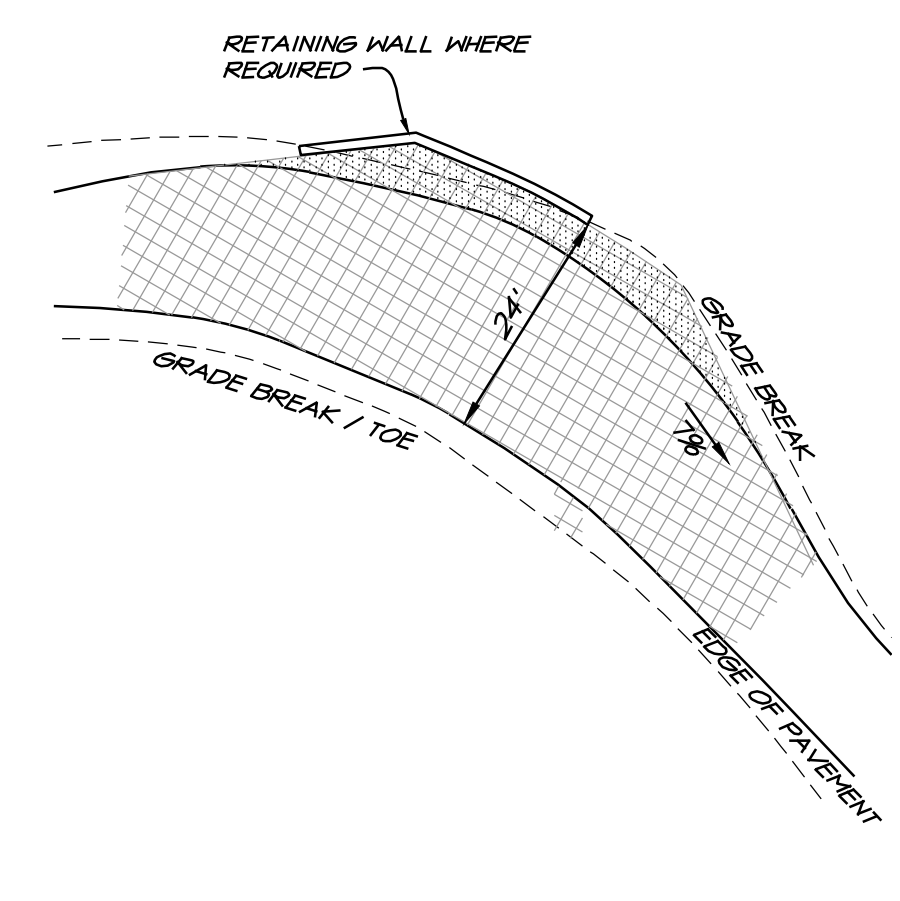
DATE	Nov. 25, 2015
DRAWN	JFW
DESIGNED	
CHECKED	BNF
JOB NO.	4111061.0

SHEET NO.
8
 OF 10 SHEETS

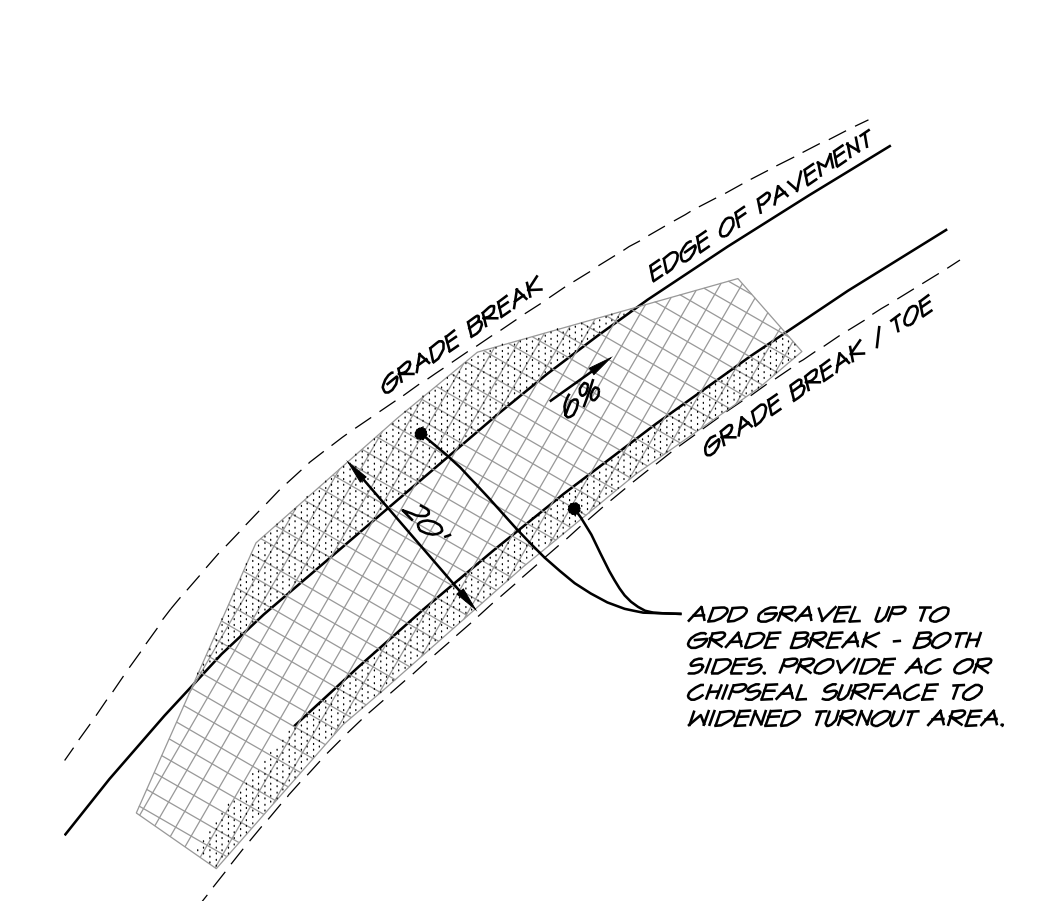
NO.	DATE	REVISIONS	BY



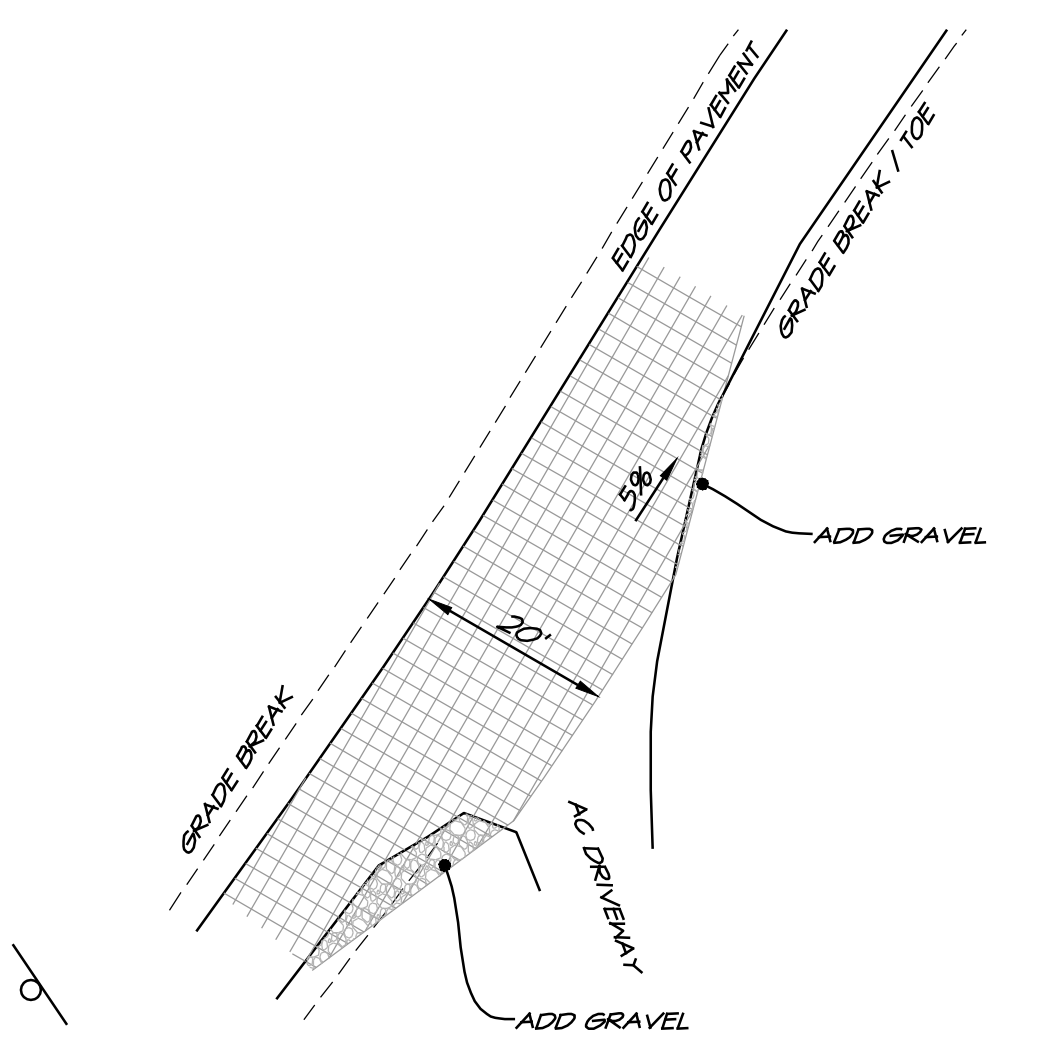
STATION 94+50



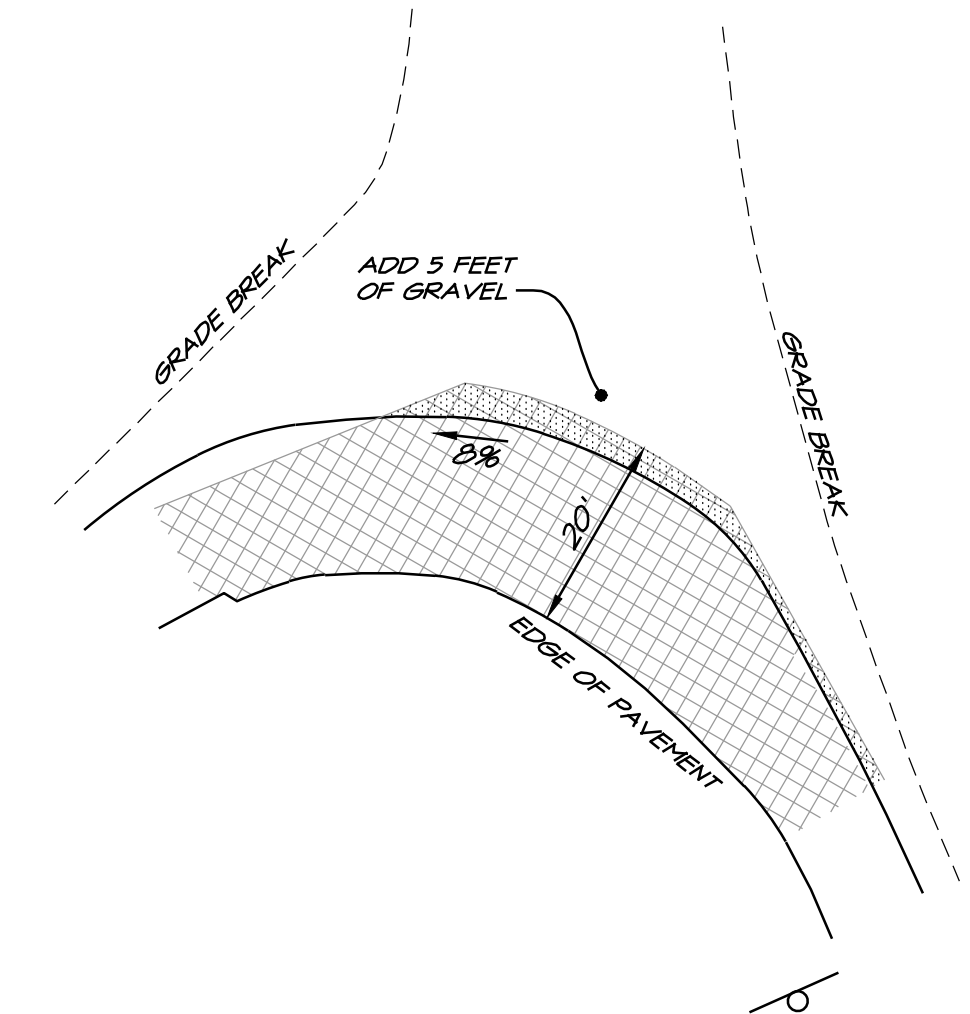
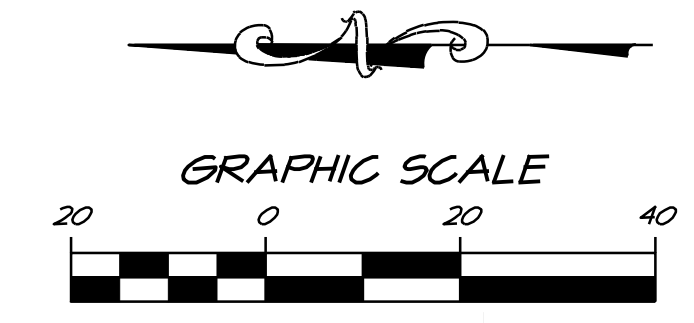
STATION 97+00



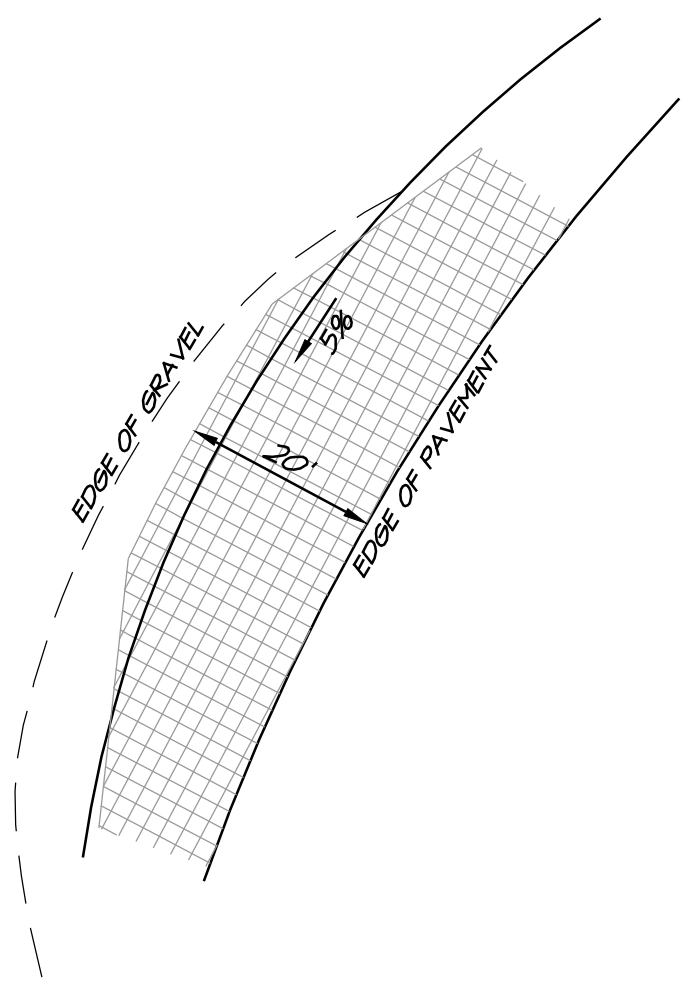
STATION 100+00



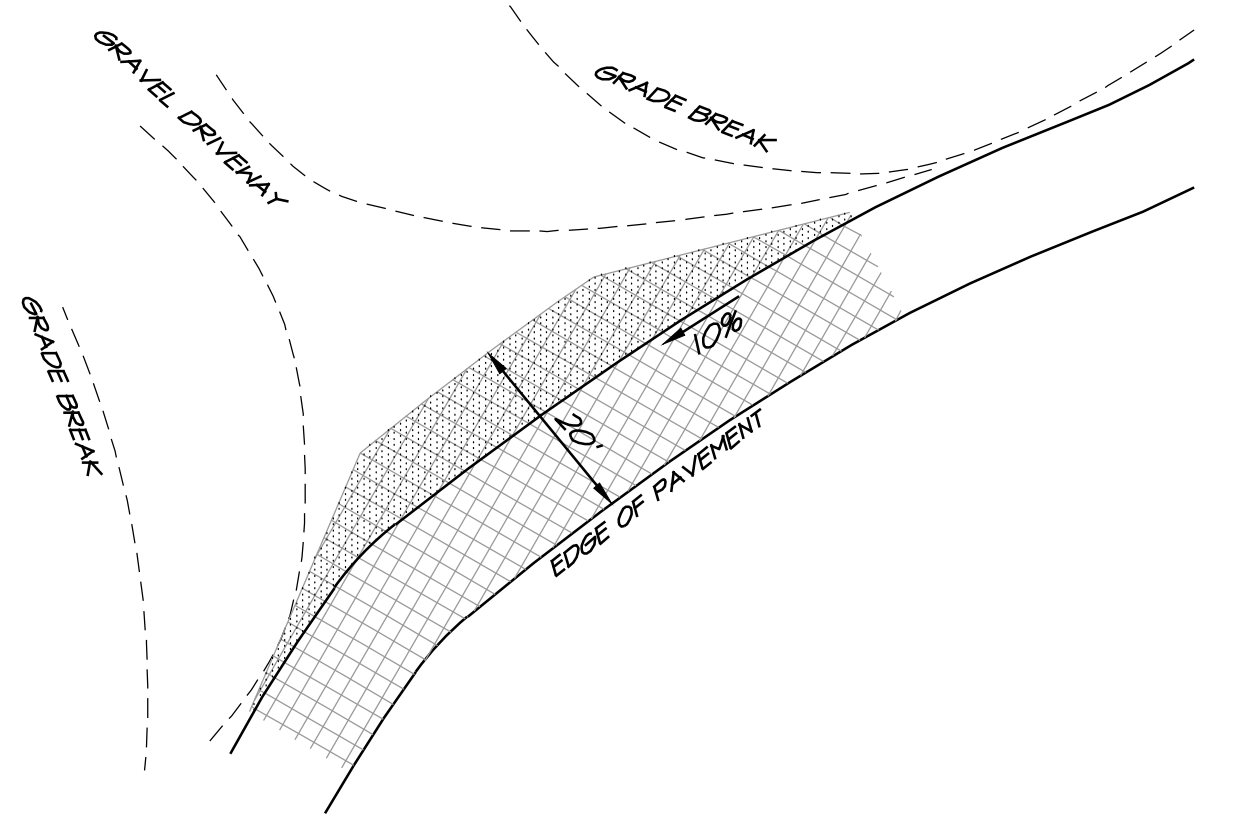
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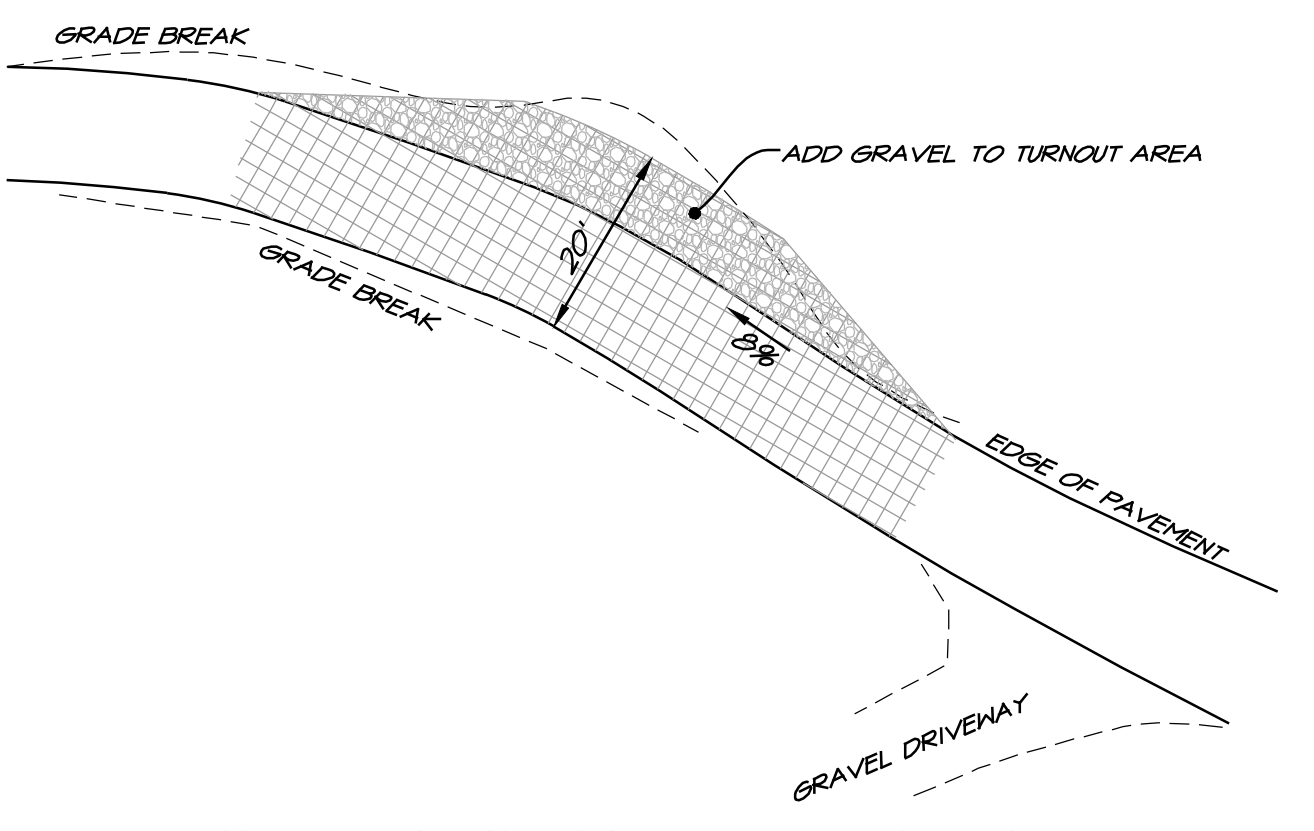
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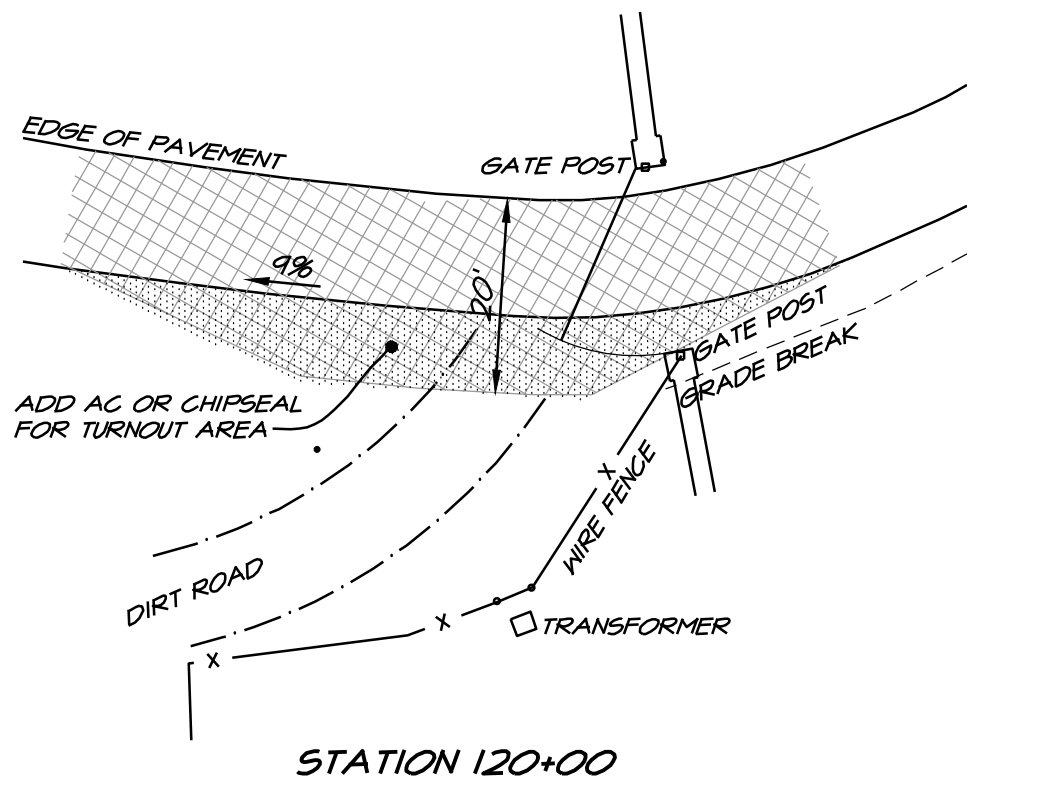
STATION 109+00



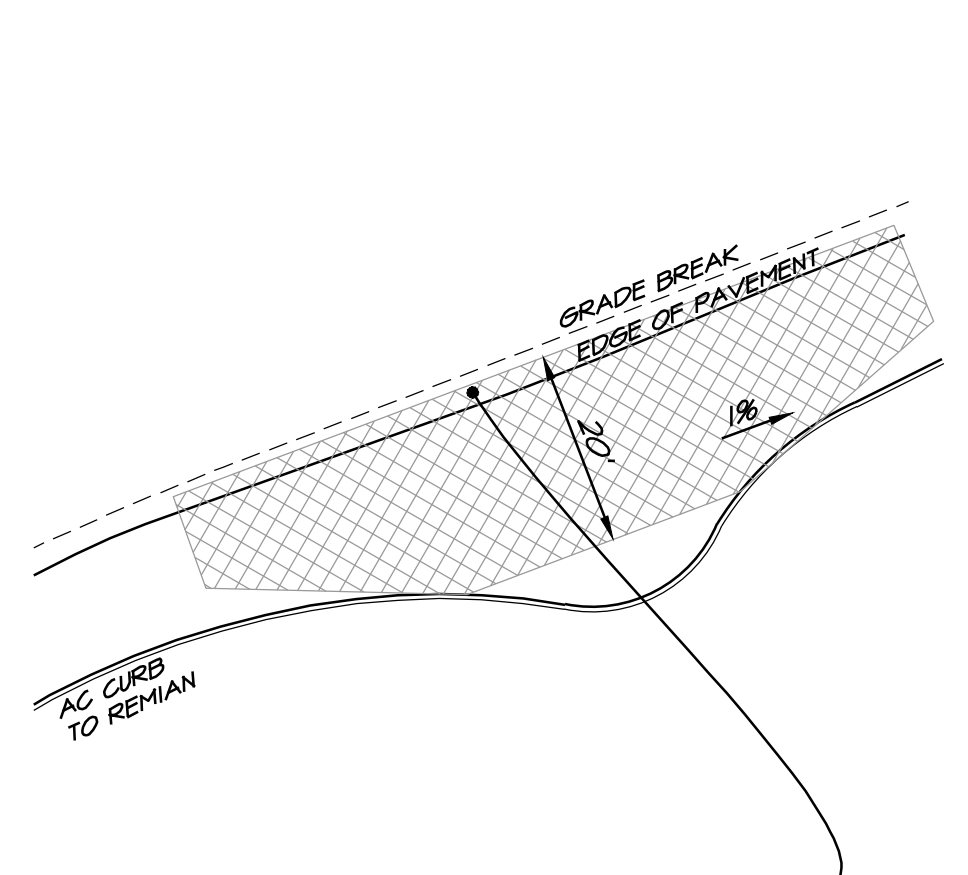
STATION 113+50



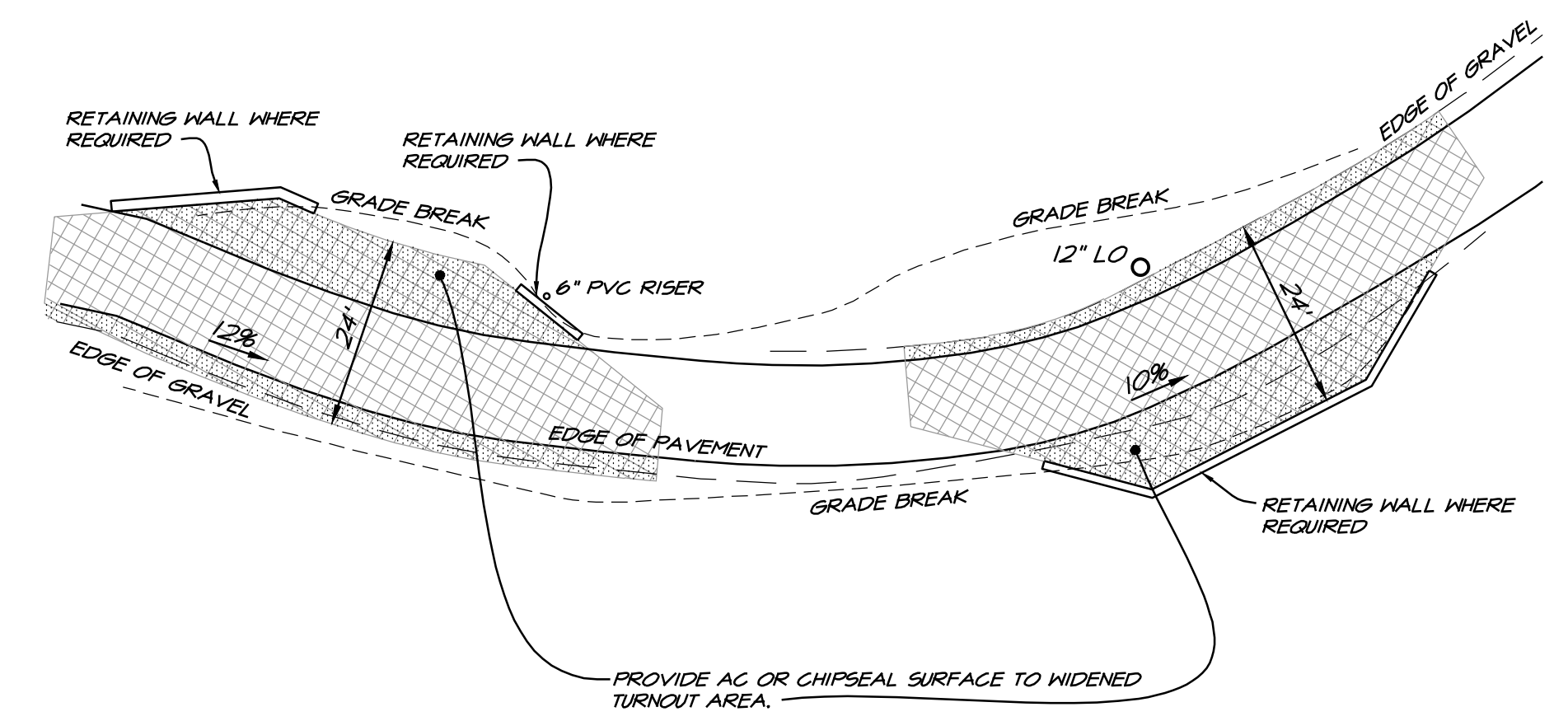
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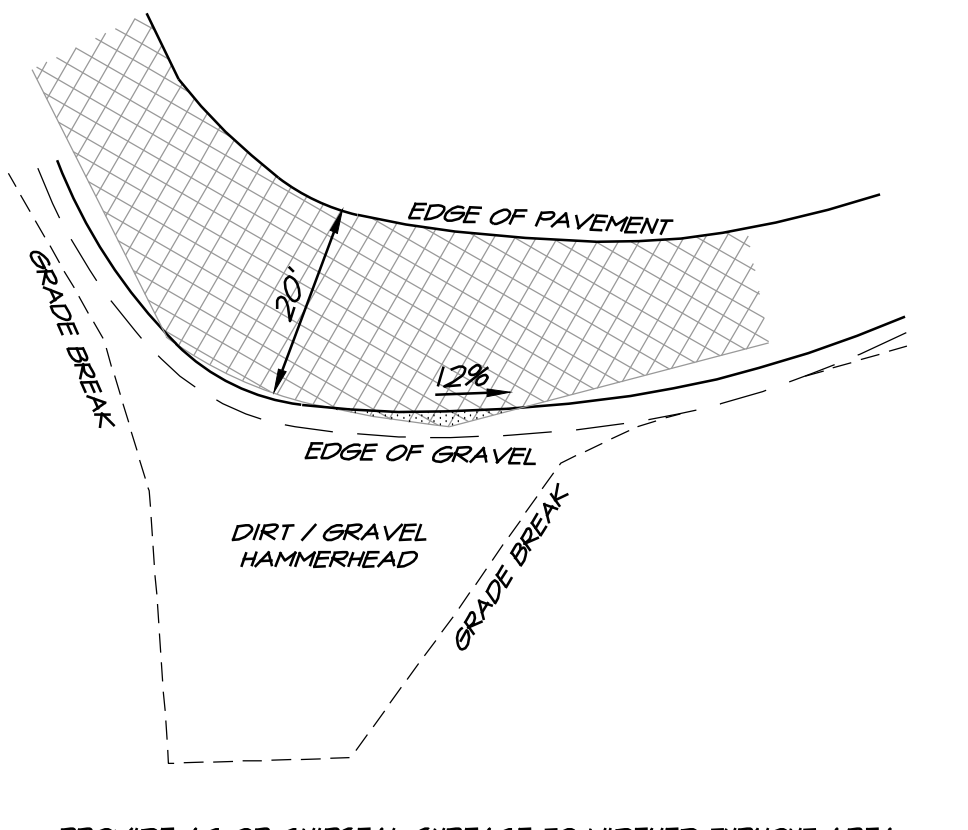
STATION 120+00



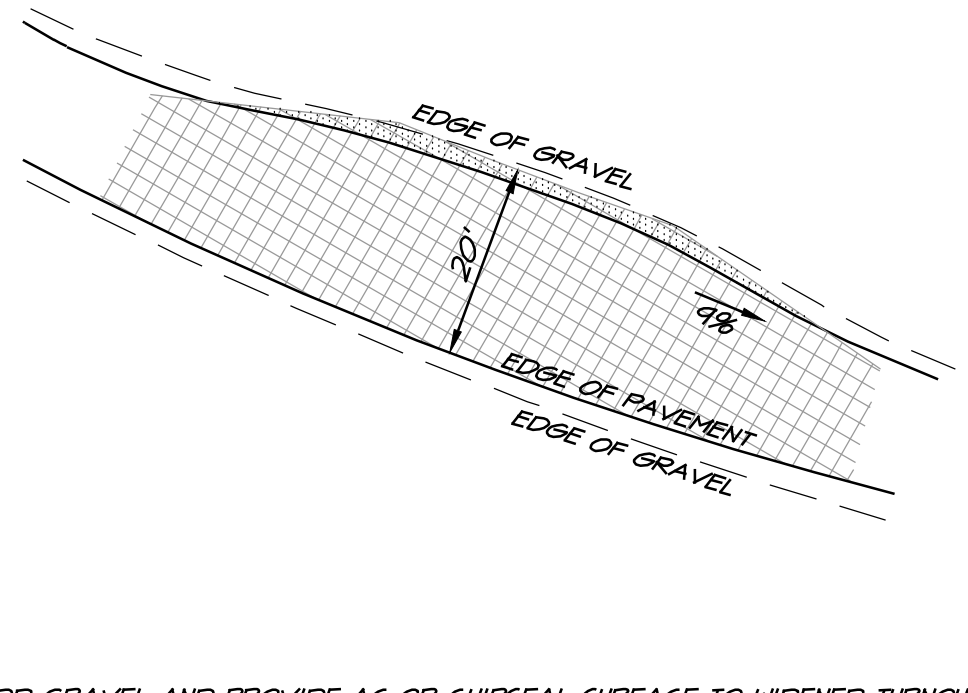
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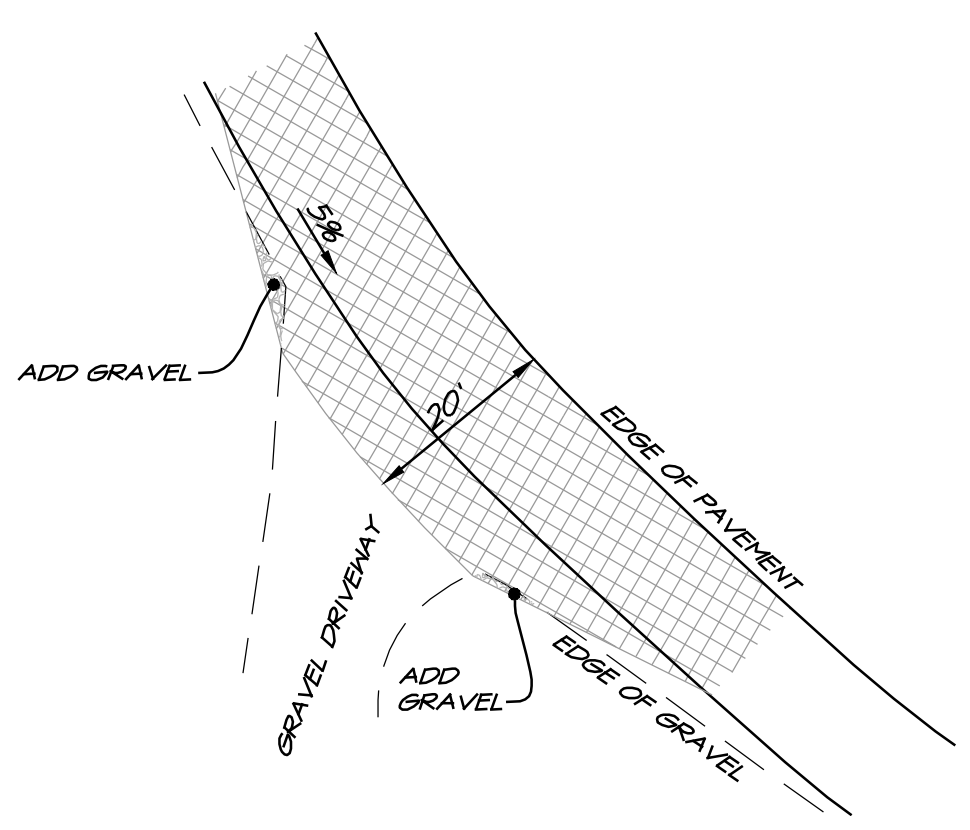
STATION 133+00-134+50



STATION 136+00



STATION 138+50



STATION 140+00



1541 Third Street
Napa, California 94559
P 707.252.4966
F 707.252.4966
Y 707.252.3301

HENNESSEY RIDGE ROAD
STATION DETAILS
ST. HELENA CALIFORNIA

DATE	Nov. 25, 2015
DRAWN	JFW
DESIGNED	
CHECKED	BNF
JOB NO.	4111061.0
SHEET NO.	10
OF 10 SHEETS	