

Conservation Regulations Exception Request



RSA+ | CONSULTING CIVIL ENGINEERS + SURVEYORS +

RYAN GREGORY, PE

SERVING CALIFORNIA SINCE |

1515 FOURTH STREET NAPA, CALIFORNIA 94559 FAX | 707 | 252.4966 OFFICE | 707 | 252.3301

1980

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CHRISTOPHER TIBBITS, PE, LS

PRINCIPAL + VICE PRESIDENT

Rodde Residence **Driveway Project Narrative**

PRINCIPAL + VICE PRESIDENT

#4111055.0 September 14, 2016

Purpose:

This application requests approval of a Use Permit for the construction of a section of new, 20foot wide, paved driveway to connect to the existing Rodde Residence driveway off of Hagen Road in Napa County. The driveway will be an improvement from the existing driveway and constructed to conform to Napa County Road and Street Standards. The new driveway will provide access to the residence that is separate from the current driveway that is frequently used by commercial vehicles from the neighboring parcels. Also, the new driveway will provide an improved emergency fire access route to the residence.

Existing Conditions:

The Rodde Residence is currently served by a shared driveway from Hagen Road. The shared driveway provides access to a private residence and the Palmaz Winery in addition to the Rodde Residence. The existing driveway is 1,150 feet long with an average width of 10 feet and as narrow as 8.5 feet in areas. The narrow road makes two-way traffic difficult and causes issues for emergency vehicles. The driveway does not provide shoulders nor turnouts and does not meet the current Napa County Road and Street Standards. The existing Rodde driveway turns left off of the shared driveway and leads North over a cattle guard and widens to 20 feet, better conforming to Napa County Road and Street Standards for a driveway serving more than one parcel in the State Responsibility Area.

The currently shared driveway is frequently used by autos and commercial vehicles traveling to and from the Palmaz Winery. Commercial traffic traveling on the narrow shared driveway raises a concern of safety. Traffic is more prevalent in the morning and evenings as workers arrive and leave. Other maintenance and delivery trucks utilize the driveway throughout the day.

Existing Hagen Creek Constraints:

The existing driveway is on the north side of Hagen Creek. The average slopes between the driveway and top of bank are between 4% and 14%. Per the County Code, the required creek setback is 45 to 55 feet. The existing driveway is located within the creek setback for approximately 1,000 feet. Improvements to the existing driveway to meet current County Standards is not a feasible option due to the proximity of Hagen Creek. Improvements would

require permits and approval from the California Department of Fish and Wildlife (CDWF). The likelihood of approval from CDFW is very low.

Proposed Conditions:

The Rodde Residence proposes to construct a new 20 foot wide, 1,170 feet long, paved driveway that connects to the existing 20-foot wide driveway leading to the residence. The proposed driveway will be a significant improvement from the existing driveway and meet the Napa County Road and Street Standards. The proposed driveway will run parallel and to the north of the existing driveway. The proposed driveway will be constructed through an existing easement on the neighboring parcel and will be constructed the furthest possible distance from Hagen Creek without encroaching on the adjacent property drainage and vineyard improvements. The existing easement was created in 1987 in anticipation of improving future driveway access.

A bio-swale will be constructed between the proposed and existing driveways. The bio-swale will capture and treat stormwater runoff from the new driveway. The bio-swale will outfall into Hagen Creek. An assessment of the proposed driveway runoff rate and existing runoff conditions was performed using TR-55 for the 100-year storm event. The proposed driveway and bio-swale produce a runoff rate of 21.07 cfs compared to the existing stormwater runoff rate of 21.26 cfs. The proposed driveway development does not exceed the existing stormwater runoff rates into Hagen Creek. Please refer to attached RSA+ letter dated October 21, 2015 for further detail.

Proposed Hagen Creek Constraints:

The proposed driveway will reduce the potential impacts on Hagen Creek when compared to the existing driveway. The proposed new driveway of total length 1,170 feet will have 492 feet located within the creek setback. The proposed bio-swale will substantially reduce any impacts on the Hagen Creek caused from the proposed areas located within the creek setback.

Construction staging areas and equipment will be located north of the proposed driveway to reduce the risk of impacting Hagen Creek.

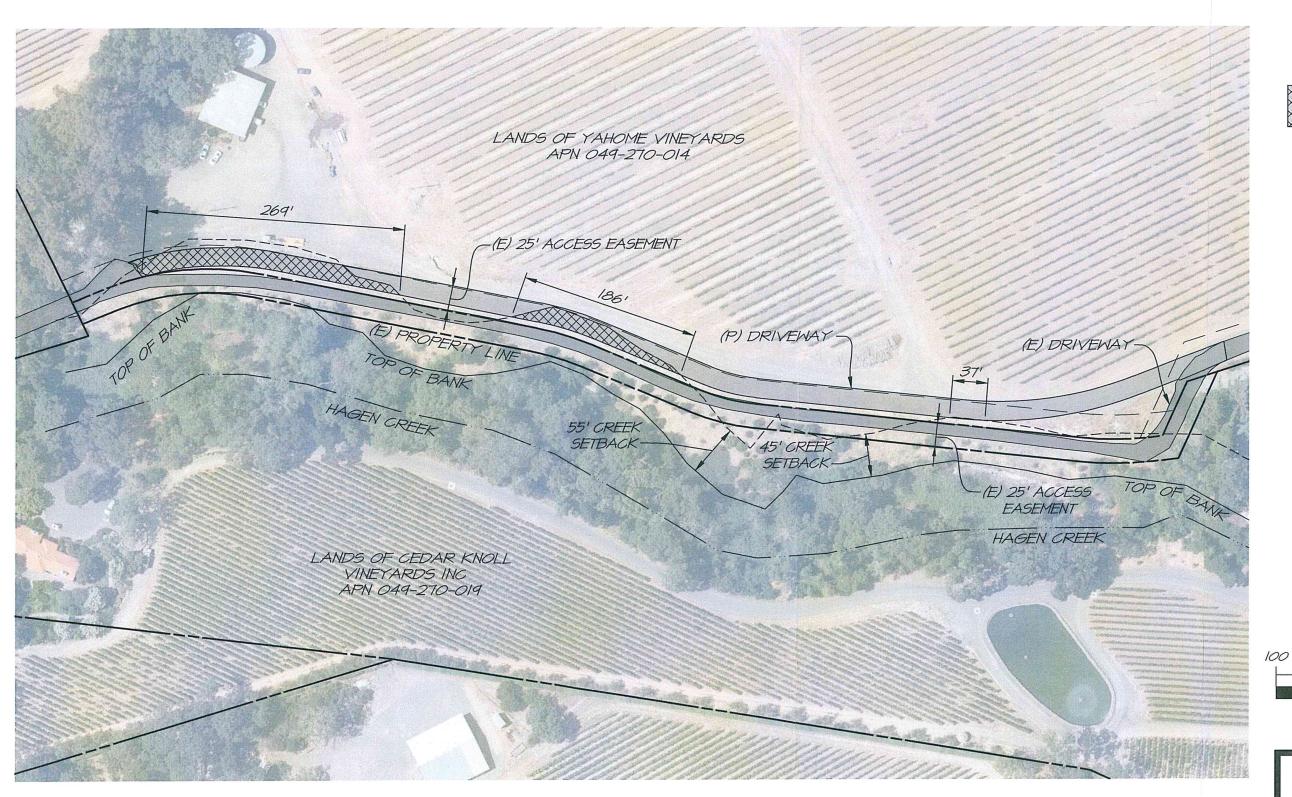
Variance Requested:

A variance is requested to allow encroachment within the Hagen Creek setback along certain portions of the proposed driveway on the grounds that:

1. The proposed driveway will be a significant improvement from the existing driveway and conform to current Napa County Road and Street Standards;

- 2. The driveway widening will give fire department vehicles, and other emergency vehicles, better access to the Rodde Residence and improve passing capacity for inbound and outbound traffic, improving the safety of the road;
- 3. The proposed driveway will provide separate access for commercial traffic from the Palmaz Winery and residential traffic to the Rodde Residence;
- 4. The proposed bio-swale, between the proposed driveway and Hagen Creek, will treat the new impervious area and has been modeled to show the reduced peak flow rate to the Hagen Creek riparian area;
- 5. The existing easement, existing property lines and current uses prevent the proposed driveway to be located further from the Hagen Creek setback.

RODDE RESIDENCE DRIVEWAY EXHIBIT





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AUGUST 12, 2016 4111055.0 Exh- Driveway.dwg

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CHRISTOPHER TIBBITS, PE. LS

PRINCIPAL + VICE PRESIDENT

#4111055.0 October 21, 2015

Scott Rodde 1500 Third Street, Suite C Napa, CA 94559 srodde@napanet.net

Dear Scott:

The following is my response to the September 17, 2015 memo that Brian Bordona sent to Patrick Ryan at the county ECD. As discussed, some of this information was shared with Brian when I met with him last week. I have further supplemented it with a bit more information you provided on the CDFW LSAA, and also with a summary of the storm water runoff comparison that I ran yesterday.

Rodde Residence Driveway Plan-Summary of Environmental Comparisons, Pre and Post Driveway

The Rodde Residence Driveway, as currently drawn by RSA+, provides access from a point east of Hagen Road toward the Rodde residence, over a distance of some 1,250 feet. In the initial 650 feet, the driveway is in portions, close enough to Hagen Creek to warrant an examination of the distance of setback from the creek top-of-bank.

The proposed grading and construction of the new driveway is pursuant to Grading Permit #ENG14-00038, and is also subject to the Napa County Conservation Regulations, Chapter 18.108.025 of the Napa County Code. This section of code establishes the required setbacks for construction, grading, and vegetation modifications for county-defined streams. The primary guiding purpose of the regulations are to control soil erosion, protect water quality, and protect riparian habitat that might otherwise be compromised by land disturbance activities.

The proposed driveway parallels on the outboard side of an existing paved driveway for some 650 feet before diverging significantly away from Hagen Creek. Through this segment, the edge-of-pavement of the existing paved driveway is inside of the county required setback distance for 570 feet, (lands of a slope of 5% or greater to 15% slope require a setback distance of 55 feet). By comparison, the proposed Rodde driveway would exceed the 55 foot required setback for a distance of 440 lineal feet.

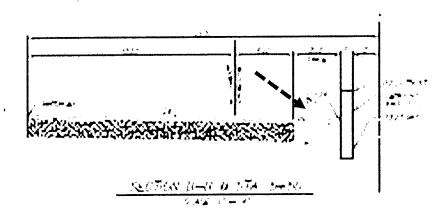
Lands adjacent to the existing driveway and creek consist of vineyard, vineyard avenue, and areas of ruderal grassland vegetation. Currently, sheet flow from adjacent lands pass across the driveway and enter the riparian area over distances of less than 8 feet, up to about 65 feet. On the same side of the creek, native riparian vegetation was re-established, following the clearing of large eucalyptus trees. The work was performed sometime around 2008, under a Lake and Streambed Alteration Agreement carried out with the CA Dept of Fish and Wildlife, (CDFW).

The RSA+ plan proposes to construct a bio-swale between the existing and proposed driveways. In contrast to current sheet flow distances of 8 to 65 feet, the bio-swale captures sheet flow runoff and transports it over a distance of 144 feet on the downhill segment, and over a distance of 345 feet on the uphill segment. Average slope run in the bio-swale ranges from 2% to 4%, compared with the over-land

slopes of 3.8% to 13.7% which exists between the driveway and the creek top-of-bank. Vegetation to be established in the bio-swale will consist primarily of native grasses, in comparison with the ruderal, annual Mediterranean grasses and forbs that form the current vegetative buffer between the vineyard and the riparian area. Bio-swale native grasses typically develop dense, deep root systems that are superior to ruderal vegetation in absorbing and filtering sediments and pollutants entrained in storm runoff. A culvert will discharge bio-swale runoff to the creek. The culvert design has been reviewed and approved by CDFW under a more recent Lake and Streambed Alteration Agreement, (LSAA).

The existing paved driveway follows closely to Hagen Creek at distances and in landscapes that might otherwise be composed of a continuous assemblage of riparian vegetation. The addition of a second driveway outboard of the existing one therefore occupies land that cannot be effectively restored to a homogenous riparian cover condition. It should be noted that the stream segment of Hagen Creek adjacent to the proposed driveway was required to be restored to native trees and shrubs under a 2008 LSAA, (CDFW Not. # 1600-2008-0192-3). That work has been completed by the responsible applicant.

Inclusion of the bio-swale provides a water quality-benefitting feature, and creates a managed buffer between the farmland and the creek. Increased storm runoff could potentially impact to Hagen Creek as a result of additional grading and driveway development. An assessment was performed using TR-55 to compare current conditions with the proposed additional driveway and bio-swale. Using NOAA 14 storm intensity data for the site, runoff modeling indicates that the Q_{100} storm event will discharge 21.07 cfs, versus 21.26 cfs pre-project, (current conditions). This was largely the result of a reduction in time of concentration, (T_c) of 16.5% that is conferred by the interception and lengthier transport of runoff in the swale. The Rodde driveway will therefore not contribute to an increase in runoff to the riparian area in the segment within the 55 foot setback area.



TYPICAL- BIO-SWALE CROSS SECTION VIEW, (RSA+ C3.0 excerpt)

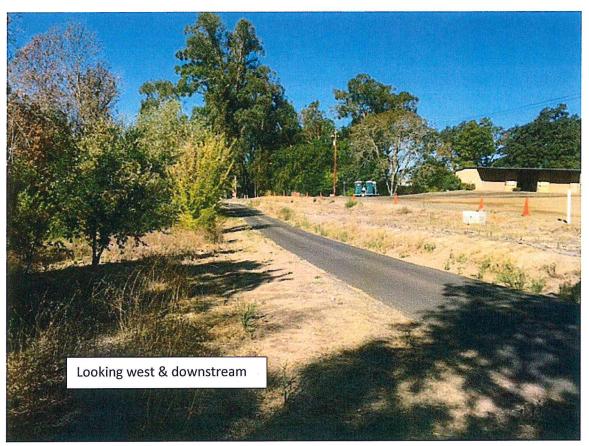
I hope this helps. Let me know if you have any questions.

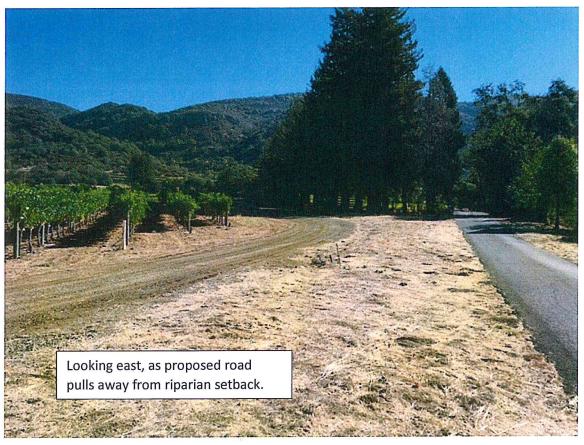
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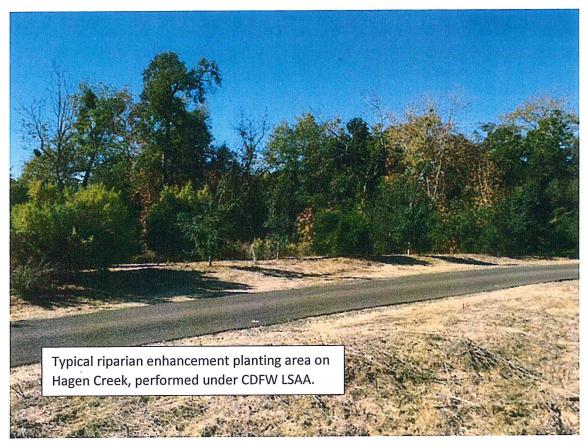
Phill Blake

Agriculture and Natural Resources Advisor, CPESC

EXHIBIT: Rodde – Images in the Hagen Creek Riparian Area:









RODDE RESIDENCE CIVIL IMPROVEMENT PLANS



EXISTING

‡	LIGHT
-ф-	HOSE BIB
•6	GAS RISER
Ğ∨	GAS VALVE
EV	ELECTRIC VAULT
O IO" TREE	TREE (AS NOTED)
9 5500	SEWER CLEANOUT
\triangle	SURVEY CONTROL STATION
	IRRIGATION CONTROL VALVE
, , , , , , , , , , , , , , , , , , , ,	FLOWLINE

6D	
<i>3</i> 0	STORM DRAIN LINE
	SS OR PWW LINE
[DH]	DOMESTIC WATER LINE
[FX]	FIRE WATER LINE
SSMH 🌑	SANITARY SEWER MANHOLE
SDMH 🌑	STORM DRAIN MANHOLE
	SLOPE AS SHOWN
FH 🐨	FIRE HYDRANT
₩Ð	WATER VALVE
DI 🔳	DRAIN INLET
AD	AREA DRAIN
5500 ●	SANITARY SEWER CLEANOU
XIREE	EX TREE TO BE REMOVED

SWALE FLOW LINE

PROPERTY LINE

ABBREVIATIONS

AREA DRAIN
BENCHMARK
CENTERLINE
CLEANOUT
CONFORM
CHECK VALVE
DRAIN INLET
DOMESTIC WATER
EDGE OF PAVEMENT
EXISTING
FOUND
FIRE DEPT. CONNECTION
FINISH FLOOR
FINISH GRADE
FIRE HYDRANT
FLOW LINE
FINISH SURFACE
FIRE WATER LINE
GRADE BREAK
HIGH POINT
ILLEDGIBLE
INVERT
IRON PIPE
LINEAL FEET/FOOT
LOW POINT
LEFT
MANHOLE
ON CENTER
OVERHEAD
PACIFIC GAS AND ELECTRIC
POST INDICATOR VALVE
PROPERTY LINE
PROPOSED NEW WORK
RADIUS
RELATIVE COMPACTION
RIGHT OF WAY
RIGHT
RAIN WATER LEADER
SLOPE (FEET/FOOT)
SEE ARCHITECTS DRAWINGS
STORM DRAIN
SANITARY SEWER
SANITARY SEWER CLEANOUT
SEE STRUCTURAL DRAWINGS
SEE STRUCTURAL DRAWINGS

STA

STATION TOP OF CURB

TOP OF WALL WATER LINE

WATER METER

WATER VALVE

WET DRAFT HYDRANT

SYMBOL LEGEND

	EDGE OF GRAVEL		10-17-1, 07-1-1-1-1-1
ROPO	SED	CIVIL ENGINEER:	RSA* I5I5 FOURTH STREET NAPA, CA 94559
	STORM DRAIN LINE		
	SS OR PWW LINE	APN & AREA:	049-270-013 (17.70) 049-270-014 (167.17
•	DOMESTIC WATER LINE	EXISTING USE:	RURAL HOMESITE
	FIRE WATER LINE	PROPOSED USE:	RURAL HOMESITE
	SANITARY SEWER MANHOLE	ZONING:	RC
•	STORM DRAIN MANHOLE		
Y	SLOPE AS SHOWN		

BOUNDARY NOTES

TOPOGRAPHY NOTES

ROAD TOPOGRAPHY BASED ON A FIELD SURVEY PERFORMED BY MICHAEL W. BROOKS & ASSOCIATES IN MARCH, 2010. CONTOURS ARE SHOWN EVERY TWO FEET (2"), HIGHLIGHTED EVERY TEN FEET (IO'). ELEVATIONS SHOWN ON THIS MAP ARE ASSUMED DATUM AND ARE AS SHOWN ON SURVEY CONTROL STATIONS.

CI.0	COVER SHEET & SITE PLAN
CI.I	CONSTRUCTION NOTES
<i>C2.0</i>	PAVING, LAYOUT AND DIMENSION PLAN
C3.0	DRIVEWAY PLAN 0+00 - 6+00
C3.1	DRIVEWAY PLAN 6+00 - 12+50
C4.0	DRIVEWAY SECTIONS
<i>C5.0</i>	DRIVEWAY PROFILE

CALL USA BEFORE EXCAVATING



48 HOURS IN ADVANCE

VICINITY MAP

PROJECT INFORMATION

INER:	STEPHEN AND HELEN RODDE 1500 THIRD STREET, #C NAPA, CA 94558
F66.	4100 HAGEN RD

SITE ADDRESS:	4100 HAGEN RD NAPA, CA 94558	
CIVIL ENGINEER:	RSA* ISIS FOURTH STREET	

APN & AREA:	049-270-013 (17.70 ACRES) 049-270-014 (167.17 ACRES)	
EVICTING ICE	DIDAI HOMEGITE	

THE BOUNDARIES SHOWN HEREIN ARE BASED UPON THE PARCEL MAP DATED DECEMBER 2, 1986 RECORDED AS 31 RS 58-61 NAPA COUNTY RECORDS.

SHEET INDEX

STILL! INDEX			
71.0	COVER SHEET & SITE PLAN		
<i>71.1</i>	CONSTRUCTION NOTES		
2.0	PAVING, LAYOUT AND DIMENSION PLAN		
3.0	DRIVEWAY PLAN 0+00 - 6+00		
<i>3.1</i>	DRIVEWAY PLAN 6+00 - 12+50		
C4.0	DRIVEWAY SECTIONS		
C5.0	DRIVEWAY PROFILE		

 $\partial_{\lambda}(g_{1}) \vee (2g_{1}^{2}(g_{2}^{2}) \vee g_{2}^{2}(g_{2}^{2}))$

DESIGNED DHIDJS

CHECKED BWF

1 OF 7 SHEETS

JOB NO. 4///055.0

SHEET NO.



1 (800) 227-2600

COUNTY OF NAPA GENERAL NOTES

- ALL WORKMANSHIP AND MATERIALS FOR BOTH ON-SITE AND OFF-SITE IMPROVEMENTS SHALL CONFORM TO THE ADOPTED NAPA COUNTY ROAD AND STREET STANDARDS (REVISED AUGUST 9, 2011) OR LATEST EDITION, AND/OR THE LATEST EDITION OF CALTRANS STANDARD SPECIFICATIONS AND STANDARD PLANS, AND/OR LATEST EDITION OF THE CBC, CFC, CGBS, CMC, CPC AND CRC. THE ON-SITE IMPROVEMENTS SHALL BE INSPECTED BY THE COUNTY OF NAPA PLANNING, BUILDING AND ENVIRONMENTAL (PBES) DEPARTMENT INSPECTOR.
- 2. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR BEING FAMILIAR WITH THE PROVISIONS AND REQUIREMENTS CONTAINED IN THE COUNTY STANDARD SPECIFICATIONS. CONTRACTOR SHALL HAVE A COPY AVAILABLE AT THE JOB SITE AT ALL TIMES.
- CONTRACTOR SHALL NOTIFY ALL PUBLIC OR PRIVATE UTILITY COMPANIES 48 HOURS PRIOR TO COMMENCEMENT OF WORK ADJACENT TO EXISTING UTILITY LINE UNLESS ENCROACHMENT PERMIT SPECIFIES OTHERWISE.
- CONTRACTOR SHALL PROVIDE EMERGENCY TELEPHONE NUMBERS TO THE COUNTY OF NAPA POLICE DEPARTMENT, FIRE DEPARTMENT AND PLANNING, BUILDING AND ENVIRONMENTAL DEPARTMENT, AND KEEP THEM INFORMED DAILY REGARDING STREETS UNDER CONSTRUCTION AND DETOURS. DETOURS SHALL NOT BE PERMITTED UNLESS APPROVED IN WRITING BY THE COUNTY OF NAPA PBES DEPARTMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL EXISTING UTILITIES IN THE FIELD. LOCATIONS OF UTILITIES AND UNDERGROUND FACILITIES SHOWN ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
- 6. CONTRACTOR SHALL PROVIDE AND MAINTAIN SUFFICIENT BARRICADES TO PROVIDE FOR THE SAFETY OF THE GENERAL PUBLIC TO THE SATISFACTION OF THE PUBLIC WORKS DIRECTOR.
- ALL MATERIAL SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
- ALL UNDERGROUND UTILITY WORK IN THE STREET AREAS SHALL BE COMPLETED PRIOR TO PLACEMENT OF BASE ROCK UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL CONFORM TO EXISTING ROADS, SURROUNDING LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, SIDEWALKS, GRADING, ETC., AND TO AVOID ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES, LOW SPOTS OR HAZARDOUS CONDITIONS.
- IO. CONTRACTOR SHALL COORDINATE ALL NECESSARY UTILITY RELOCATIONS, IF REQUIRED, WITH THE APPROPRIATE UTILITY COMPANIES.
- CONTRACTOR SHALL CONTACT THE COUNTY OF NAPA PBES DEPARTMENT TO ARRANGE A PRE-PROJECT CONFERENCE FOR THE PURPOSE OF REVIEWING JOB REQUIREMENTS AND
- 12. CONTRACTOR SHALL NOTIFY THE COUNTY OF NAPA PBES DEPARTMENT AT LEAST 12 HOURS IN ADVANCE OF THE COMMENCEMENT OF ANY PART OF THE WORK.
- 13. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER HARMLESS FROM ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT; EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNERS OR THE ENGINEER.
- SHOULD ANY CONTRACTOR OR SUBCONTRACTOR FIND ANY DEFICIENCIES, ERRORS, CONFLICTS OR OMISSIONS IN THESE PLANS AND SPECIFICATIONS OR SHOULD HE BE IN DOUBT AS TO THEIR MEANING OR INTENT, HE SHALL NOTIFY THE ENGINEER FOR A WRITTEN CLARIFICATION, ADDENDUM, ETC. SHOULD HE FAIL TO DO SO BEFORE SUBMITTING A PROPOSAL HE CANNOT CLAIM ADDITIONAL COMPENSATION FOR WORK REQUIRED TO COMPLETE THE PROJECT.
- 15. IF THERE IS A CONFLICT BETWEEN WRITTEN AND SCALED DIMENSIONS, NOTIFY THE ENGINEER AND OBTAIN A CLARIFICATION. NO DEVIATIONS OR SUBSTITUTIONS SHALL BE ALLOWED WITHOUT OBTAINING WRITTEN APPROVAL FROM THE ENGINEER.
- 16. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL SECURE CONSTRUCTION PERMITS FROM COUNTY OF NAPA AND OTHER AGENCIES AS NECESSARY AND PAY ALL FEES THEREFORE.
- ONE WEEK PRIOR TO ANY EXCAVATION IN EXISTING STREET AREAS, THE CONTRACTOR SHALL CONTACT AND REQUEST PG&E, TELEPHONE AND CABLE COMPANIES, THE COUNTY OF NAPA PBES DEPARTMENT, AND OTHER AGENCIES AS NECESSARY FOR MARKING THE LOCATION OF THEIR RESPECTIVE FACILITIES. COSTS OF REPAIRING ANY INJURIES OR DAMAGES CAUSED BY THE CONTRACTOR SHALL BE BORNE BY THE CONTRACTOR. VARIOUS UNDERGROUND LINES WERE PLOTTED ON THE PLANS FROM THE INFORMATION OBTAINED FROM THE RESPECTIVE UTILITY COMPANIES, THEREFORE, NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE COMPLETENESS OR CORRECTNESS OF THEIR LOCATION.
- IB. ALL STATIONS (SHOWN ON PLAN AND PROFILE) ARE TAKEN ALONG CENTERLINE UNLESS OTHERWISE NOTED ON PLAN, AND SHOW MEASUREMENTS IN A HORIZONTAL PLANE.
- 19. FADED BACKGROUND REPRESENTS EXISTING TOPOGRAPHIC FEATURES.
- 20. WORK DONE WITHIN THE COUNTY RIGHT-OF-WAY SHALL BE DONE UNDER AN ENCROACHMENT PERMIT ISSUED BY THE COUNTY OF NAPA.

COUNTY OF NAPA GRADING NOTES

GENERAL

- ALL GRADING SHALL CONFORM THE THE 2013 CALIFORNIA BUILDING CODE (CBC) CHAPTERS IT, IS AND APPENDIX CHAPTER - J AS AMENDED BY ORDINANCE 15.08.080 AND 15.08.090 OF THE COUNTY CODE.
- 2. ALL PROPERTY CORNERS SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION/ORADING.
- 3. ALL WORK UNDER THIS GRADING PERMIT SHALL BE LIMITED TO WORK WITHIN PROPERTY LINES. ALL WORK WITHIN THE RIGHT-OF-WAY WILL REQUIRE SEPARATE PLANS AND A SEPARATE REVIEWAPPROVAL (PERMIT) FROM THE NAPA COUNTY PUBLIC WORKS, ROADS DIVISION.
- GRADING SHALL BE DONE UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION.
- COMPACTED FILL TO SUPPORT ANY STRUCTURES SHALL COMPLY WITH CBC SECTION 1803.5. PROJECTS WITHOUT A GEOTECHNICAL REPORT SHALL HAVE DETAILED SPECIFICATIONS SATISFYING THE REQUIREMENTS IN SECTION 1803.5 PREPARED BY THE ENGINEER OF RECORD (EOR).
- 6. THE CONTRACTOR SHALL NOTIFY THE NAPA COUNTY PBES, ENGINEERING DIVISION AT LEAST 48 HOURS IN ADVANCE TO REQUEST FINISH LOT GRADE AND DRAINAGE INSPECTION. THE INSPECTION MUST BE APPROVED PRIOR TO BUILDING PERMIT FINAL INSPECTION FOR EACH LOT.
- 7. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) TWO DAYS BEFORE DIGGING AT I-800-22T-2600.
- 8. THE GEOTECHNICAL ENGINEER SHALL BE NOTIFIED AT LEAST THREE (3) DAYS IN ADVANCE OF COMMENCING WORK, INCLUDING SITE STRIPPING AND GRADING OPERATIONS. THIS WORK SHALL BE OBSERVED AND TESTED BY THE GEOTECHNICAL ENGINEER'S REPRESENTATIVE.
- 9. SITE SHALL BE VISUALLY INSPECTED BY THE CONTRACTOR TO DETERMINE THE EXTENT OF CLEARING, GRUBBING, AND GRADING WORK TO BE DONE.
- IO. SOIL STRIPPED AS DETAILED IN THE SOILS REPORT SHALL BE STOCKPILED FOR USE IN LANDSCAPED AREAS. CONTRACTOR SHALL COORDINATE WITH LANDSCAPE CONTRACTOR.

COUNTY OF NAPA GRADING NOTES CONTINUED

GENERAL CONTINUED

- II. EXCESS SOIL SHALL BE STOCKPILED AT A LOCATION SPECIFIED BY THE PERMITS.
- 12. TREES THAT ARE REMOVED SHALL ALSO HAVE THEIR STUMPS AND MAJOR ROOT SYSTEMS REMOVED. AFTER A TREE OR A STUMP IS REMOVED THE RESULTING EARTH CAVITY SHALL BE CLEANED OF LARGER ROOTS (2 INCH DIAMETER AND LARGER). SOILS SHOULD BE REMOVED AND DISHED TO PROVIDE ACCESS FOR COMPACTION EQUIPMENT. ALL EARTHWORK, SCARIFICATION, BACKFILL, AND COMPACTION SHALL BE PERFORMED PER THE GEOTECHNICAL REPORT AND GEOTECHNICAL ENGINEER'S REQUIREMENTS.
- 13. CONTRACTOR SHALL CONDUCT ALL GRADING OPERATIONS IN SUCH A MANNER AS TO PRECLUDE WIND BLOWN DIRT AND DUST AND RELATED DAMAGE TO NEIGHBORING PROPERTIES. SUFFICIENT WATERING TO CONTROL DUST IS REQUIRED AT ALL TIMES. CONTRACTOR SHALL ASSUME LIABILITY FOR CLAIMS RELATED TO WIND BLOWN MATERIAL IF THE DUST CONTROL IS INADEQUATE AS DETERMINED BY THE NAPA COUNTY PBES, THE CONSTRUCTION WORK SHALL BE TERMINATED UNTIL CORRECTIVE MEASURES ARE TAKEN.

CUTIFILL

- MAXIMUM CUT AND FILL SLOPE = 2:1, UNLESS OTHERWISE RECOMMENDED BY A GEOTECHNICAL ENGINEER IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.
- 2. NO FILL SHALL BE PLACED IN EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOP SOIL AND OTHER DELETERIOUS MATERIAL. FILLS SHOULD BE PLACED IN THIN LIFTS (8-INCH MAX OR AS RECOMMENDED IN THE GEOTECHNICAL REPORT), COMPACTED AND TESTED AS GRADING PROCESS UNTIL FINAL GRADES ARE ATTAINED. ALL FILLS ON SLOPES STEEPER THAN 5 TO I (H/V) AND A HEIGHT GREATER THAN 5 FEET SHALL BE KEYED AND BENCHED INTO FIRM NATURAL SOIL FOR FULL SUPPORT. THE BENCH UNDER THE TOE MUST BE IO FEET
- 3. THE SLOPE STABILITY FOR CUT AND FILL SLOPES OVER 30 FEET IN VERTICAL HEIGHT, OR SLOPES GREATER THAN 2:1 MUST BE VERIFIED WITH A FACTOR OF SAFETY OF AT LEAST 1.5.
- 4. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL WITH A MAXIMUM DIMENSION GREATER THAN 12 INCHES SHALL BE BURIED OR PLACED IN FILLS CLOSER THAN 10 FEET TO FINISH GRADE.

DRAINAGE AND EROSION / DUST CONTROL

- DRAINAGE ACROSS THE PROPERTY LINE SHALL NOT EXCEED THAT WHICH EXISTED PRIOR TO GRADING. EXCESS OR CONCENTRATED DRAINAGE SHALL BE CONTAINED ON SITE OR DIRECTED TO AN APPROVED DRAINAGE FACILITY.
- PROVIDE A SLOPE INTERCEPTOR DRAIN ALONG THE TOP OF CUT SLOPES WHERE THE DRAINAGE PATH IS GREATER THAN 40 FEET TOWARDS THE CUT SLOPE.
- 3. THE GROUND IMMEDIATELY ADJACENT TO THE BUILDING FOUNDATION SHALL BE SLOPED AWAY WITH 5% MIN FOR A MINIMUM DISTANCE OF IO HORIZONTAL FEET. SWALES WITHIN IO FEET FROM BUILDING SHALL BE 2% MINIMUM SLOPE. IMPERVIOUS SURFACES WITHIN IO FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2% AWAY FROM THE BUILDING.
- 4. NO OBSTRUCTION OF NATURAL WATER COURSES IS PERMITTED.
- 5. DURING ROUGH GRADING OPERATIONS AND PRIOR TO CONSTRUCTION OF PERMANENT DRAINAGE STRUCTURES, TEMPORARY DRAINAGE CONTROL (BEST MANAGEMENT PRACTICES, BMPs) SHALL BE PROVIDED TO PREVENT PONDING OF WATER AND DAMAGE TO ADJACENT PROPERTIES.
- 6. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS.
- 7. ALL EXISTING DRAINAGE COURSES ON THE PROJECT SITE MUST CONTINUE TO FUNCTION. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING OPERATIONS.
- 8. FOR SLOPES 3:1 (H/V) OR STEEPER: ALL SLOPES EQUAL TO OR GREATER THAN 3 FEET IN VERTICAL HEIGHT ARE REQUIRED TO BE PLANTED WITH GRASS OR ROSEA ICE PLANT (OR EQUAL) GROUND COVER AT A MAXIMUM SPACING OF 12 INCHES ON CENTER, OR TREES SPACED NOT TO EXCEED 20 FEET ON CENTER OR SHRUBS NOT TO EXCEED IO FEET ON CENTER, OR A COMBINATION OF SHRUBS AND TREES NOT TO EXCEED IS FEET IN ADDITION TO THE GRASS OR GROUND COVER. SLOPES THAT REQUIRE PLANTING SHALL BE PROVIDED WITH AN IN-GROUND IRRIGATION SYSTEM EQUIPPED WITH AN APPROPRIATE BACKFLOW DEVICE PER CALIFORNIA PLUMBING CODE (CPC) CHAPTER 603. THE SLOPE PLANTING AND IRRIGATION SYSTEM SHALL BE INSTALLED PRIOR TO PRECISE GRADING FINAL.

COMPLETION OF WORK

04/2014

- A REGISTERED GEOTECHNICAL ENGINEER SHALL PREPARE FINAL COMPACTION REPORT/GRADING REPORT AND IT SHALL BE SUBMITTED FOR REVIEW AND APPROVAL. THE REPORT SHALL ALSO PROVIDE BUILDING FOUNDATION DESIGN PARAMETERS INCLUDING ALLOWABLE SOIL PRESSURES, EXPANSION INDEX AND REMEDIAL MEASURES IF EI>20, WATER SOLUBLE CONTENT, CORROSIVITY AND REMEDIAL MEASURES IF NECESSARY.
- 2. EXCEPT FOR NON-TRACT SINGLE LOT RESIDENTIAL GRADING, THE COMPACTION REPORT SHALL INCLUDE THE SPECIAL INSPECTION VERIFICATIONS LISTED IN TABLE 1704.7 OF 2013 CBC.
- 3. A REGISTERED CIVIL ENGINEER SHALL SUBMIT TO PBES ENGINEERING DIVISION, WRITTEN CERTIFICATION OF COMPLETION OF GRADING IN ACCORDANCE WITH THE APPROVED GRADING PLAN PRIOR TO REQUESTING INSPECTION AND ISSUANCE OF THE BUILDING PERMIT. CERTIFICATION SHALL INCLUDE LINE GRADE, SURFACE DRAINAGE, ELEVATION AND LOCATION OF PERMITTED GRADING ON THE LOT.

EARTHWORK NOTES

- ALL QUANTITIES SHOWN ON THIS PLAN ARE APPROXIMATE. CALCULATED EXCESS AND SHORTAGE ARE TO FINISHED ROUGH GRADE AND EXISTING GROUND. THE ACTUAL AMOUNT OF EARTH MOVED WILL VARY, DEPENDENT ON COMPACTION, CONSOLIDATION, STRIPPING REQUIREMENTS, AND THE CONTRACTOR'S METHOD OF OPERATION.
- 2. DUE TO THE INEXACT NATURE OF EARTHWORK ESTIMATING, THERE IS NO GUARANTEE OF THESE QUANTITIES. CONTRACTOR SHALL MAKE HIS OWN ESTIMATE FOR BID AND CONTRACT PURPOSES.
- 3. THE PAVEMENT SECTIONS AS SHOWN ON THIS PLAN SHOULD BE VERIFIED BASED ON USE OF SELECT FILL OR LIME TREATMENT AND USING IN-SITU R VALUES ONCE THE SITE HAS BEEN ROUGH GRADED. ANY CHANGES MADE TO THE PAVEMENT SECTIONS SHOWN WILL AFFECT THE SUMMARY.
- 4. ANY CHANGE TO THE FOUNDATION THICKNESS AS SHOWN ON THESE PLANS WILL AFFECT THE SUMMARY.

DEMOLITION NOTES

- PRIOR TO BEGINNING OF DEMOLITION WORK, CONTRACTOR/APPLICANT SHALL OBTAIN A DEMOLITION PERMIT FROM THE COUNTY OF NAPA, AND OTHER APPLICABLE AGENCIES.
- CONTRACTOR SHALL NOT BEGIN ANY EXCAVATION UNTIL ALL EXISTING UTILITIES HAVE BEEN MARKED IN THE FIELD BY THE APPLICABLE ENTITY RESPONSIBLE FOR THAT PARTICULAR UTILITY. THE CONTRACTOR SHALL NOTIFY EACH APPLICABLE ENTITY AT LEAST 24 HOURS BEFORE STARTING WORK.

EROSION AND SEDIMENT CONTROL NOTES

GENERAL

- GRADING ON THE SITE SHALL BE LIMITED TO THE AREA SHOWN ON THE PLAN.
- 2. ALL MOYEMENT OF EARTH SHALL COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE NAPA COUNTY GRADING ORDINANCE, THE EROSION CONTROL PLAN, AND STORM WATER QUALITY MANAGEMENT PLAN (SOMP) OR STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
- 3. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN TO MEET FIELD CONDITIONS SHALL BE MADE ONLY WITH THE APPROVAL OF/OR AT THE DIRECTION OF RSA+.
- THE CONTRACTOR SHALL INFORM ALL CONSTRUCTION SITE WORKERS ABOUT THE MAJOR PROVISIONS OF THE EROSION AND SEDIMENT CONTROL PLAN AND SEEK THEIR COOPERATION IN AVOIDING THE DISTURBANCE OF THESE EROSION CONTROL MEASURES.
- CONTRACTOR SHALL NOTIFY THE COUNTY OF NAPA PLANNING, BUILDING AND ENVIRONMENTAL SERVICES (PBES) DEPARTMENT (101-253-44IT) 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION, FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED SQMP OR
- REVIEW AND/OR APPROVAL OF THE SQMP/SWPPP SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION SITE RUNOFF CONTROL MANUAL, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR
- OMISSIONS IN THE APPROVED PLAN. IF THE APPROVED PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY THE COUNTY OF NAPA PBES DEPARTMENT.
- 8. CONTRACTOR SHALL PROVIDE THE COUNTY OF NAPA PBES DEPARTMENT, AN EROSION AND SEDIMENT CONTROL PLAN, AND A SCHEDULE FOR IMPLEMENTATION OF SUCH MEASURES, IF ANY LOT OR STREET GRADING IS TO BE DONE BETWEEN OCTOBER IS THROUGH APRIL I. HYDROSEEDING OF ALL GRADED SLOPES SHALL BE COMPLETED BY NOVEMBER I.

MAINTENANCE NOTES

- FIBER ROLL SEDIMENT BARRIERS SHALL BE INSTALLED PRIOR TO ANY GRADING ON THE SITE AND WILL REMAIN OPERABLE UNTIL PERMANENT STABILIZATION HAS BEEN ACHIEVED.
- 2. DURING THE RAINY SEASON, ALL SEDIMENT BARRIERS SHALL BE INSPECTED AND REPAIRED AT THE END OF EACH WORKING DAY AND, IN ADDITION, AFTER EACH STORM.
- 3. ALL PAVED AREAS SHALL BE KEPT CLEAR OF DIRT, SEDIMENT, AND DEBRIS. THE PROJECT AREA SHALL BE MAINTAINED SO THAT A MINIMUM OF SEDIMENT-LADEN RUNOFF LEAVES THE SITE.
- 4. THE SEEDED AREAS SHALL BE PREPARED, RESEEDED, AND MULCHED AS SOON AS POSSIBLE AFTER BEING DAMAGED.

SEEDING SPECIFICATIONS

- ALL GRADED OR DISTURBED AREAS SHALL BE SEEDED IMMEDIATELY AFTER GRADING IS COMPLETED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:
 - M STANDARD EROSION CONTROL MIX: USE AT A RATE OF 25 LBS PER ACRE, OR O.6 LBS. PER 1,000 SF

STANDARD EROSIONS CON	TRAI
BLANDO BROME	409
ZORRO ANNUAL FESCUE	209
	15%
CALIFORNIA BROME CRIMSON CLOVER ROSE CLOVER	15% 10%

B. I EROSION MIX FOR WINTERIZATION OF HIGH USE AREAS: (NON-SURFACED ROADS, INCLUDING FARM FIELD ACCESS ROADS)

> 40 LBS/ACRE BARLEY RED OATS 60 LBS/ACRE

C. 🛘 EROSIONS CONTROL MIX FOR RIPARIAN AREAS AND ENVIRONMENTALLY SENSITIVE AREAS (ESA'S):

I. SUNNY AREAS: USE AT A RATE OF 39 LBS PER ACRE, OR I.O LBS PER I,000 SF

> MEADOW BARLEY "MOLATE" FESCUE CALIFORNIA BROME 26%

II. D SHADY OR PARTIAL SHADE AREAS: USE AT A RATE OF 39 LBS PER ACRE, OR I.O LBS PER I,000 SF

> CALIFORNIA BROME 27% BLUE WILDRYE IDAHO FESCUE 32%

D. 🛘 EROSION MIX FOR HIGHER ELEVATION AREAS, (ABOVE 1,000 FEET) USE AT A RATE OF 39 LBS PER ACRE, OR I.O LBS PER I,OOO SF

> PERENNIAL RYEGRASS 30% BLUE WILDRYE *32%* 38% IDAHO FESCUE

2. FERTILIZER USED SHALL BE ONE OF THE FOLLOWING FORMULATIONS OR IT'S EQUIVALENT:

□ NONE: (ENVIRONMENTALLY SENSITIVE AREA)

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M 16-20-0 APPLIED AT A RATE OF 200 TO 250 LBS PER ACRE, (4.6 TO 5.7 LBS PER 1,000 SF) □ 15-15-15 APPLIED AT A RATE OF 300 LBS PER ACRE, (1.0 LBS PER 1,000 SF)

- AREA TO BE SEEDED SHALL BE SCARIFIED TO DEPTH OF 4" TO 8" AND DRESSED TO PROVIDE A REASONABLY SMOOTH FIRM SURFACE.
- 4. IF HYDROSEEDING METHOD IS USED, A TACKIFIER SUCH AS M-BINDER OR SENTINEL (OR EQUAL) SHALL BE APPLIED AT A RATE OF 15 TO 100 LBS/ACRE.
- 5. IF HYDROSEEDING METHOD IS USED, SEED SHALL NOT REMAIN IN THE SLURRY LONGER THAN 30 MINUTES, FERTILIZERS SHALL NOT REMAIN IN THE SLURRY LONGER THAN 2 HOURS. THE SLURRY SHALL BE APPLIED IN A UNIFORM MANNER AT A RATE THAT IS NON-EROSIVE AND MINIMIZES
- IF STRAW MULCH METHOD IS USED, STRAW SHALL BE ANCHORED TO THE SOIL BY A TACKIFIER, EROSION CONTROL BLANKET, CRÍMPING, PUNCH ROLLER-TYPE ROLLERS, OR TRACK WALKING.
- NORTH AMERICAN GREEN SCI50 EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL SLOPES STEEPER THAN 2:1. JUTE NETTING SHALL BE INSTALLED OVER STRAW MULCH OVER SEED ON ALL SLOPES 2:1 TO 4:1.
- THE SEEDED AREAS SHALL BE PREPARED, RESEEDED AND MULCHED AS SOON AS POSSIBLE AFTER BEING DAMAGED.

COUNTY OF NAPA UTILITY NOTES

- STORM DRAIN PIPE OPTIONS WHICH MAY BE USED AT THE CONTRACTOR'S OPTION IN THE NAPA COUNTY RIGHT-OF-WAY ARE AS FOLLOWS:
- A. CAST-IN-PLACE PIPE (C.I.P.P.) SHALL BE USED ONLY OUTSIDE OF ROADWAY IN
- CONFORMANCE WITH CALTRANS STANDARD SPECIFICATIONS
- B. REINFORCED CONCRETE PIPE (R.C.P.) CLASS III PER CALTRANS STANDARD SPECIFICATIONS
- C. CORRUGATED POLYETHYLENE PIPE SUCH AS ADVANCED DRAINAGE SYSTEM (A.D.S.) N-I2 OR APPROVED EQUAL. POLYETHYLENE SHALL NOT BE USED IN SIZES LARGER THAN 36".
- INSTALLATION OF ASBESTOS CEMENT (A.C.P.) PIPE SHALL NOT BE ALLOWED UNDER ANY CIRCUMSTANCES.

REQUIRED FIRE PROTECTION NOTES

DETAIL #14 OF THE NAPA COUNTY FIRE STANDARDS.

- (PER CALFIRE FIRE SAFE STANDARDS DATED MARCH 2008) THE NUMERICAL ADDRESS SHALL BE POSTED AT THE PUBLIC ROADWAY AND ANY OTHER INTERSECTIONS OR RESIDENTIAL ROADWAY. HEIGHT AND NUMBERS SHALL BE A MINIMUM OF 4 INCHES REFLECTIVE, OR ON A CONTRASTING BACK GROUND, AND / OR ILLUMINATED. SEE
- DEFENSIBLE SPACE FOR WILDFIRE SHALL BE A MINIMUM OF IOO FEET AROUND ALL STRUCTURES OR TO THE PROPERTY LINES. GREATER CLEARANCE MAYBE REQUIRED UPON INSPECTION AS DETERMINED DUE TO SLOPE AND FUEL LOADS.
- OVERHEAD CLEARANCE OF TREE LIMBS AND BRUSH ALONG THE ENTIRE LENGTH OF THE DRIVEWAY SHALL BE A MINIMUM OF 13 FEET 6 INCH VERTICAL CLEARANCE. SEE DETAIL #8 OF NAPA CO. FIRE STANDARDS.
- 4. HORIZONTAL DEFENSIBLE SPACE CLEARANCE SHALL BE A MINIMUM OF IO FEET ON EACH SIDE OF THE DRIVENAY, SEE DETAIL #8 OF THE NAPA COUNTY FIRE STANDARDS.

MATERIAL SPECIFICATIONS		
PIPE	TYPE	
GRAVITY SEWER	N/A	
PRESSURIZED SEWER	N/A	
FIRE LINE (HYDRANT)	N/A	
FIRE LINE (SPRINKLER)	N/A	
DOMESTIC WATER	N/A	
STORM DRAIN	CORRUGATED POLYETHYLENE PIPE SUCH AS ADVANCED DRAINAGE SYSTEM (ADS) N-12 OR APPROVED EQUAL	

EARTHWORK NOTES

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- 2. DUE TO THE INEXACT NATURE OF EARTHWORK ESTIMATING, THERE IS NO GUARANTEE OF THESE QUANTITIES. CONTRACTOR SHALL MAKE HIS OWN ESTIMATE FOR BID AND CONTRACT PURPOSES.
- 3. THE PAYEMENT SECTIONS AS SHOWN ON THIS PLAN SHOULD BE VERIFIED BASED ON USE OF SELECT FILL OR LIME TREATMENT AND USING IN-SITU R VALUES ONCE THE SITE HAS BEEN ROUGH GRADED. ANY CHANGES MADE TO THE PAVEMENT SECTIONS SHOWN WILL AFFECT THE SUMMARY.
- 4. ANY CHANGE TO THE FOUNDATION THICKNESS AS SHOWN ON THESE PLANS WILL AFFECT THE SUMMARY.
- 5. EXCESS SPOILS ARE TO BE HAULED OFF-SITE TO AN APPROVED NAPA COUNTY GRADING PERMIT. THE CONTRACTOR SHALL VERIFY WITH NAPA COUNTY THAT THE RECEIVING PROPERTY HAS OBTAINED A PERMIT THAT ALLOWS FOR THE IMPORT OF THE SOIL.

EARTHWORK ESTIMATES			
LOCATION	CUT (C.Y.)	FILL (C.Y.)	
ROAD	455	490	
NET	35 C.Y. IMPORT		
LOADS	3 (12 C.Y. / LOAD)		
TRIPS	6 (2 TRIPS / LOAD)		

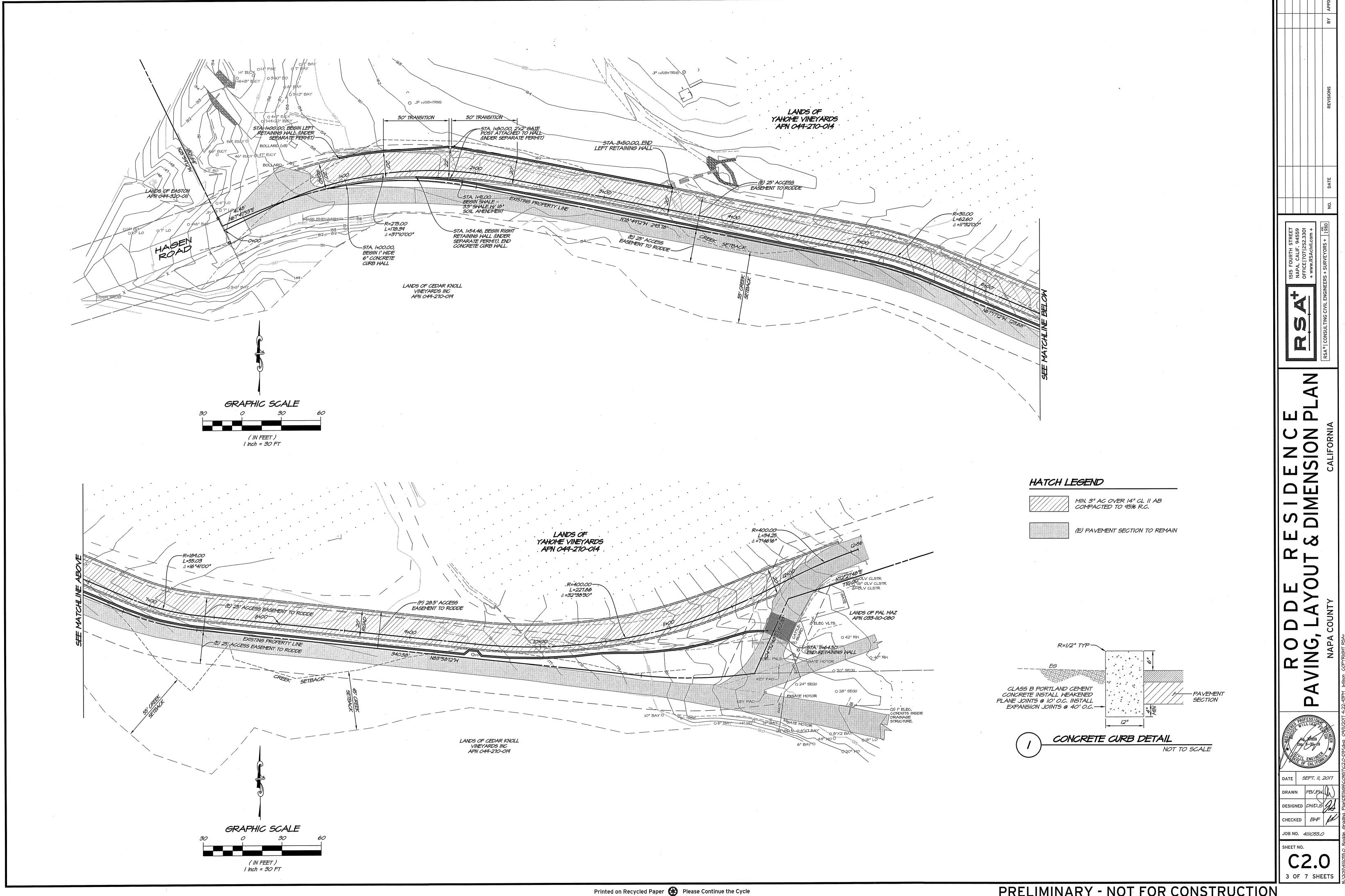


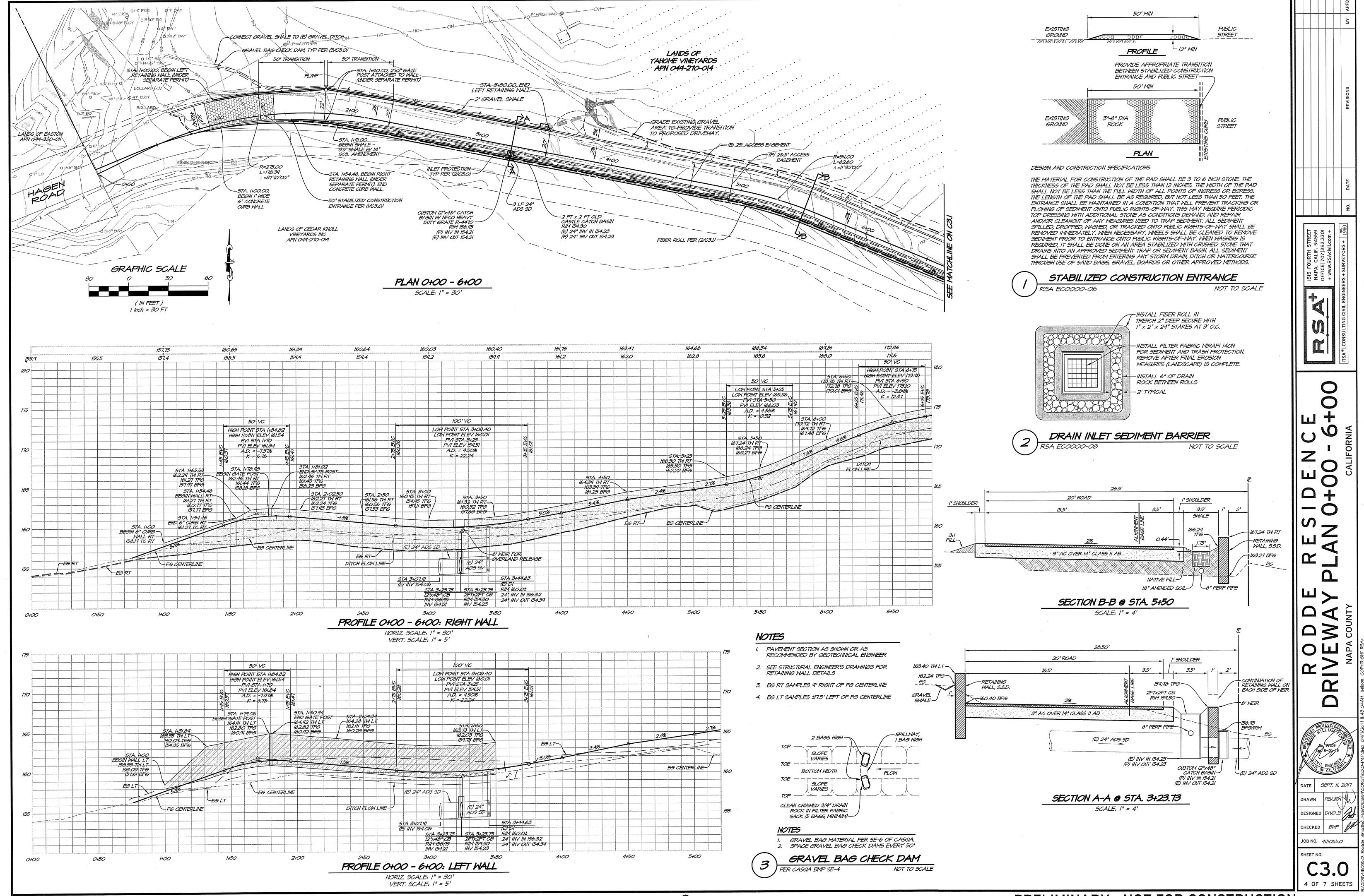
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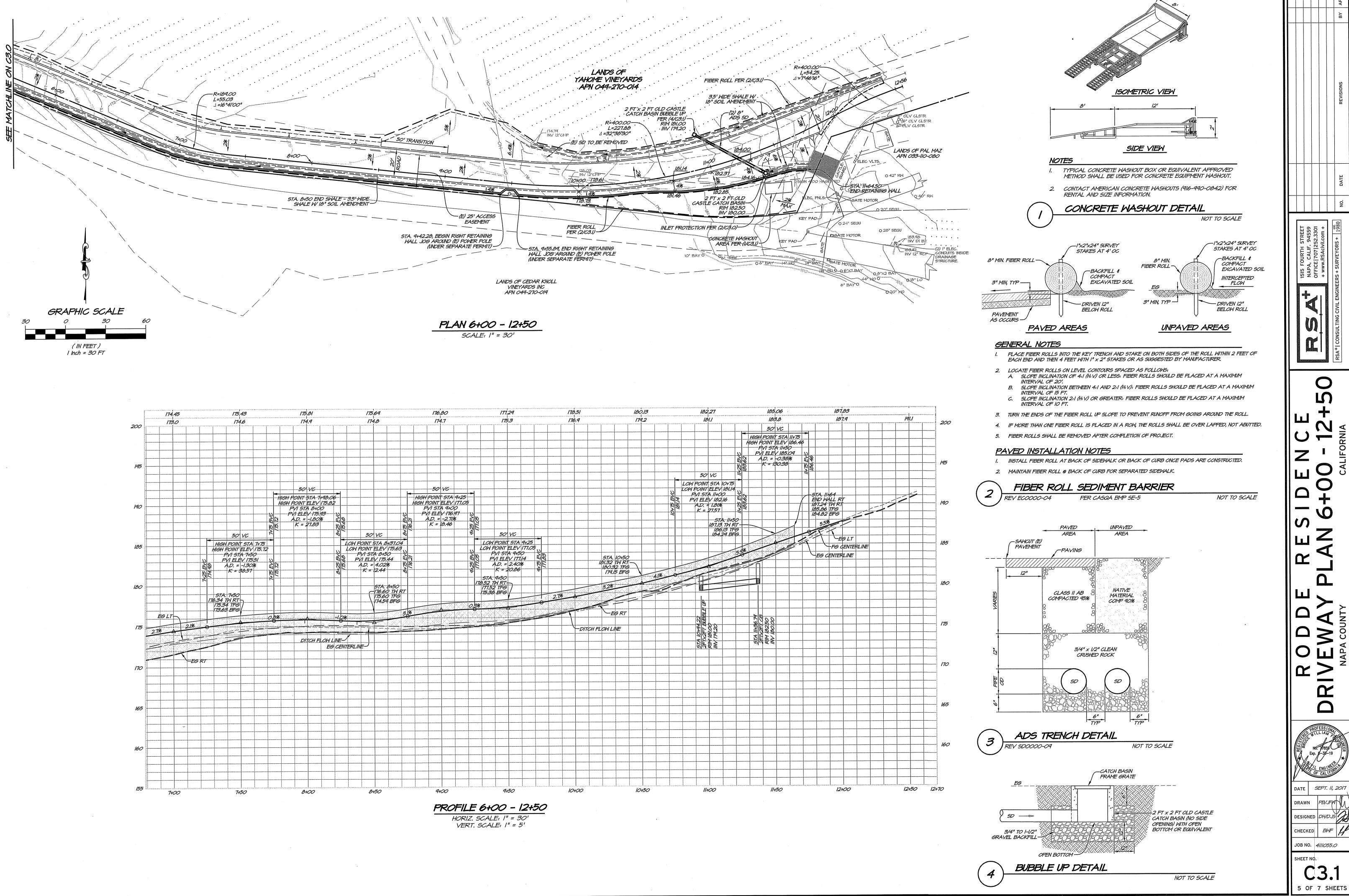
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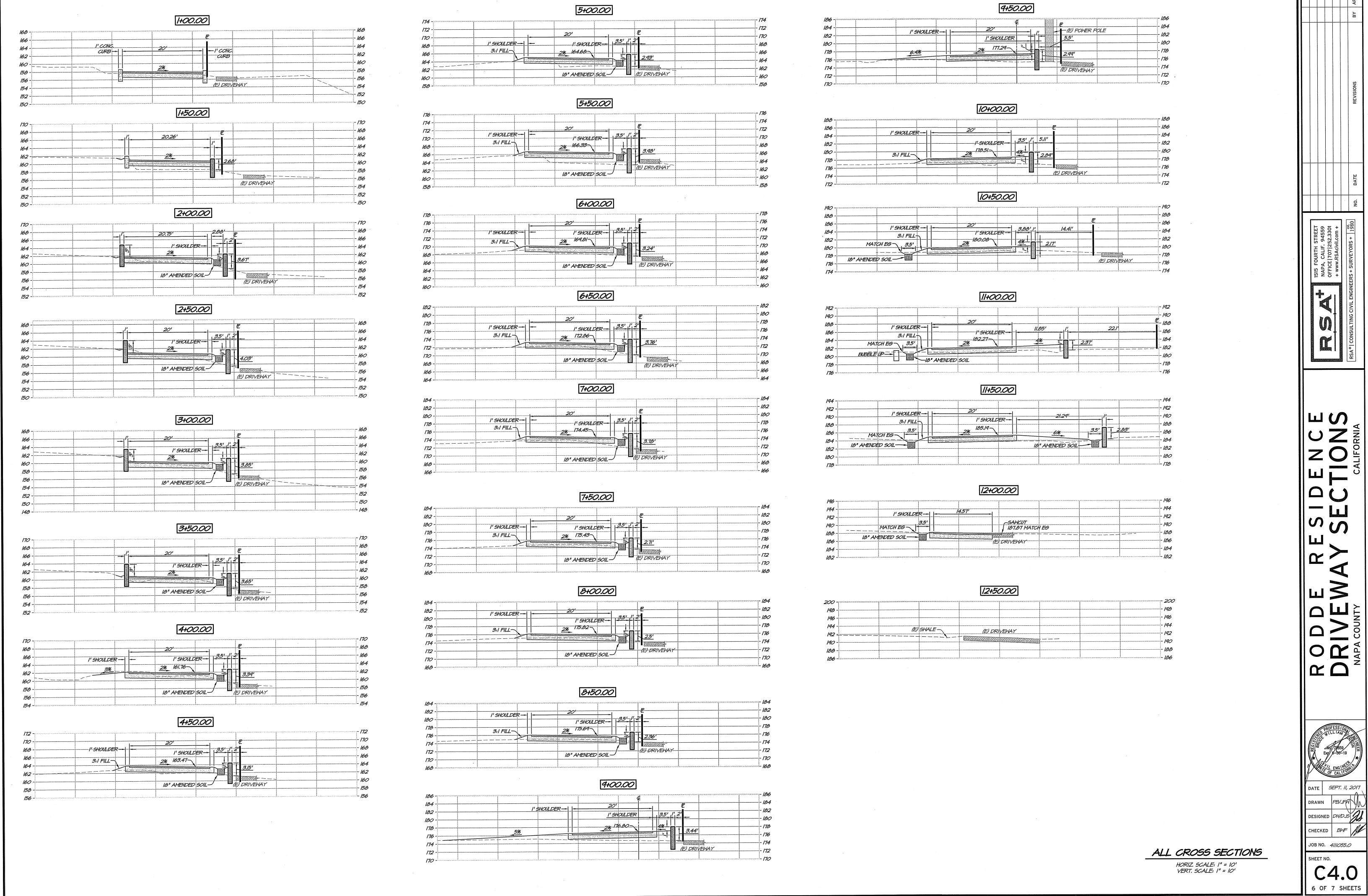






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