

Mad River Properties, Inc.

2660 Clay Road McKinleyville, CA 95519; (707) 496-0054

Scott Graves
Po Box 923
Trinidad CA 95570

Graves Less Than Three Acre Conversion Mitigation Plan

This document has been prepared pursuant to Section 55.4.10(j) of the Humboldt County Commercial Medical Marijuana Land Use Ordinance, applications for Commercial Cannabis Activity occupying sites created through prior unauthorized conversion of timberland. The document evaluates site conditions and conversion history for the parcel and contains a Registered Professional Foresters (RPF's) recommendation as to remedial actions necessary to bring the conversion area into compliance with provisions of the Forest Practice Act.

1. Contact Information

a. Timberland/Timber Owner of Record:

Scott W & Stacy C Graves
P.O. Box 923
Trinidad CA 95570

b. Registered Professional Forester Preparing Report:

Stephen Hohman
P.O. Box 733
Hydesville, CA 95547

2. Location of Project

a. Site Address: NA

b. Community Area: Garberville

c. Assessor's Parcel No(s): 216-174-010

d. Parcel Size(s): 300 Ac.

3. Project Description

a. Timber stand characteristics including species composition and age class.

The Graves property is composed of a mixed Douglas-fir/upland hardwood forest. The current composition consists primarily of an even aged stand of second growth Douglas-fir, black oak, Oregon white oak, and pacific madrone with a minor amount of other hardwood sub species. All species combined (conifer & hardwood) basal areas is approximately 229 square feet (sq. ft.) per acre with an approximately 80% closed canopy. The property is zoned AE-B-5(160). The Use Code Description is, Ag Preserve, Vacant.

b. Watercourse and Lake Protection Zones (WLPZ) which exist within the boundaries of the parcel or immediate vicinity of the project (Section 916.4)

The property contains several class II and III watercourses that require WLPZ or ELZ protection. As per the Forest Practice Rules, the riparian buffers requirements are listed as follows:

Class II standard watercourse 14CCR 916.9(g): (Class II watercourses within the Coastal Anadromy Zone)

ZONE WIDTHS:

Channel Zone = channel between the WTL.

<30% = 15' Core Zone and 50' Inner Zone

30%-50% = 15' Core Zone and 75' Inner Zone

>50% = 15' Core Zone and 100' Inner Zone

Class III watercourses 14CCR 916.9(h): (Class III watercourses within a coastal anadromy zone)

EEZ WIDTHS:

30 ft. for side slopes <30%

50 ft. for side slopes >30%

As per the zone widths listed above it appears that no portions of Sites 1, 2, 3 or 5 are present within the riparian zones of Class II and III watercourses. However portions of site 4 are within a Class 2 WLPZ and a Class 3 EEZ. A small Class 3 stream runs near the end of the greenhouse and into the Class 2, 100 feet below. Access roads to all sites need maintenance including upgrades to several Class 2 and Class 3 Stream crossings.

c. Describe the timber harvest history, including timber operations within the parcel prior to the unauthorized conversion.

The area has had at least one previous entree about 30 years ago. The past harvesting incorporated the removal of large diameter old growth by tractor skidding.

d. Identify and describe any portions of the parcel that are part of the unauthorized conversion of timberland. Calculate the total acreage of all areas converted. Differentiate between discrete (non-contiguous) areas of conversion and provide relevant sub-totals of these acreages.

There are 5 sites a total of 3.05 acres used for Cannabis cultivation on the property. Of this 1.90 acres were converted from forestland. The table below list the sites with the acres cleared.

Site #	Acres Converted	Date Converted*	Ownership Status
1	0.00	Grassland	NA
2	0.47	2012	Scott W & Stacy C Graves
3	0.37	2004	Scott W & Stacy C Graves
4	0.22	2014	Scott W & Stacy C Graves
5	0.84	2012	Scott W & Stacy C Graves

4. Analysis of Consistency Between Unauthorized Conversion and Applicable Forest Practice Rules.

Conversion Site 1

History: The area was originally grassland at the edge of an oak woodland forest. The site was first used at for Cannabis cultivation in 2012. To date the site has remained outside of the oak woodland area. No timber harvesting has occurred in or around this site in the last ten years. The site is near Class 2 and Class 3 watercourses but is just outside of the protection zones. No rare, threatened or endangered animals and plants present within 1000' as per 2017 CNDDDB search. No hazard reduction issues present. Road erosion present leading to the site.

Numbers of forested acres used for Cannabis Cultivation: **0.00**

Mitigations for Site area and access road leading to the Site:

RP#1: Existing functioning 24" diameter culvert on a class II watercourse for a seasonal dirt road. Outlet is showing signs of erosion. Rock outlet for 10' feet below to reduce surface erosion with 2'-4' sharp angular rock. Install a critical dip left of the hinge line (looking downstream). Rock the entire crossing 50' left and right with 2"- 4" diameter crush rock. No rolling dip is necessary. Potential of 2 cu yards of erosion. Repair within 5 years.

RP#2: Existing undersize 24" diameter culvert on a class II watercourse for a seasonal dirt road. Remove and install a 30" diameter culvert to stream grade. Install a critical dip left of the hinge line, (looking downstream). Add a rocked rolling dip 60' to the right around the turn. Rock the entire crossing 50' left and right with 2"- 4" diameter crush rock. Repair within 5 years.

RP#3: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 2" to 4" diameter crush rock to divert surface runoff off the road prism.

RP#4: Existing inside ditch. Rock line the ditch for 150' with 4"-6" diameter sharp angular rock, to reduce sediment transport.

RP#5: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 2" to 4" diameter crush rock to divert surface runoff off the road prism.

Point 1c and 1d. Existing 24" cross drain for wet area. Rock the culvert inlet 10' uphill and right and left of the inlet with 4"-6" sharp angular rock. Rock the Culvert outlet 10' downhill with 4"-6" sharp angular rock to prevent sediment transport to the top of the Class III below.

RP#6: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 2" to 4" diameter crush rock to divert surface runoff off the road prism.

RP#7: Existing inside ditch intercepting a class III stream. The class III stream and the road drain to a class II stream at RP8. Rock line the inside ditch from RP8 up the road for 90' with 4" - 6" diameter sharp angular rock, to reduce sediment transport into the watercourse. Potential of 3 cu yards of erosion. Repair within 5 years.

RP#8: Existing functioning 36" diameter culvert on a class II watercourse for a seasonal dirt road. Install a critical dip right of the hinge line (looking downstream). Dip shall be lined with 4" to 6" diameter sharp angular rock. A 10' by 8' area is showing signs of erosion to the left of the culvert outlet. Key in a mix of 0.5' - 2' diameter rock to armor the area and prevent further erosion. Rock the entire crossing 100' left and right with 2" - 4" diameter crush rock. Potential of 27 cu yards of erosion. Repair within 5 years.

Conversion Site 2

History: The site was converted from a sparsely timbered area to a cannabis cultivation site in 2012. Hazard reduction issues are present, a slash pile from the original conversion can be found on the eastern edge of the site. To the southeast a group of trees were recently felled to allow light onto the site and left on the ground intact, stumps were left and the ground has not been graded. Cleanup of the downed trees is necessary however; this area will not be considered part of the conversion. No commercial timber harvesting has occurred in or around this site in the last ten years. No permit was obtained from CALFIRE to clear the area for such activities. The conversion area is not within or near any riparian buffer zones. No rare, threatened or endangered animals and plants present within 1000' as per 2017 CNDDDB search. Road erosion present leading to the site. Ownership at the time of the initial illegal conversion was Scott W & Stacy C Graves.

Number of forested acres converted without 14CCR 1104.1: **0.47**

Mitigations for Site area and access road leading to the Site:

RP#9: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 2" to 4" diameter crush rock to divert surface runoff off the road prism.

RP#10: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 2" to 4" diameter crush rock to divert surface runoff off the road prism.

RP#11: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 2" to 4" diameter crush rock to divert surface runoff off the road prism.

RP#12: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 2" to 4" diameter crush rock to divert surface runoff off the road prism.

RP#13: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 2" to 4" diameter crush rock to divert surface runoff off the road prism.

Point 2a: Soil storage area. All foreign soil shall be removed from this point stored in a flat area covered with plastic and staked at the edges with straw wattles. The remaining bare disturbed

soil shall be regraded to the original contours, grass seeded and straw mulched before the beginning of the winter period.

RP#14: Install shallow rocked rolling dip across a seasonal dirt road/landing. Line/cap the dip with 4" to 6" diameter sharp angular rock to divert surface runoff off the site toward the swale at the far edge.

Point 2c: Slash pile shall be moved from its current location off the bank and removed from the property or treated onsite by burning, chipping or burying.

Point 2d & 2f: Slash shall be removed from the property or treated onsite by burning, chipping or burying. Logs may be treated along with slash or utilized as firewood but must be cut into sections 24" long or shorter.

Point 2e: Soil pile cover is deteriorating. Replace plastic cover and secure the edges with straw waddles or use soil before the winter period.

Conversion Site 3

History: The western half of the site which contains one greenhouse and two water storage bladders is located in grassland. The western portion of the site is near the top of a Class 3 stream but outside the EEZ. The Eastern half of the site was converted from a sparsely timbered area to an open field in 2004. No commercial timber harvesting has occurred in or around this site in the last ten years. No permit was obtained from CALFIRE to clear the area for such activities. The conversion area is not within any riparian buffer zones. No rare, threatened or endangered animals and plants present within 1000' as per 2017 CNDDB search. No hazard reduction issues present. Road erosion present leading to the site. Ownership at the time of the initial illegal conversion was Scott W & Stacy C Graves.

Number of forested acres converted without 14CCR 1104.1: **0.37**

Mitigations for Site area and access road leading to the Site:

RP#20: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 2" to 4" diameter crush rock to divert surface runoff off the road prism.

RP#21: Filled class III watercourse diverted down inside ditch on a seasonal dirt road. Install a 24" diameter culvert to stream grade as feasible. Armor the inlet and outlet with 1' - 2' diameter sharp angular rock. Install a critical dip left of the hinge line. Dip shall be lined with 4" - 6" Diameter sharp angular rock. Install a rocked rolling dip 50' to the right of the crossing (looking downstream) to disconnect the road prism from the crossing. Line the dip with 4" - 6" sharp angular rock. Rock the entire crossing and rocked rolling dip with 2" - 4" crush rock.

RP#22: Existing undersized 30" diameter culvert on a class II watercourse on a seasonal dirt road. Remove and install a 48" diameter culvert to stream grade. Install a critical dip at the hinge line. Dip shall be lined with 4" to 6" diameter sharp angular rock. Rock the entire crossing 100' left and right of the centerline with 2" - 4" crush rock.

RP#23: Drain roadside seep. Install rocked rolling dip to drain a roadside seep. Line/cap the dip with 4" to 6" diameter rock to drain roadside seep across the road prism.

RP#24: Existing 24" diameter culvert on a class III watercourse on a seasonal dirt road. Inside ditch filled with debris. Clean ditch and rock line for 30' with 4"- 6" diameter sharp angular rock. Install a critical dip at the hinge line. Dip shall be lined with 4" to 6" diameter sharp angular rock. Rock the entire crossing 50' left and right of the centerline with 2"- 4" crush rock.

RP#25: Class III watercourse diverted down the road to road point 24. Redirect watercourse into original channel. Install 24" diameter culvert on a class III watercourse on a permanent rocked road. Rock inlet and outlet with 4"- 6" sharp angular rock. Install a critical dip at the left of the hinge line (looking downstream). Dip shall be lined with 4" to 6" diameter sharp angular rock. Rock the entire crossing 50' left and right of the centerline with 2"- 4" crush rock.

RP#26: Road drains to unstable area below. Install inside ditch to drain water to road point 25 and dewater the unstable area. Line the ditch with 4" to 6" diameter rock to trap silt and debris. Potential of 5 cu yards of erosion. Repair within 5 years.

RP#27: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface runoff off the road prism.

RP#28: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface runoff off the road prism.

RP#29: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface runoff off the road prism.

Point 3a: An inside ditch shall be installed between the bank seep and Road point 29 to facilitate proper drainage of the water storage flat. The ditch shall be lined with 4" to 6" diameter sharp angular rock.

Conversion Site 4

History: The site was converted from oak woodland to a cannabis cultivation site in 2014. No commercial timber harvesting has occurred in or around this site in the last ten years. No permit was obtained from CALFIRE to clear the area for such activities. A portion of the conversion area is within the Class 2 WLPZ and Class 3 Protection Zone. The site is near an unstable area where there is a high potential for runoff and sediment from the site to enter the Class 2 Stream. No rare, threatened or endangered animals and plants present within 1000' as per 2017 CNDDB search. No hazard reduction issues present. Road erosion present leading to the site. Ownership at the time of the initial illegal conversion was Scott W & Stacy C Graves.

Number of forested acres converted without 14CCR 1104.1: **0.22**

Mitigations for Site area and access road leading to the Site:

RP#29.1: Drain surface drainage. Install a deep rocked rolling dip on a seasonal dirt steep road. Line/cap the dip with 4" to 6" diameter rock to divert surface runoff off the road prism.

RP#30: Eroded knick-point on road fillslope. Install a deep rocked rolling dip on a seasonal dirt steep road. Line/cap the dip with 4" to 6" diameter rock to divert surface silt and debris off the road prism. Rock knickpoint below 10' down the slope with 6" – 1' diameter sharp angular rock to prevent farther erosion.

RP#31: Eroded knick-point on road fillslope. Install a deep rocked rolling dip on a seasonal dirt steep road. Line/cap the dip with 4" to 6" diameter rock to divert surface silt and debris off the road prism. Rock knickpoint below 10' down the slope with 6" – 1' diameter sharp angular rock to prevent farther erosion.

RP#32: Eroded knick-point on road fillslope. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface silt and debris off the road prism. Rock knickpoint below 10' down the slope with 6" – 1' diameter sharp angular rock to prevent farther erosion.

RP#33: Class III watercourse diverted by 70' inside ditch. In order to reduce erosion on the road below maintain inside ditch until it turns downhill. Rock line the ditch with 4" to 6" diameter rock for 70'.

RP#34: Roadside seep, inside ditch, 16" culvert cross drain to ditch outlet knikpoint. Install 80 feet of inside ditch along road bank to the culvert cross drain. Rock line the ditch with 4" to 6" diameter sharp angular rock. Replace existing 16" cross drain with 18" by 20' culvert, rock the inlet and outlet with 4" to 6" diameter sharp angular rock. Rock the eroded outlet ditch knikpoint down the bank 10' with a mix of 0.5' - 2' diameter rock to stabilize the bank below the road. Potential of 10 cu yards of erosion. Repair within 5 years.

Point 4a: The greenhouse and all foreign soil within 100 feet of the Class 2 stream and within 50 feet of the Class 3 stream shall be removed from Site 4. Perched fill shall be pulled back and placed along the cut-bank. Bare disturbed soil shall be grass seeded and straw mulched and planted with one-two year old Douglas fir and/or appropriate hardwoods to a minimum stocking of 300 trees per acre. The trees shall be planted following 12 x 12 foot spacing. The trees shall be planted during winter conditions. The remaining area outside of the Stream Protections Zones may continue to be used for Cannabis cultivation. Potential of 20 cu yards of erosion. Repair within 5 years.

Conversion Site 5

History: A portion of the site was a historic log landing. The original clearing was expanded in 2012 for Cannabis Cultivation. Hazard reduction issues are present, slash piles from the expansion of the conversion can be found around the edges of the site. No commercial timber harvesting has occurred in or around this site in the last ten years. No permit was obtained from CALFIRE to clear the area for such activities. The conversion area is not within or near any riparian buffer zones. No rare, threatened or endangered animals and plants present within 1000' as per 2017 CNDDDB search. Road erosion present leading to the site. Ownership at the time of the initial illegal conversion was Scott W & Stacy C Graves.

Number of acres converted without 14CCR 1104.1: **0.84**

Mitigations for Site area and access road leading to the Site:

RP#35: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface silt and debris off the road prism.

RP#36: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface silt and debris off the road prism.

RP#37: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface silt and debris off the road prism.

RP#38: Class II watercourse diverted down inside ditch. Install 30" diameter 40' long culvert to stream grade as feasible. Rock the inlet and outlet with a mix of 6" - 2" diameter sharp angular rock. Install a critical dip to the left of the hinge line (looking downstream) rock the dip with 4" to 6" diameter sharp angular rock. Rock the road surface 50' left and right of the crossing centerline with 2" - 4" diameter crush rock. Rock the existing inside ditch up to the large rocks with 4" to 6" diameter sharp angular rock to catch road seeps.

RP#39: Existing functioning 30" diameter culvert on a class II watercourse on a seasonal dirt road. Rock the culvert outlet with 2' - 4' diameter sharp angular rock. Install a critical dip to the left of the hinge line and a rocked rolling dip 50' to the right, (looking downstream). Rock the critical dip and the rocked rolling dip with 4" - 6" diameter sharp angular rock. Rock the entire road surface 50' left and right of the crossing centerline with 1" - 2" crush rock.

RP#40: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface runoff, silt and debris off the road prism.

RP#41: Existing functioning 30" diameter culvert on a class II watercourse on a seasonal dirt road. Rock the culvert inlet and outlet with 2' - 4' diameter sharp angular rock. Install a critical dip to the left of the hinge line (looking downstream). Rock the critical dip with 4" - 6" diameter sharp angular rock. Rock the entire road surface 50' left and right of the crossing centerline with 1" - 2" crush rock.

RP#42: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface runoff, silt and debris off the road prism.

RP#43: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface runoff, silt and debris off the road prism.

RP#44: Existing functioning 24" diameter culvert cross drain on a seasonal dirt road. Rock the inlet/outlet with 4"-6" diameter sharp angular rock.

RP#45: Install rocked rolling dip on a class II spring on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert spring across the road prism. Rock the entire road surface 50' left and right of the crossing centerline with 1" - 2" crush rock.

RP#46: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface runoff, silt and debris off the road prism.

RP#47: Drain surface drainage. Install rocked rolling dip. Line/cap the dip with 4" to 6" diameter rock to divert surface silt and debris off the road prism.

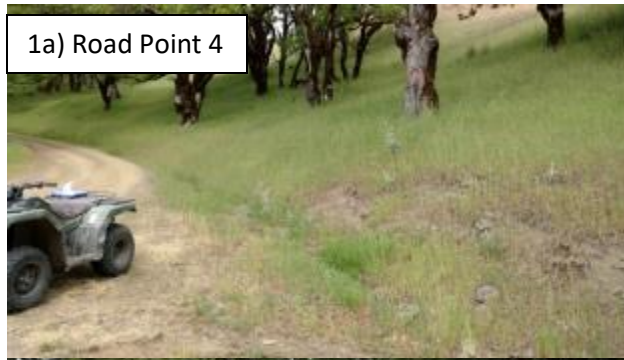
RP#61: Drain surface drainage. Install rocked rolling dip on a seasonal dirt road. Line/cap the dip with 4" to 6" diameter rock to divert surface runoff silt and debris off the road prism.

Item 5c: The slash piles surrounding site 5 shall be Slash shall be removed from the property or treated onsite by burning, chipping or burying.

6. Photos, Figures, and Maps

Conversion Site 1





1a) Road Point 4



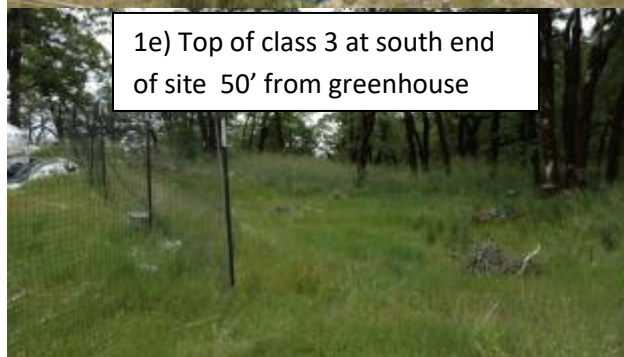
1b) Road Point 5



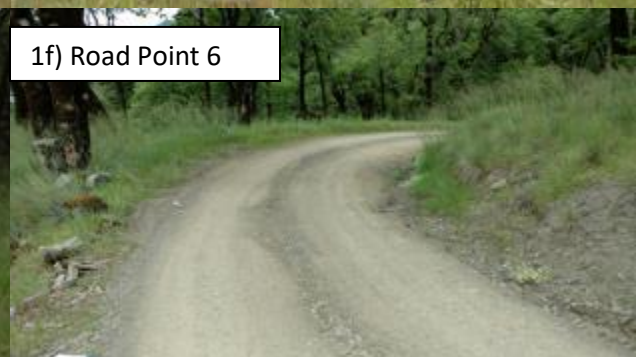
1c) Bank seep and 24"x60' culvert cross drain inlet



1d) Outlet of culvert across site



1e) Top of class 3 at south end of site 50' from greenhouse



1f) Road Point 6



1g) Road Point 7

Conversion Site 2.



2a) Soil storage area north of site



2c) Slash Pile east of site



2d) downed slash and logs southeast of site



2e) Covered Soil Pile



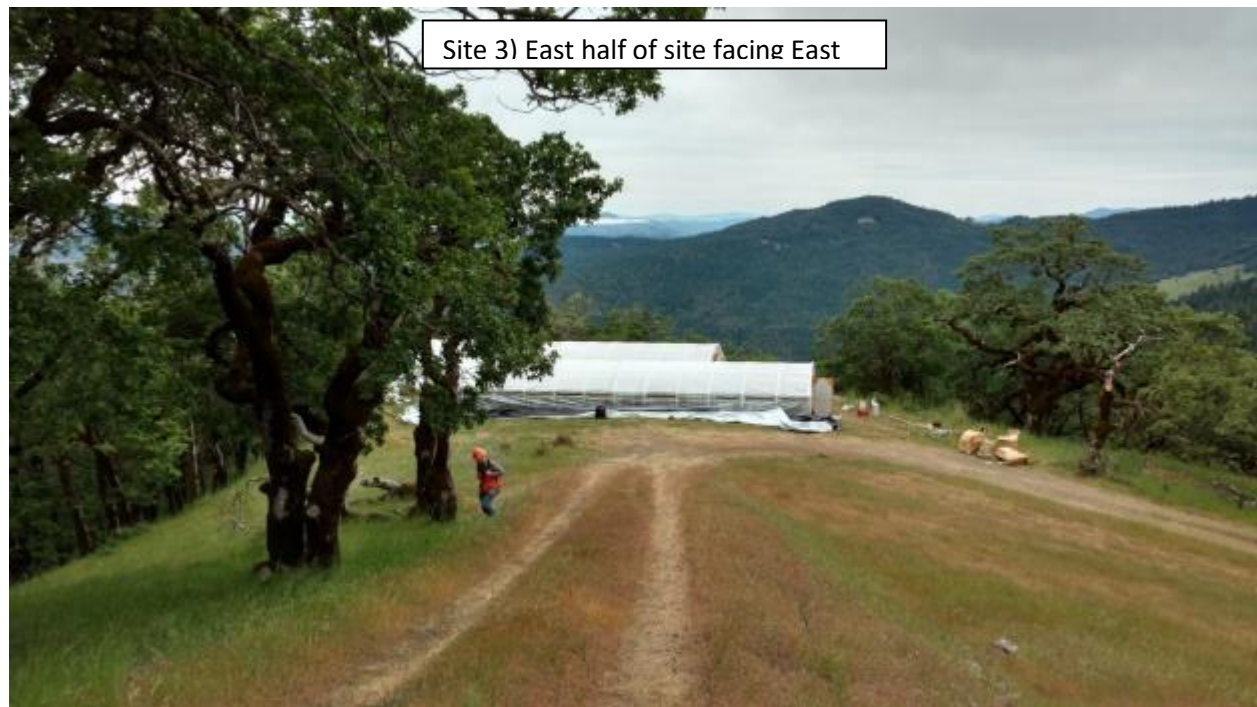
2b) Road Point 14



2f) Oak Slash west of site



Conversion Site 3.





Conversion Site 4



4a) Road point 30 facing downhill



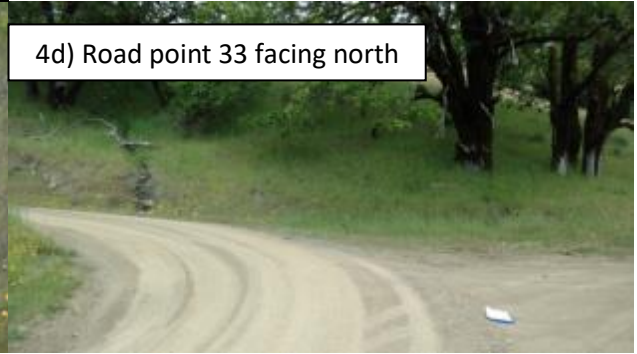
4b) Road point 31 facing downhill



4c) Road point 32 facing uphill



4d) Road point 33 facing north



4e) Road Point 34 looking toward site 4



4f) Cross drain on road point 34



4g) Erosion at outlet of road point 34



Conversion Site 5



Culvert Calculations

8/31/2017

Precipitation Frequency Data Server



NOAA Atlas 14, Volume 6, Version 2
Location name: Garberville, California, USA*
Latitude: 40.1628°, Longitude: -123.7026°
Elevation: 2831.46 ft**
* source: ESRI Maps
** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Malaria, Deborah Martin, Sandra Pavlovic, Ishant Roy, Carl Trygstad, Dale Umru, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchon

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerials](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	2.20 (1.93-2.52)	2.60 (2.29-2.99)	3.14 (2.76-3.62)	3.60 (3.13-4.19)	4.24 (3.54-5.12)	4.74 (3.96-5.66)	5.27 (4.18-6.72)	5.83 (4.49-7.69)	6.62 (4.85-9.17)	7.27 (5.11-10.5)
10-min	1.58 (1.39-1.81)	1.87 (1.64-2.14)	2.26 (1.98-2.60)	2.58 (2.24-3.00)	3.04 (2.54-3.67)	3.40 (2.77-4.21)	3.78 (2.89-4.82)	4.18 (3.20-5.51)	4.75 (3.47-6.56)	5.21 (3.66-7.50)
15-min	1.27 (1.12-1.46)	1.50 (1.32-1.72)	1.82 (1.60-2.08)	2.08 (1.81-2.42)	2.45 (2.04-2.96)	2.74 (2.24-3.40)	3.04 (2.41-3.88)	3.37 (2.58-4.44)	3.83 (2.80-5.30)	4.20 (2.95-6.04)
30-min	0.880 (0.778-1.01)	1.04 (0.918-1.19)	1.26 (1.10-1.45)	1.44 (1.25-1.67)	1.70 (1.42-2.05)	1.90 (1.55-2.35)	2.11 (1.87-2.69)	2.33 (1.79-3.07)	2.65 (1.84-3.67)	2.91 (2.04-4.19)
60-min	0.611 (0.539-0.700)	0.724 (0.637-0.831)	0.875 (0.788-1.01)	1.00 (0.871-1.16)	1.18 (0.985-1.43)	1.32 (1.09-1.64)	1.47 (1.16-1.87)	1.62 (1.24-2.14)	1.84 (1.35-2.55)	2.02 (1.42-2.91)
2-hr	0.484 (0.427-0.558)	0.576 (0.506-0.660)	0.695 (0.610-0.800)	0.793 (0.689-0.922)	0.927 (0.774-1.12)	1.03 (0.840-1.28)	1.14 (0.902-1.45)	1.25 (0.958-1.65)	1.40 (1.03-1.94)	1.53 (1.07-2.20)
3-hr	0.432 (0.381-0.485)	0.513 (0.452-0.589)	0.619 (0.543-0.712)	0.705 (0.612-0.819)	0.821 (0.695-0.992)	0.909 (0.741-1.13)	1.00 (0.793-1.27)	1.10 (0.839-1.44)	1.22 (0.895-1.69)	1.33 (0.932-1.91)
6-hr	0.350 (0.308-0.400)	0.416 (0.366-0.477)	0.501 (0.439-0.576)	0.569 (0.494-0.661)	0.660 (0.551-0.798)	0.729 (0.594-0.903)	0.799 (0.633-1.02)	0.870 (0.667-1.15)	0.967 (0.706-1.34)	1.04 (0.732-1.50)
12-hr	0.262 (0.231-0.300)	0.314 (0.277-0.361)	0.382 (0.335-0.439)	0.436 (0.379-0.506)	0.507 (0.424-0.613)	0.561 (0.457-0.695)	0.615 (0.487-0.784)	0.670 (0.514-0.883)	0.744 (0.544-1.03)	0.801 (0.563-1.15)
24-hr	0.190 (0.171-0.217)	0.232 (0.206-0.264)	0.285 (0.255-0.326)	0.327 (0.290-0.377)	0.383 (0.330-0.455)	0.425 (0.359-0.514)	0.467 (0.388-0.578)	0.510 (0.410-0.647)	0.567 (0.438-0.747)	0.610 (0.457-0.830)
2-day	0.133 (0.119-0.151)	0.164 (0.147-0.187)	0.203 (0.181-0.232)	0.234 (0.207-0.269)	0.274 (0.236-0.325)	0.304 (0.257-0.368)	0.334 (0.276-0.413)	0.364 (0.293-0.462)	0.403 (0.312-0.531)	0.433 (0.325-0.589)
3-day	0.107 (0.098-0.121)	0.132 (0.118-0.151)	0.164 (0.147-0.188)	0.190 (0.168-0.218)	0.222 (0.191-0.264)	0.247 (0.209-0.298)	0.270 (0.223-0.334)	0.294 (0.236-0.373)	0.325 (0.252-0.428)	0.349 (0.261-0.474)
4-day	0.090 (0.081-0.103)	0.112 (0.100-0.128)	0.139 (0.124-0.159)	0.160 (0.142-0.185)	0.188 (0.162-0.223)	0.208 (0.175-0.251)	0.228 (0.188-0.282)	0.247 (0.199-0.314)	0.273 (0.211-0.360)	0.292 (0.219-0.397)
7-day	0.065 (0.058-0.074)	0.080 (0.072-0.091)	0.098 (0.089-0.112)	0.112 (0.100-0.129)	0.131 (0.112-0.155)	0.144 (0.122-0.174)	0.157 (0.130-0.194)	0.170 (0.137-0.216)	0.187 (0.145-0.247)	0.200 (0.150-0.272)
10-day	0.053 (0.047-0.060)	0.064 (0.058-0.073)	0.079 (0.070-0.090)	0.090 (0.079-0.103)	0.104 (0.089-0.123)	0.114 (0.096-0.138)	0.124 (0.102-0.153)	0.133 (0.107-0.169)	0.146 (0.113-0.192)	0.155 (0.116-0.211)
20-day	0.035 (0.032-0.040)	0.043 (0.039-0.049)	0.052 (0.047-0.060)	0.059 (0.053-0.068)	0.068 (0.058-0.081)	0.074 (0.062-0.090)	0.080 (0.066-0.099)	0.085 (0.069-0.108)	0.092 (0.071-0.122)	0.097 (0.073-0.132)
30-day	0.029 (0.026-0.033)	0.036 (0.032-0.040)	0.043 (0.038-0.049)	0.049 (0.043-0.056)	0.055 (0.048-0.066)	0.060 (0.050-0.072)	0.064 (0.053-0.079)	0.068 (0.055-0.086)	0.073 (0.057-0.096)	0.077 (0.057-0.104)
45-day	0.025 (0.022-0.028)	0.030 (0.027-0.035)	0.037 (0.033-0.042)	0.041 (0.037-0.047)	0.047 (0.040-0.055)	0.050 (0.042-0.061)	0.053 (0.044-0.066)	0.057 (0.045-0.072)	0.060 (0.047-0.079)	0.063 (0.047-0.085)
60-day	0.022 (0.020-0.025)	0.027 (0.024-0.031)	0.032 (0.029-0.037)	0.036 (0.032-0.042)	0.041 (0.035-0.049)	0.044 (0.037-0.053)	0.047 (0.038-0.058)	0.049 (0.039-0.062)	0.052 (0.040-0.068)	0.054 (0.040-0.073)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound or less than the lower bound is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

PF graphical

https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_printpage.html?lat=40.1628&lon=-123.7026&data=intensity&units=english&series=pds

Location: Graves Project

(Enter data in fields with red-colored headings. Other data fields will be calculated automatically.)

Magnitude and Frequency Method for 100-year flood flow (A > 100 acres)

No.	Crossing	Area (acres) A	Basin maximum elevation (ft) *	Crossing elevation (ft) *	Area (mi ²) A	Avg. Annual Precipitation (in/yr) P	Index (mean basin elevation)	100-yr flood flow Q ₁₀₀ (cfs)			
								North Coast ⁽¹⁾ (NC)	Sierra ⁽²⁾ (S)	North- east ⁽³⁾ (NE)	Central Coast ⁽⁴⁾ (CC)
1	RP#1	6.75	3570	3340	0.011	68.78	3455	9.9	9.5	18.8	16.1
2	RP#2	10.72	3570	3300	0.017	68.78	3435	14.8	14.3	26.4	23.8
3	RP#8	24.91	3570	3180	0.039	68.78	3375	30.7	30.1	48.9	48.3
4	RP#21	0.79	3230	3120	0.001	68.78	3175	1.5	1.5	3.9	2.7
5	RP#22	26.35	3570	3110	0.041	68.78	3340	32.2	31.7	50.9	50.6
6	RP#24	5.88	3340	3080	0.009	68.78	3210	8.8	8.6	17.0	14.4
7	RP#25	0.66	3200	3070	0.001	68.78	3135	1.3	1.3	3.4	2.3
8	RP#38	3.57	3240	2860	0.006	68.78	3050	5.7	5.6	11.8	9.4
9	RP#39	3.04	3230	2860	0.005	68.78	3045	5.0	4.9	10.5	8.2
10	RP#41	3.15	3220	2780	0.005	68.78	3000	5.1	5.1	10.8	8.5
11											
12											

*To estimate discharges for bridges, use elevations along watercourse at 85 percent and 10 percent of water-course length from crossing to drainage divide, respectively, instead of using maximum and crossing elevations.

See below for M&F equations

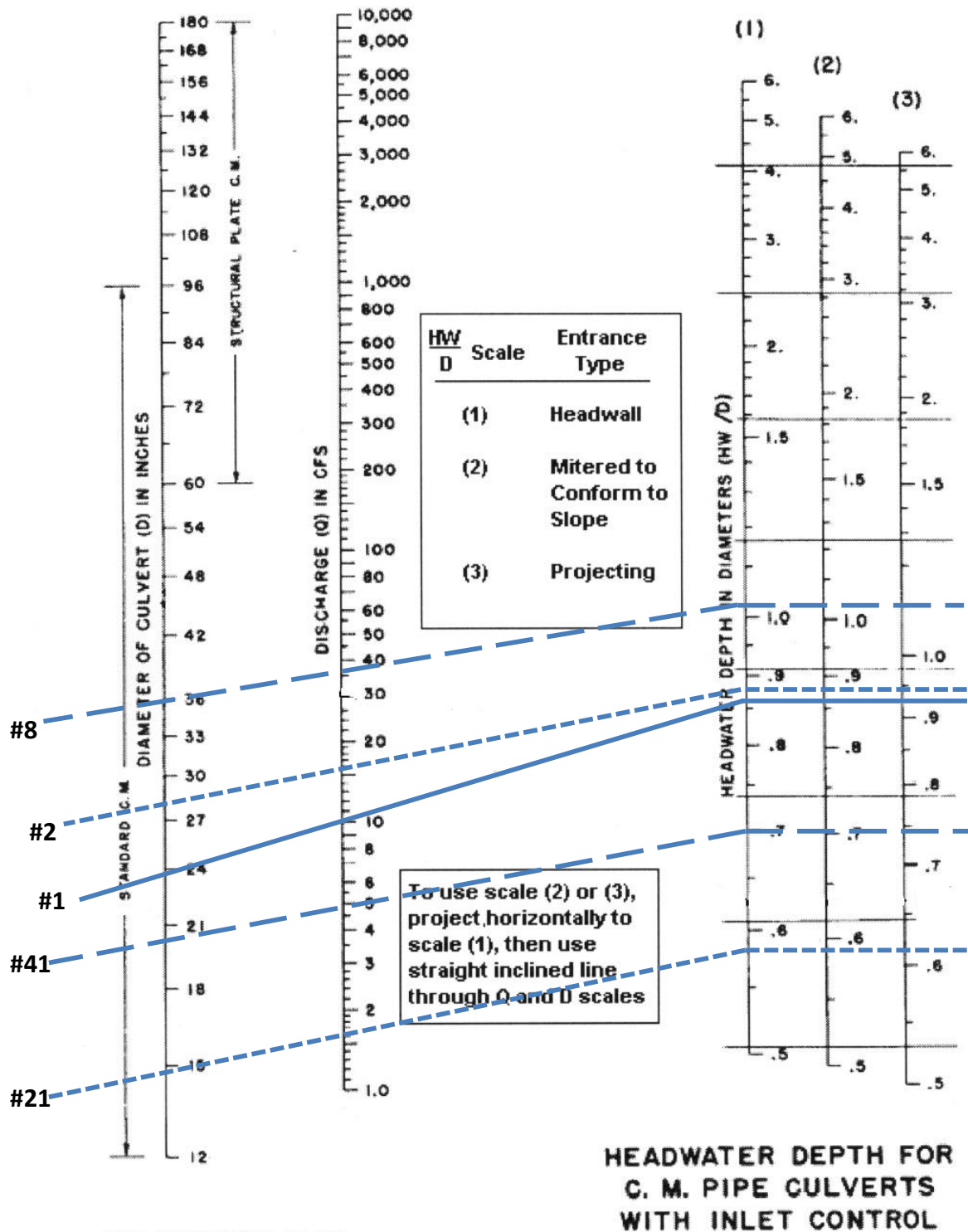
Rational Method for 100-year flood flow (A < 200 acres)

No.	Crossing	T _c = 60((11.9 X L ³ /H) ^{1/3})/0.385		Q ₁₀₀ = CIA			100-yr flood flow (cfs) Q ₁₀₀	Magnitude & Frequency Q ₁₀₀ equations
		Channel length (to top of basin) L (mi)	Elevation difference (ft) H	Concentra- tion time (min) T _c	Runoff coefficient C	100-year Return-Period Precipitation (in/hr) I*	Area (acres) A	
1	RP#1	0.2155303	230	3	0.4	3.78	6.75	10.2
2	RP#2	0.2340909	270	3	0.4	3.78	10.72	16.2
3	RP#8	0.3125	390	4	0.4	3.78	24.91	37.7
4	RP#21	0.0606061	110	1	0.4	3.78	0.79	1.2
5	RP#22	0.3431818	460	4	0.4	3.78	26.35	39.8
6	RP#24	0.1577652	260	2	0.4	3.78	5.88	8.9
7	RP#25	0.0577652	130	1	0.4	3.78	0.66	1.0
8	RP#38	0.1950758	380	2	0.4	3.78	3.57	5.4
9	RP#39	0.1893939	370	2	0.4	3.78	3.04	4.6
10	RP#41	0.194697	440	2	0.4	3.78	3.15	4.8
11								
12								

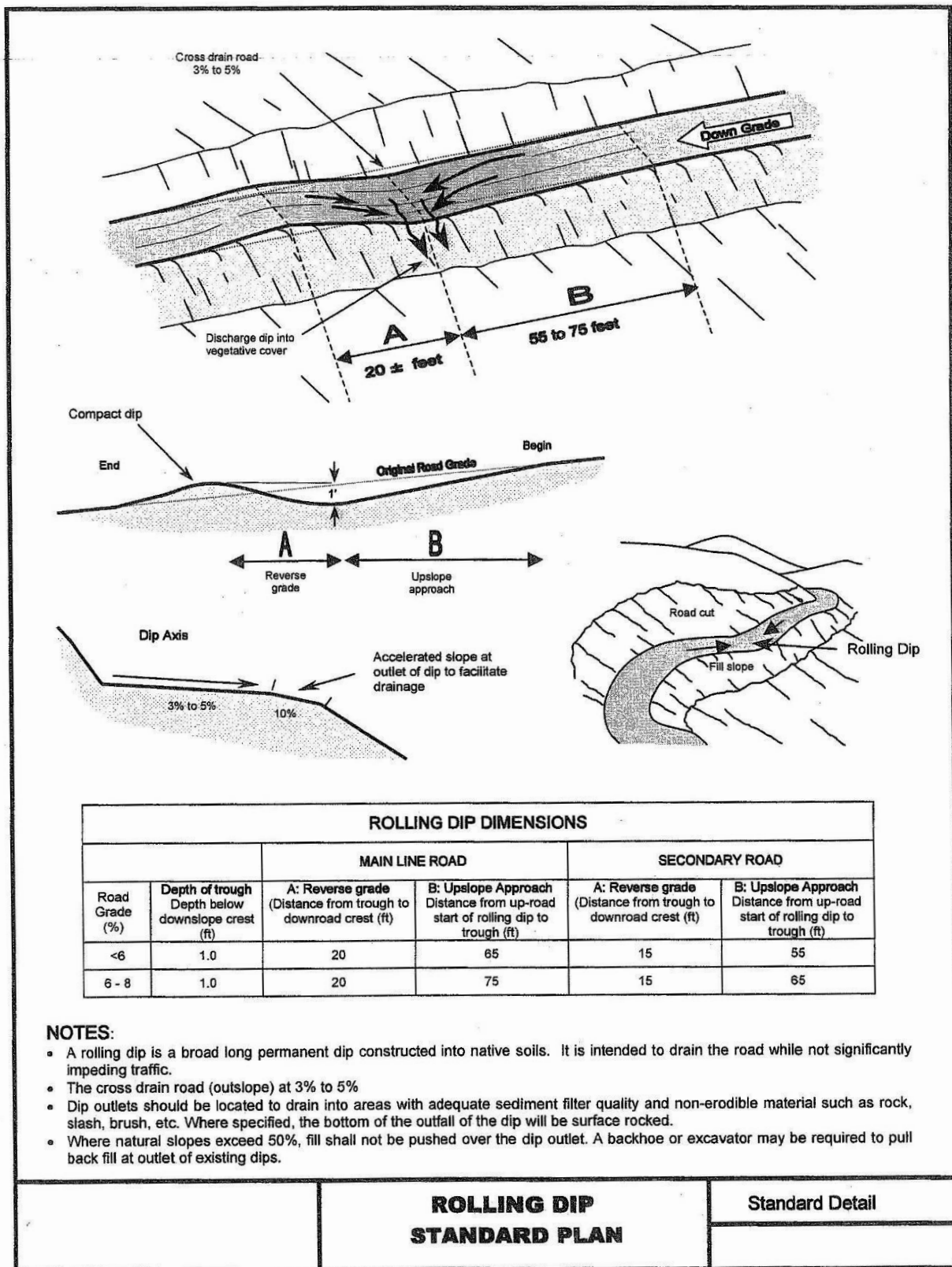
NC (1) Q₁₀₀ = 48.5(A)^{0.0004} (P)^{0.5300}
S (2) Q₁₀₀ = 20.6 (A)^{0.0174} (P)^{1.424} (H)^{-0.420}
NE (3) Q₁₀₀ = 0.713 (A)^{0.1257} (P)^{1.00}
CC (4) Q₁₀₀ = 11.0 (A)^{0.04} (P)^{0.5374}

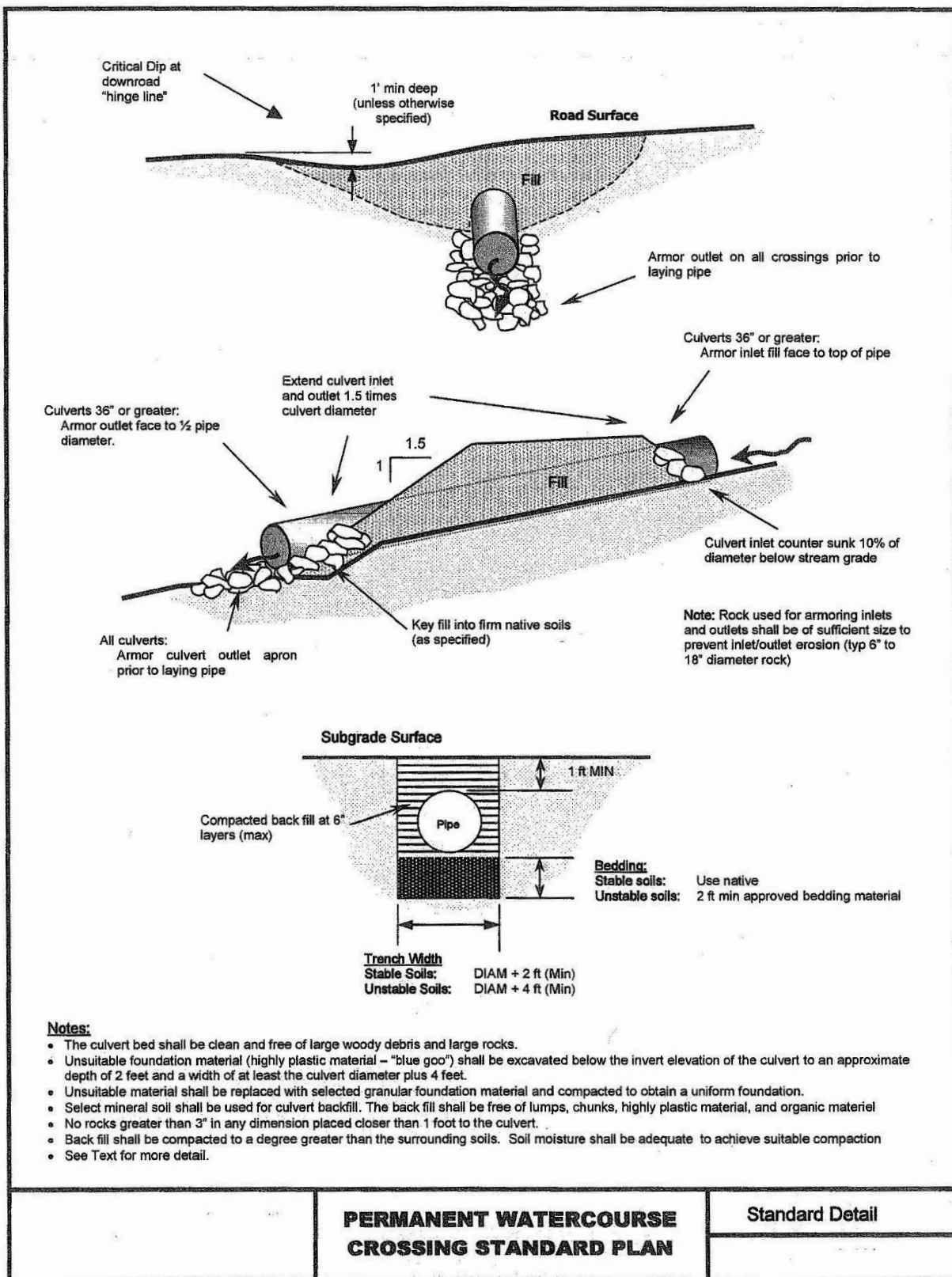
*Use 100-yr precipitation of duration similar to T_c or for 10 min, whichever is larger, convert to in/hr for input as "I"

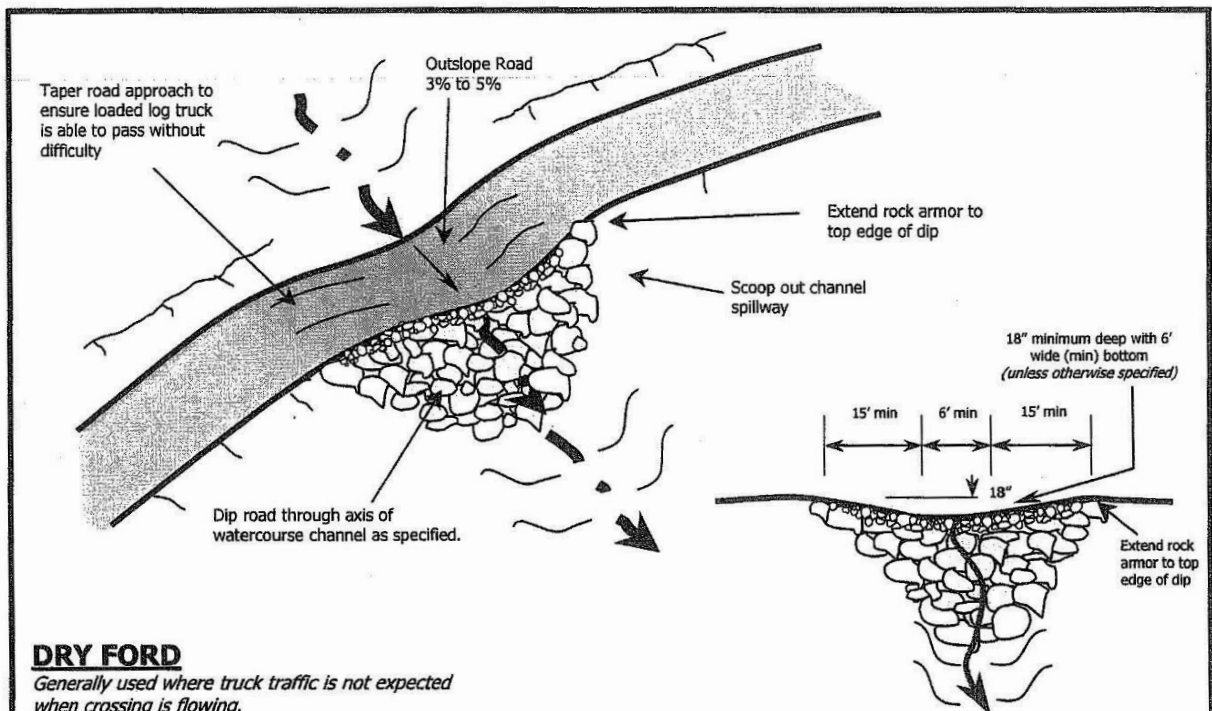
Graves Project Culvert Sizing



BUREAU OF PUBLIC ROADS JAN. 1963

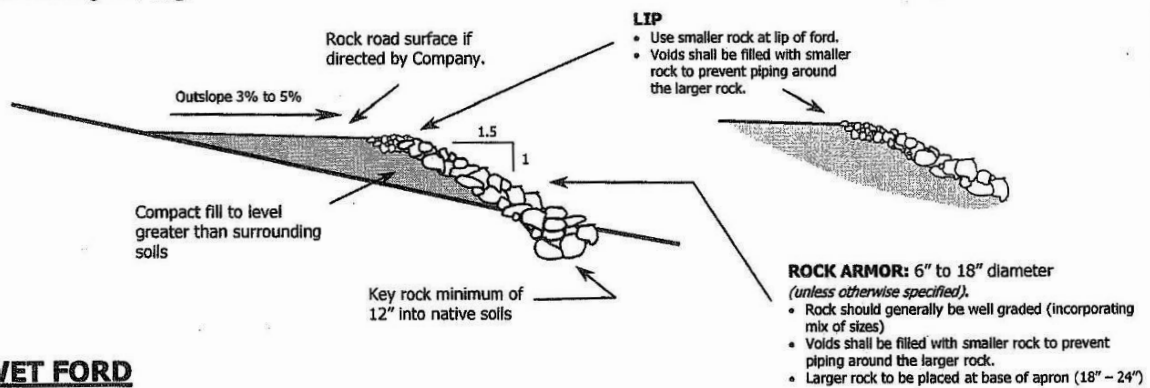






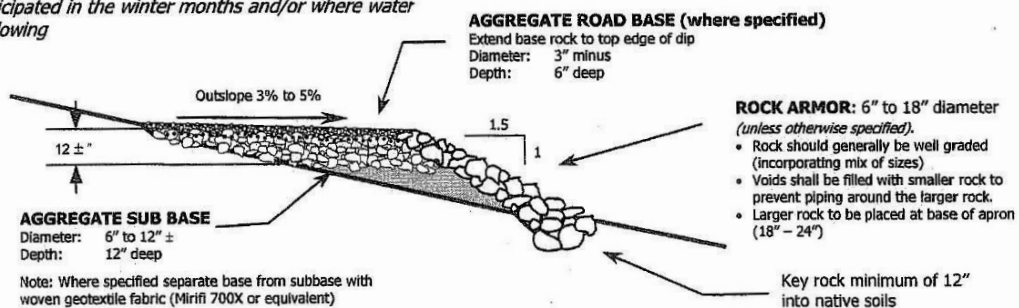
DRY FORD

Generally used where truck traffic is not expected when crossing is flowing.



WET FORD

Generally used where 4x4 pickup traffic is anticipated in the winter months and/or where water is flowing



NOTE

- Details are typical and intended for use as a guideline. Adjustments to the actual design may need to occur in field during time of construction due to local site conditions.
- Refer to THP for specific design criteria where applicable.

WET AND DRY FORD STANDARD PLANS

Standard Detail

RECORDING REQUESTED BY
Humboldt Land Title Company
AND WHEN RECORDED MAIL TO
Name Scott Graves & Stacy Graves
Address P.O. Box 611
Redway, CA 95560

Order No. 00103108-001-SB

2001-12354-2
Recorded — Official Records
Humboldt County, California
Carolyn Crnich, Recorder

Recorded by Humboldt Land Title Company
Rec Fee 10.00
Doc Trf Tax 440.00
Survey Mon 10.00
Clerk: MM Total: 460.00
May 22, 2001 at 10.00

SPACE ABOVE THIS LINE FOR RECORDER'S USE

GRANT DEED

THE UNDERSIGNED GRANTOR(S) DECLARE(S) Documentary Transfer Tax is \$440.00
City of _____
Parcel No. 216-174-005 ☐ computed on full value of interest or property conveyed, or
☐ full value less value of liens or encumbrances remaining at the time of sale

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
ED LAND AND TIMBER PARTNERSHIP, a general partnership

hereby GRANT(s) to
SCOTT W. GRAVES AND STACY C. GRAVES, husband and wife as joint tenants

the following real property in the unincorporated area of the
County of Humboldt, State of California:
See Exhibit A attached hereto and made a part hereof.

Dated: March 6, 2001

STATE OF CALIFORNIA
COUNTY OF HUMBOLDT

On MAY 15, 2001

before me

BY

Daniel R. Bullock
Daniel R. Bullock

the undersigned

a Notary Public in and for said County and State, personally appeared

BY

Eric S. Moore
Eric S. Moore

DANIEL R. BULLOCK and ERIC S. MOORE

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies) and that by his/her/their signature(s) on the instrument (the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature

My Commission Expires

1/31/02



(This area for official notarial seal)

MAIL TAX STATEMENTS TO PARTY SHOWN ON THE FOLLOWING LINE, IF NO PARTY SHOWN, MAIL AS DIRECTED ABOVE

Name

Street Address

City & State

①

Exhibit A

DESCRIPTION

That real property situate in the County of Humboldt, State of California, described as follows:

PARCEL ONE:

The Southwest Quarter of the Northwest Quarter, and the North Half of the Southwest Quarter of Section 35, and that portion of the Southeast Quarter of the Northeast Quarter of Section 34, which lies East of the County Road known as Harris Road in Township 3 South, Range 4 East, Humboldt Meridian, being a portion of the land contained in the Patent recorded October 23, 1896 in Book 15 of Patents, Page 390, Humboldt County Records.

PARCEL TWO:

The Southeast Quarter of the Northwest Quarter and the Southwest Quarter of the Northeast Quarter of Section 35 in Township 3 South, Range 4 East, Humboldt Meridian, as contained in the Patent recorded July 23, 1909 in Book 21 of Patents, Page 49, Humboldt County Records.

PARCEL THREE:

The Southeast Quarter of the Northeast Quarter, the North Half of the Southeast Quarter, and the Southeast Quarter of the Southeast Quarter of Section 35, Township 3 South, Range 4 East, Humboldt Meridian, as contained in the Patent recorded July 16, 1895 in Book 15 of Patents, Page 93, Humboldt County Records.

PARCEL FOUR:

A non-exclusive easement for ingress and egress 60 feet in width over the existing road across the West Half of the Northwest Quarter, and the Northwest Quarter of the Southwest Quarter of Section 1 and Lot 1 and the North Half of the Southeast Quarter and the Northeast Quarter of the Southwest Quarter of Section 2 in Township 4 South, Range 4 East, Humboldt Meridian, and the Southwest Quarter of the Southwest Quarter of Section 35, Township 3 South, Range 4 East.

2001-12354-2

②

RECORDING REQUESTED BY:
LAW OFFICES OF CATHERINE M. KOSHKIN

AND WHEN RECORDED MAIL TO:
SCOTT W. GRAVES
STACY C. GRAVES
P.O. Box 923
Trinidad, California 95570

2006-867-3
Recorded — Official Records
Humboldt County, California
Carolyn Crnich, Recorder
Recorded by KOSHKIN
Rec Fee 13.00
Clerk: DG Total: 13.00
Jan 9, 2006 at 10:49

SPACE ABOVE THIS LINE FOR RECORDER'S USE

GRANT DEED

Grant Deed (Excluded from Reappraisal under Proposition 13, i.e., Calif. Const. Art 13A § 1 et. seq.) The undersigned grantors declare that the following is true and correct:

THERE IS NO CONSIDERATION FOR THIS TRANSFER.

There is no Documentary transfer tax due. This is a Trust Transfer under § 62(d) of the Revenue and Taxation Code: Transfer to a revocable trust. This conveyance transfers the Grantor's interest into his or her revocable trust, R&T 11930.



GRANTORS: SCOTT W. GRAVES and STACY C. GRAVES, Husband and Wife as Joint Tenants, hereby grant to **SCOTT W. GRAVES and STACY C. GRAVES, Trustees of the SCOTT W. AND STACY C. GRAVES 2006 TRUST**, the following described real property in the County of Humboldt, State of California:

All that real property described on Exhibit A attached hereto and made a part hereof by this reference.

Assessor Parcel Number: 216-174-005
Property Address or Location: Unimproved parcel, Tooby Park / Pratt Mountain Area,
Unincorporated Area of Humboldt County

Dated: January 5, 2006

Grantors:


SCOTT W. GRAVES

STACY C. GRAVES

①

State of California)
)
County of Humboldt)

On January 5, 2006, before me, Karla Oliveira, a Notary Public, personally appeared SCOTT W. GRAVES and STACY C. GRAVES ~~personally known to me~~ (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) ~~is~~ are subscribed to the within instrument, and acknowledged to me that ~~he/she~~ they executed the same in ~~his/her~~ their authorized capacity(ies), and that by ~~his/her~~ their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature Karla Oliveira (Seal)



Mail future tax statements to SCOTT W. GRAVES and STACY C. GRAVES, P.O. Box 923,
Trinidad, California 95570

2006-867-3

2

Exhibit A

DESCRIPTION

That real property situate in the County of Humboldt, State of California, described as follows:

PARCEL ONE:

The Southwest Quarter of the Northwest Quarter, and the North Half of the Southwest Quarter of Section 35, and that portion of the Southeast Quarter of the Northeast Quarter of Section 34, which lies East of the County Road known as Harris Road in Township 3 South, Range 4 East, Humboldt Meridian, being a portion of the land contained in the Patent recorded October 23, 1896 in Book 15 of Patents, Page 390, Humboldt County Records.

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PARCEL FOUR:

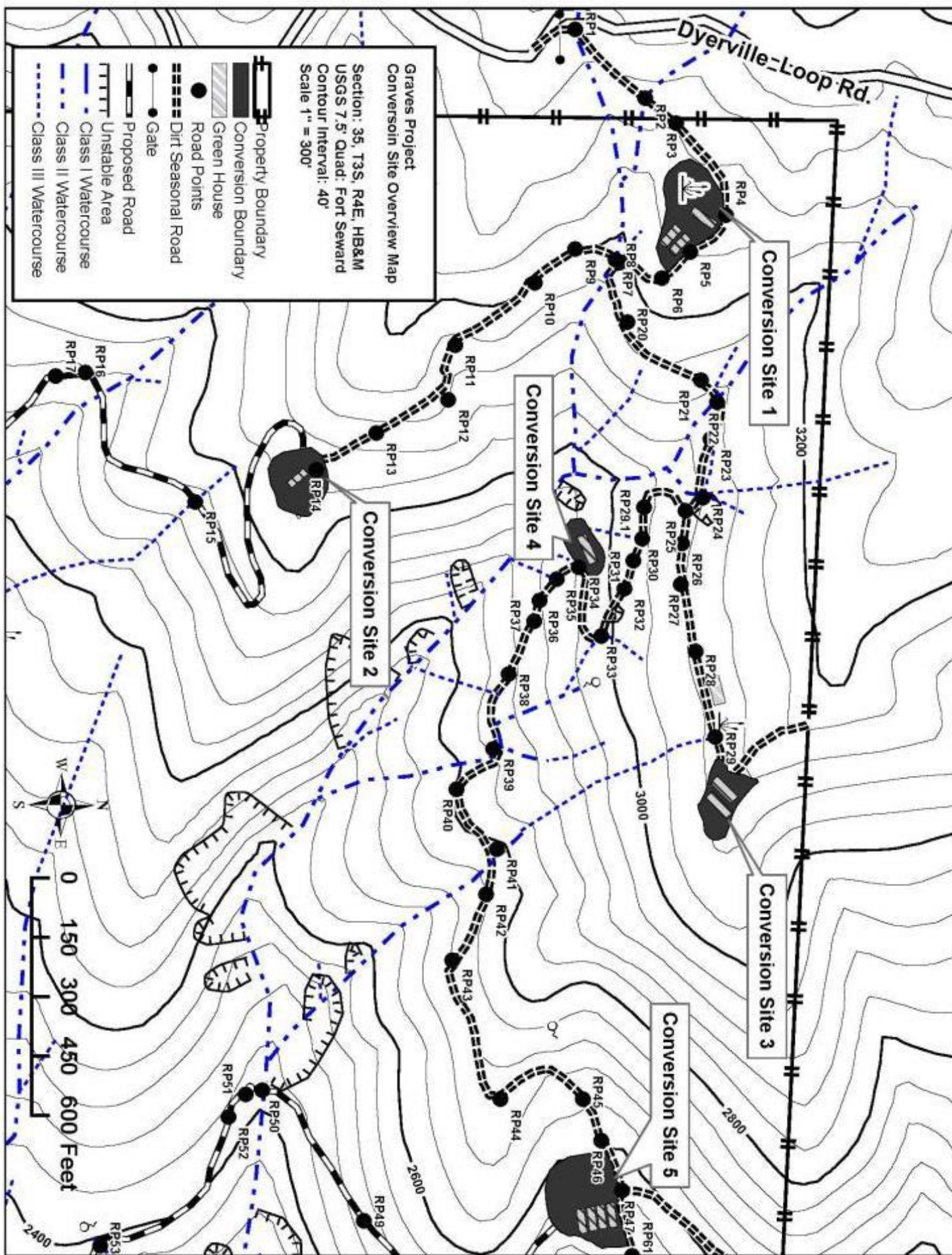
A non-exclusive easement for ingress and egress 60 feet in width over the existing road across the West Half of the Northwest Quarter, and the Northwest Quarter of the Southwest Quarter of Section 1 and Lot 1 and the North Half of the Southeast Quarter and the Northeast Quarter of the Southwest Quarter of Section 2 in Township 4 South, Range 4 East, Humboldt Meridian, and the Southwest Quarter of the Southwest Quarter of Section 35, Township 3 South, Range 4 East.

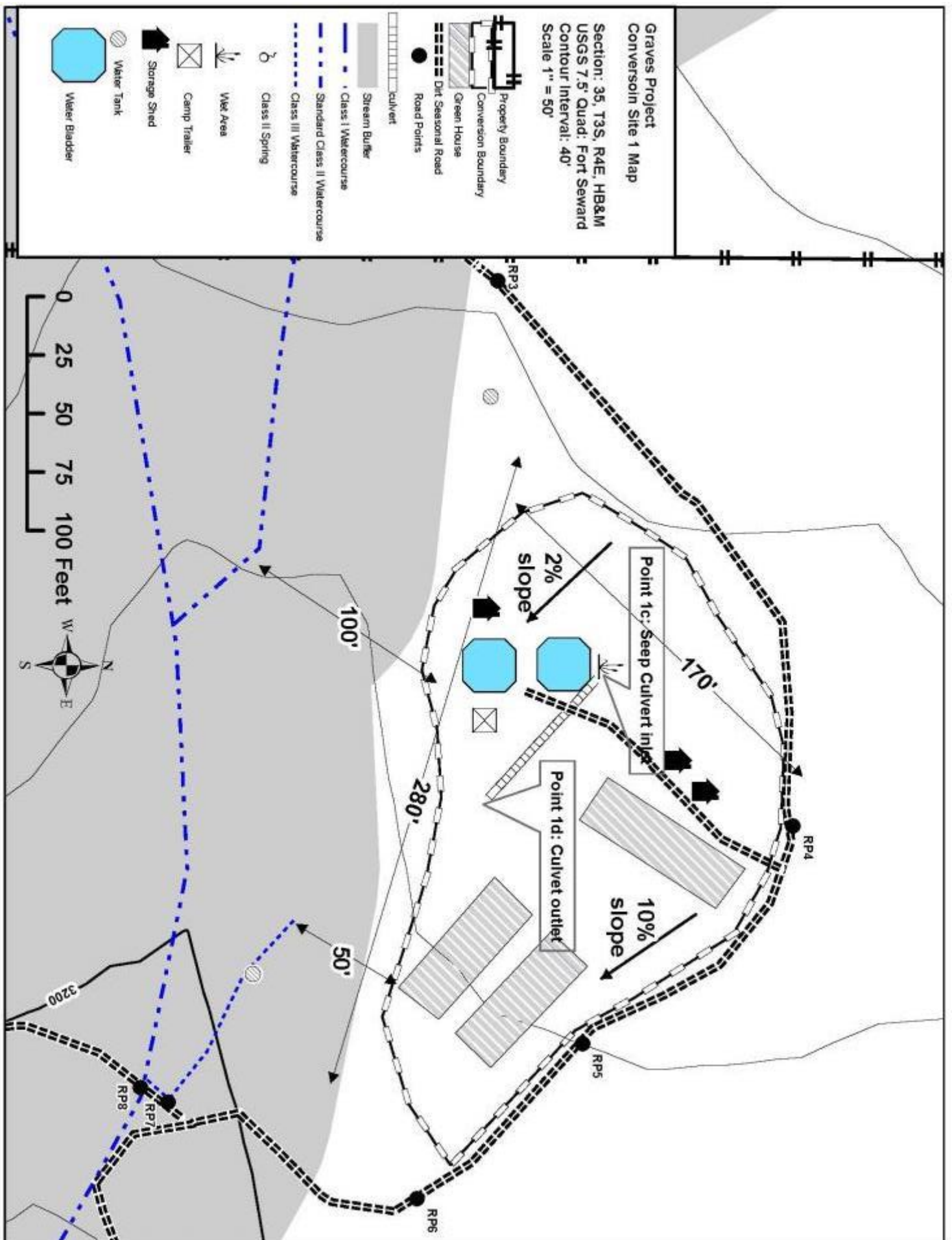
Assessor Parcel Number:
Situs:

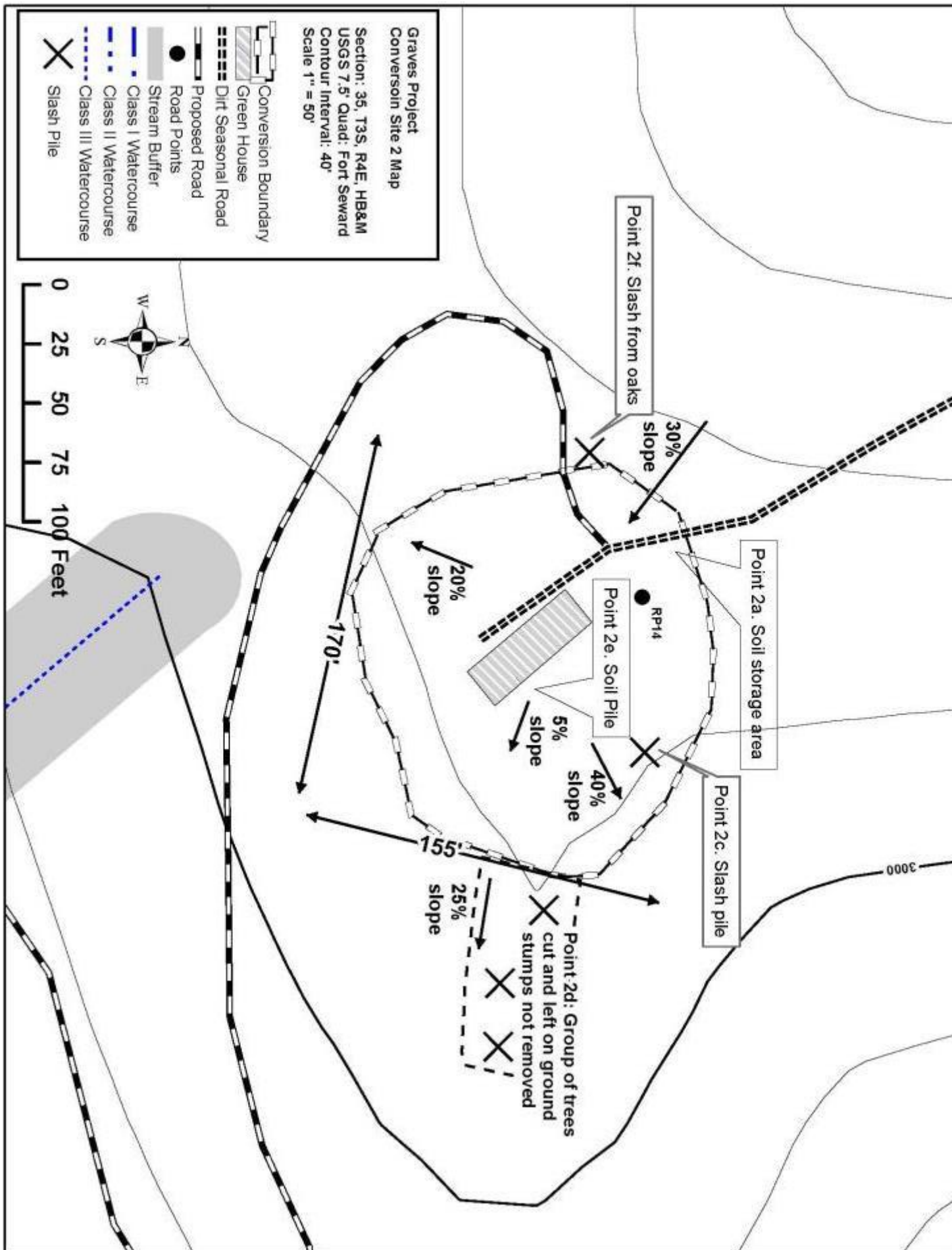
216-174-005
Unimproved Area, Tooby ~~Ranch~~ / Pratt Mountain
Park

2006-867-3


















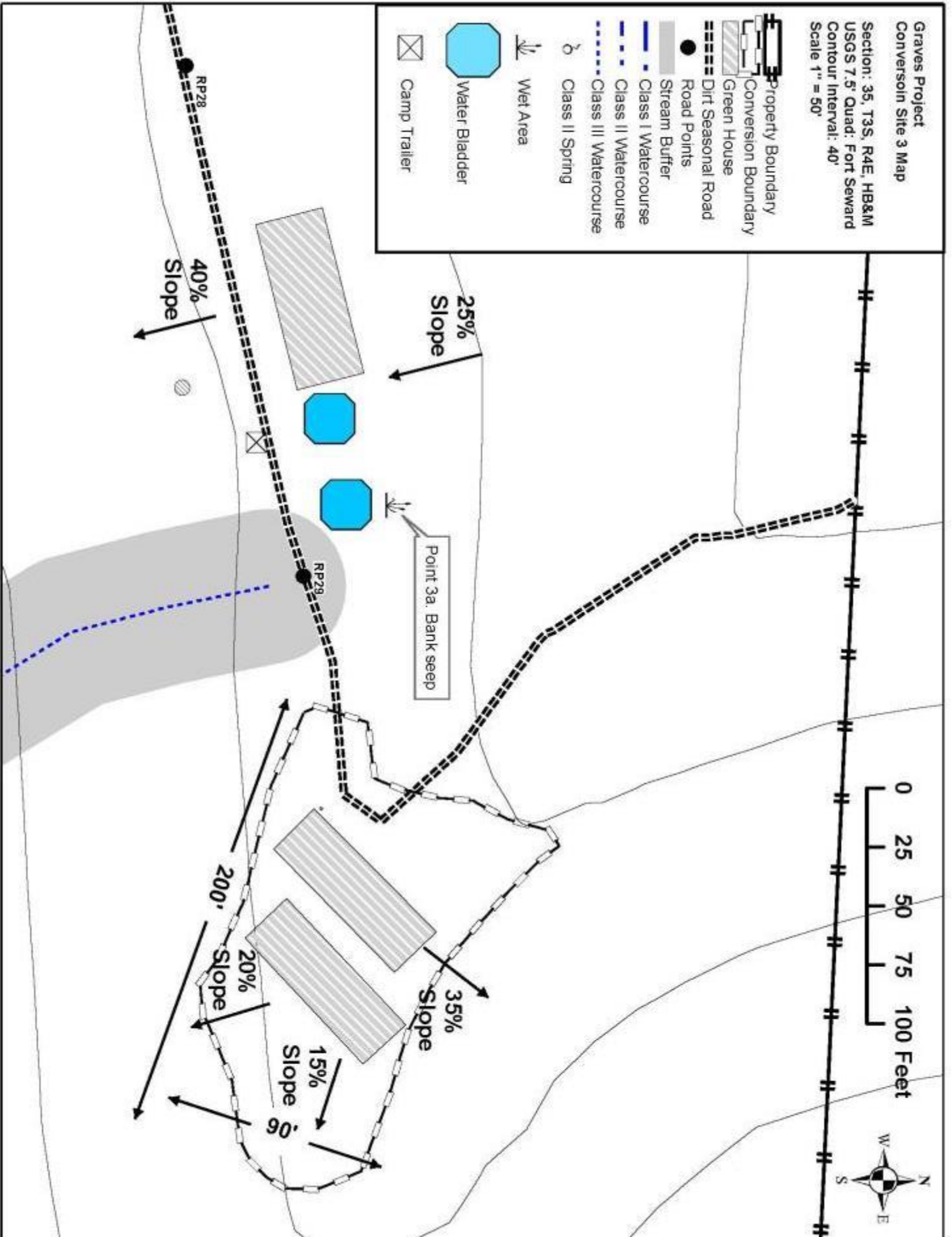


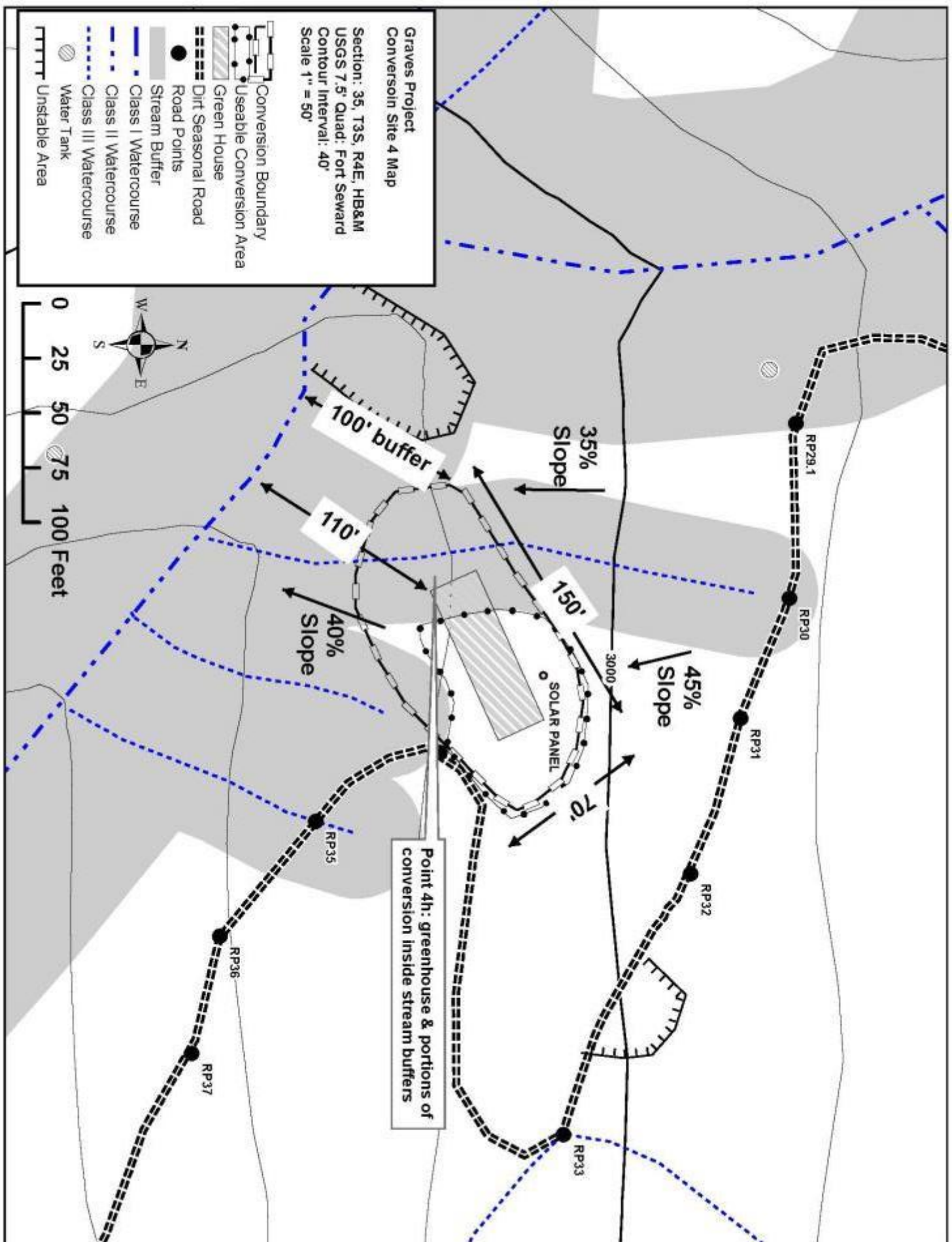


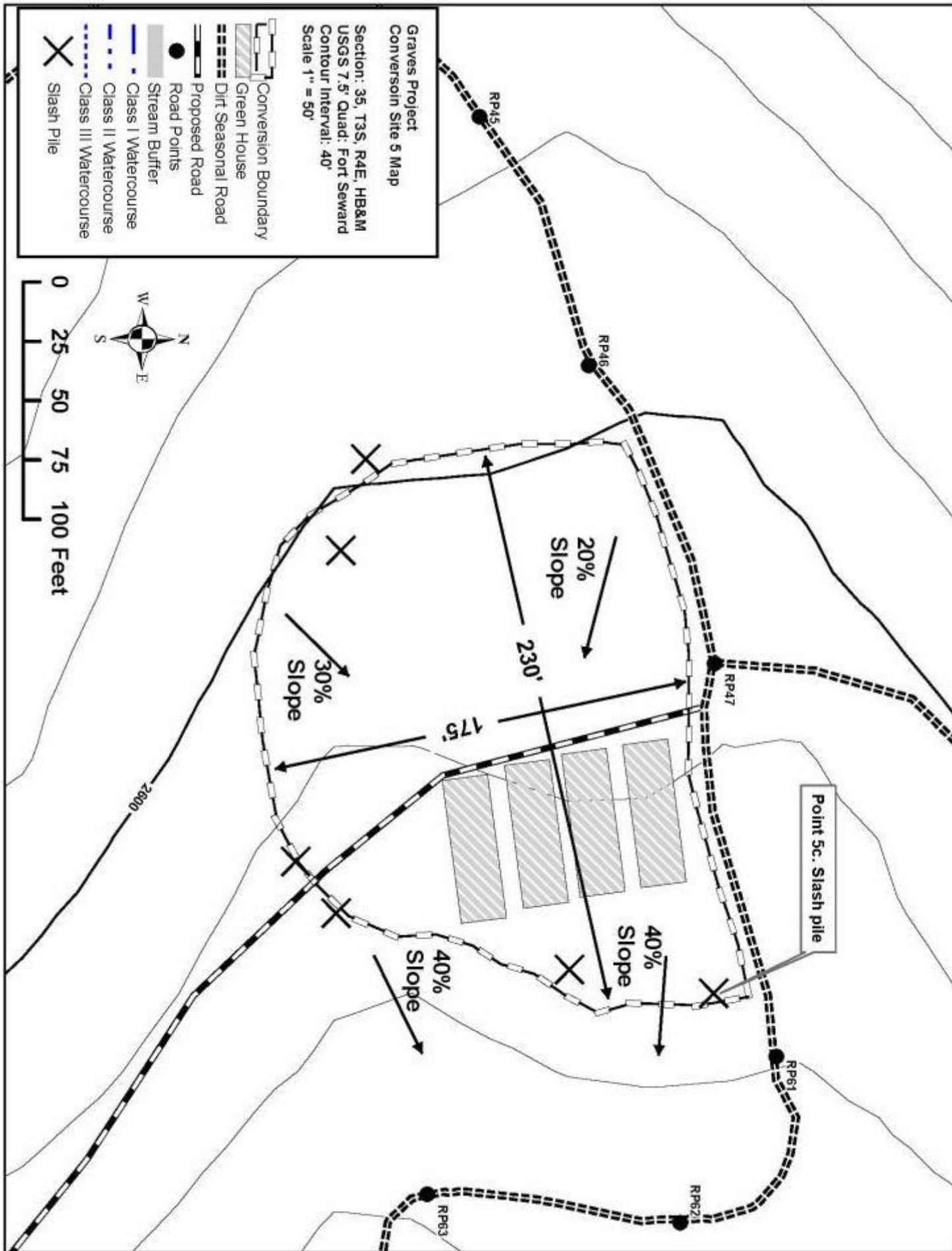
Graves Project
Conversion Site 3 Map

Section: 35, T3S, R4E, HB&M
USGS 7.5' Quad: Fort Seward
Contour Interval: 40'
Scale 1" = 50'

-  Property Boundary
-  Conversion Boundary
-  Green House
-  Dirt Seasonal Road
-  Road Points
-  Stream Buffer
-  Class I Watercourse
-  Class II Watercourse
-  Class III Watercourse
-  Class II Spring
-  Wet Area
-  Water Bladder
-  Camp Trailer







7. References

California Forest Practice rules, 2017; Title 14, California Code of Regulations, Chapters 4, 4.5, and 10

California Natural Diversity Database June 9, 2017 – <http://bios.dfg.ca.gov>

Parcel Quest Data – County Assessor information; <http://pqweb.parcelquest.com>


Humboldt County Web GIS; <http://webgis.co.humboldt.ca.us/HCEGIS2.0/>

Land Owner of Record: Scott W & Stacy C Graves

Signature: _____ Date: _____

Signature: _____ Date: _____

Registered Professional Forester: Stephen Hohman RPF #2652

Signature:  Date: 9-5-17