



A G E N D A

Meeting of the Scotts Valley City Council

Date: December 6, 2017

Time: 6:00 pm

CITY OF SCOTTS VALLEY 1 Civic Center Drive Scotts Valley, CA 95066 (831) 440-5602	MEETING LOCATION City Council Chambers 1 Civic Center Drive Scotts Valley, CA 95066	POSTING: The agenda was posted 12-1-17 at City Hall, SV Senior Center, SV Library and on the Internet at www.scottsvalley.org .
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Elected Officials Randy Johnson, Mayor Jim Reed, Vice Mayor Stephany E. Aguilar, Council Member Jack Dilles, Council Member Donna Lind, Council Member	City Staff Members Jenny Haruyama, City Manager Kirsten Powell, City Attorney Taylor Bateman, Acting Community Development Dir Scott Hamby, Public Works Director Steve Walpole, Chief of Police Tracy Ferrara, City Clerk
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Notice regarding City Council Meetings:

The City Council meets regularly on the 1st and 3rd Wednesday of each month at 6:00 pm in the City Hall Council Chambers located at 1 Civic Center Drive, Scotts Valley, CA 95066.

Agenda and Agenda Packet Materials:

The City Council agenda and the complete agenda packet are available for review by 5:00 pm the Friday before the Wednesday meeting on the Internet at the City's website: www.scottsvalley.org and in the lobby of City Hall at 1 Civic Center Drive, Scotts Valley, CA. Pursuant to Government Code §54957.5, materials related to an agenda item, submitted after distribution of the agenda packet, are available for public inspection in the lobby of City Hall during normal business hours, Monday-Friday, 8am-12 pm and 1-5 pm. In accordance with AB 1344, such documents will be posted on the City's website at www.scottsvalley.org.

Televised Meetings:

City Council meetings are cablecast "Live" on Community Television of Santa Cruz County on Comcast Channel 25.

CALL TO ORDER 6:00 p.m.

PLEDGE OF ALLEGIANCE and MOMENT OF SILENCE

ROLL CALL

COMMITTEE REPORTS

(Council members are appointed to committees which are either City committees or committees dealing with other jurisdictions. This portion of the agenda allows the committee member to present oral or written reports to the Council regarding their committee assignments. It also allows the Council to make comments and give the committee member direction, as required.)

CITY MANAGER REPORT

PUBLIC COMMENT TIME

(This is the opportunity for individuals to make and/or submit written or oral comments to the Council on any items within the purview of the Council, which are NOT part of the Agenda. No action on the item may be taken, but the Council may request the matter be placed on a future agenda.)

ALTERATIONS TO CONSENT AGENDA

(Council can remove or add items to the Consent Agenda.)

CONSENT AGENDA

(The Consent Agenda is comprised of items which appear to be non-controversial. Persons wishing to speak on any items may do so raising their hand to be recognized by the Mayor.)

- A. Approve City Council meeting minutes 11-15-17
- B. Approve check register – 11-13-17, 11-17-17, 11-22-17
- C. Approve second reading and adoption of Ordinance No. 159.1, modifying Sections 5.06.020, 5.06.030, 5.06.040 and 5.06.080 to Title 5 of the Scotts Valley Municipal Code regarding Bingo
- D. Approve updated job class specification for Wastewater Operator-In-Training
- E. Accept the 2016/2017 Annual Report of Development Impact Fees
- F. Approve Resolution No. 1613.4 making certain findings regarding the City's development impact fees and accepting the 5-Year Development Impact Fee report
- G. Accept informational report regarding ADA Accessibility Committee Work Plan

ALTERATIONS TO REGULAR AGENDA

(Council can remove or add items to the Regular Agenda.)

REGULAR AGENDA

(Persons wishing to speak on any item may do so by raising their hand to be recognized by the Mayor.)

1. Consider approval of Glenwood Open Space Preserve Long Term Management Plan (Acting Community Development Director Bateman)
2. Consider acceptance of report on update of temporary, trial use of Siltanen Park Ball Field Lights on weekends (Recreation Division Manager Ard)

PUBLIC HEARING (To be heard at 6:30 p.m.)

3. Consider first reading and introduction of Ordinance No. 190.1 amending Chapter 5.38 to Title 5 of the Scotts Valley Municipal Code requiring safety inspections of firearms dealers by the Chief of Police; and, consider first reading and introduction of Ordinance No. 16-139 implementing a conditional use permit for firearms dealers, firearms repair services, and related uses (Police Chief Walpole)
 - Open public hearing
 - Close public hearing
 - Approve first reading and introduction of Ordinance No. 16-139
 - Approve first reading and introduction of Ordinance No. 190.1

REGULAR AGENDA

(For Regular Agenda items following the public hearing. Regularly scheduled subjects of discussion on the Regular Agenda include:)

4. Consider approval of Resolution No. 1183.3 revising the City of Scotts Valley Standard Details and Specifications (Civil Engineer Kahn)
5. Future Council agenda items
(This portion of the Regular Agenda allows the Council to determine items to be placed on a future agenda and to choose a date, if so desired.)

CONVENE TO CLOSED SESSION

CLOSED SESSION

SUBJECT:	Conference with legal counsel regarding potential litigation – 2 cases.
Legal Authority:	Government Code Section 54956.9
Name of Case:	N/A
Staff Present:	City Manager, City Attorney

RECONVENE TO OPEN SESSION

REPORT ON ACTION TAKE DURING CLOSED SESSION

ADJOURNMENT

The City of Scotts Valley does not discriminate against persons with disabilities. The City Council Chambers is an accessible facility. If you wish to attend a City Council meeting and require assistance such as sign language, a translator, or other special assistance or devices in order to attend and participate at the meeting, please call the City Clerk's office at (831) 440-5602 five to seven days in advance of the meeting to make arrangements for assistance. If you require the agenda of a City Council meeting be available in an alternative format consistent with a specific disability, please call the City Clerk's Office. The California State Relay Service (TTY/VCO/HCO to Voice: English 1-800-735-2929, Spanish 1-800-855-3000; or, Voice to TTY/VCO/HCO: English 1-800-735-2922, Spanish 1-800-855-3000), provides Telecommunications Devices for the Deaf and Disabled and will provide a link between the TDD caller and users of telephone equipment.

PROCEDURAL INFORMATION FOR THE PUBLIC

**THE FOLLOWING IS THE PROCEDURE COUNCIL SHOULD TAKE IN
APPROVAL OF A RESOLUTION:**

1. Move the Resolution number for approval.
2. Second the motion.
3. Vote by body, a roll call vote is not required.

**THE FOLLOWING IS THE PROCEDURE COUNCIL SHOULD TAKE IN
INTRODUCTION/ADOPTION OF AN ORDINANCE:**

1. Move the Ordinance number for introduction (or adoption).
2. Move the Ordinance be introduced by title only and waive the reading of the text.
3. Read the Ordinance title.
4. Second the motion.
5. Vote by body, a roll call vote is not required.

**THE FOLLOWING IS THE PROCEDURE COUNCIL SHOULD TAKE IN
PUBLIC COMMENT/PUBLIC HEARINGS:**

Unless otherwise determined by the presiding officer of the meeting:

1. Three minutes allowed per individual to speak.
2. Five minutes allowed per individual representing a group of three or more.



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DATE: 12-6-2017



MINUTES

Meeting of the Scotts Valley City Council

Date: November 15, 2017

POSTING:

The agenda was posted on 11-9-17 at City Hall, the SV Senior Center, and the SV Library, and on the Internet at www.scottsvalley.org, by the City Clerk.

CALL TO ORDER 6:00 p.m.

PLEDGE OF ALLEGIANCE and MOMENT OF SILENCE

ROLL CALL

Present:

Mayor Johnson
Vice Mayor Reed
Council Member Aguilar
Council Member Dilles
Council Member Lind

City Manager Haruyama
City Attorney Powell
Police Chief Walpole
Public Works Director Hamby
Acting Community Development Director Bateman
Recreation Division Manager Ard
City Clerk Ferrara

COMMITTEE REPORTS

CM Dilles attended Monterey Bay Economic Partnership 2017 State of the Region where the program included a dynamic presentation from Chuck Marohn, CEO of Strong Towns.

VM Reed reported that he and Mayor Johnson, as part of the Town Center Subcommittee, met last week with two developers who are interested in submitting Town Center proposals. The Subcommittee, along with City Manager Haruyama and Acting Community Development Director Bateman, toured housing complexes that had been constructed by these developers in Sunnyvale and Milpitas. He reported that meetings will be held in December for the Town Center Subcommittee to receive presentations from different developers and recommendations will then be brought forward to the entire City Council.

CM Lind reported that the Criminal Justice Council met and received a report from the Santa Cruz Anti-Crime Team. They also received a report from the Youth Violence Prevention Team on a recent forum that was held.

CM Lind reported that the Santa Cruz Metropolitan Transit District Board met and discussed their articulated bus program.

Mayor Johnson reported that as part of the Town Center Subcommittee, he and VM Reed met with two developers and toured the various types of housing that are available and have been constructed by these developers.

Mayor Johnson reported that the City Select Committee met today, which is made up of City Managers and Mayor's from the cities in Santa Cruz County, along with the County Administrative Officer. He reported that one of the items discussed was homelessness in Santa Cruz.

CITY MANAGER REPORT

Public Works: The City recently applied for four grants through the Santa Cruz County Regional Transportation Commission (RTC). I am pleased to announce that the RTC staff will recommend that the RTC Board fund 3 of our capital projects in our 5 year capital improvement plan (CIP). The projects include:

- **Kings Village Road Sidewalks** – The City requested \$271,000 (RTC staff recommended 100%) to complete sidewalks on both sides of Kings Village Rd. from MHR to Bluebonnet. It will also provide sidewalk on Bluebonnet where needed.
- **Glen Canyon/Green Hills Road/S. Navarra Drive** – The City requested \$102,000 (RTC staff recommended for 100% funding) to supplement planned road repair and bicycle improvements from the Fish Park to Green Hills Road and the entire length of Green Hills – scheduled for Spring 2018.
 - Bicycle sharrows (shared lane signage on the street) will be added on South Navarra.
 - Total cost of the project is \$993,000.
 - The new \$102K in potential funding would be in addition to the previous \$711K grant we were previously awarded.
- **Glenwood Drive Rehabilitation and Bicycle Improvements** – City staff requested \$763,000 (RTC staff recommended for \$275,000). This project will rehabilitate Glenwood Dr. from north of SV high school to the city limits and provide a bike lane on one side of the road.
- The RTC Board will vote on these recommendations at their December meeting.

New Hires: Next week we will be celebrating the swearing in of new dispatcher Angela Arneson, and Justine Thomson recently joined the City, who will serve as our Recreation Administrative Secretary.

Recreation: Last Friday, on November 10, approximately 150 people came out to celebrate our local veterans at the Food Trucks A GoGo – Honors Veterans event. Those veterans included Helen, who is 103 years old this week and was a pilot in WWII. School Age Recreation children at VH and BK made/decorated several Veteran's Day cards that were used to decorate the BBQ area and the Veteran's table and each of the Veterans were given a card.

Last, we also need volunteer coaches for Youth Basketball Boys grades 3rd-8th grade. The League runs January thru March. The commitment is practice once a week (weather permitting) and one game a weekend. For those interested, please contact the Park and Recreation Division.

PUBLIC COMMENT

Jeremy Verinsky, Under Sheriff for Santa Cruz County and Scotts Valley resident, stated that he was at the meeting on behalf of Carlos Palacios, County Administrator for the County of Santa Cruz. He stated that Santa Cruz County is embarking on its first ever strategic plan and is encouraging residents and businesses in the Santa Cruz area to provide direction as to where the County should focus its efforts. Visit www.santacruzcounty.us/visionsantacruz for more information and email updates.

Members of the Scotts Valley Parks & Recreation Advocates invited everyone to attend the Annual Tree Lighting Ceremony being held on Saturday, December 2, 2017 at 5:30 pm at the Scotts Valley Community Center.

ALTERATIONS TO CONSENT AGENDA

M/S: Aguilar/Lind

To approve the Consent Agenda.

Carried 5/0 (AYES: Aguilar, Dilles, Johnson, Lind, Reed)

Consent Agenda:

- A. Approve City Council meeting minutes 11-1-17, 11-8-17
- B. Approve check register – 10-27-17, 11-1-17
- C. Approve second reading and adoption of Ordinance No. 16-128.5, an Ordinance of the City Council of the City of Scotts Valley amending Section 17.64.020 of Chapter 17.64 of Title 17 to allow indoor cannabis cultivation of up to six (6) plants for personal use
- D. Authorize the closure of non-essential city facilities, including City Hall and Recreation administrative offices Wednesday, December 27, 2017 through Friday, December 29, 2017 and the Senior Center Monday, December 18, 2017 through Friday, December 22, 2017 and Monday, December 25, 2017 through Tuesday, January 2, 2018
- E. Approve the Operations & Maintenance Plan and Maintenance Agreement for the Timber Ridge Subdivision, APN No. 024-021-26

ALTERATIONS TO REGULAR AGENDA

M/S: Lind/Dilles

To approve the Regular Agenda.

Carried 5/0 (AYES: Aguilar, Dilles, Johnson, Lind, Reed)

REGULAR AGENDA

1. **Oral Presentation from Melanie Sobel, General Manager of the Santa Cruz County Animal Shelter regarding microchipping and rabies**

PC Walpole introduced Melanie Sobel, General Manager of the Santa Cruz County Animal Shelter, who gave an oral presentation regarding microchipping and rabies, responded to questions from Council, and asked the City Council for their support in adopting mandatory microchipping and rabies requirements.

2. **Consider first reading and adoption of Ordinance No. 159.1, an ordinance of the City Council of the City Scotts Valley modifying Sections 5.06.020, 5.06.030, 5.06.040, and 5.06.080 of Chapter 5.06 of Title 5 of the Scotts Valley Municipal Code regarding Bingo**

PC Walpole presented the written staff report and responded to questions from Council.

M/S: Aguilar/Lind

To approve introduction and first reading of Ordinance No. 159.1, an ordinance of the City Council of the City Scotts Valley modifying Sections 5.06.020, 5.06.030, 5.06.040, and 5.06.080 of Chapter 5.06 of Title 5 of the Scotts Valley Municipal Code regarding Bingo, and waive the reading thereof.

Carried 5/0 (AYES: Aguilar, Dilles, Johnson, Lind, Reed)

3. **Consider approval for the recruitment of a Wastewater Operator-in-Training (OIT) position for the Wastewater Treatment Plant and authorization for a budget appropriation in the amount of \$39,000**

PWD Hamby presented the written staff report and responded to questions from Council.

M/S: Aguilar/Reed

To approve the recruitment of a Wastewater Operator-in-Training (OIT) position for the Wastewater Treatment Plant and authorize a budget appropriation in the amount of \$39,000.

Carried 5/0 (AYES: Aguilar, Dilles, Johnson, Lind, Reed)

4. **Future Council agenda items**

CM Aguilar requested a future agenda item to consider mandatory microchipping of dogs and cats through the Santa Cruz County Animal Shelter.

CM Dilles requested a future agenda item to consider extending the City's inclusionary rate city-wide.

ADJOURNMENT

The meeting adjourned at 7:10 p.m.

Approved: _____

Randy Johnson, Mayor

Attest: _____

Tracy A. Ferrara, City Clerk

CONSENT AGENDA ITEM B
 DATE: 12-6-2017

SCOTTS VALLEY ACCOUNTS PAYABLE
 11/13/2017 11:19:42 Check Register

CITY OF SCOTTS VALLEY
 GL050S-V08.05 COVERPAGE
 GL540R

Report Selection:

RUN GROUP... 111317 COMMENT... A/P AS OF NOV 13 2017

DATA-JE-ID DATA COMMENT

W-11132017-691 A/P AS OF NOV 13 2017

Run Instructions:

Jobq	Banner	Copies	Form	Printer	Hold	Space	LPI	Lines	CPI	CP	SP	RT
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BANK	VENDOR	CHECK#	DATE	AMOUNT
BA	GENERAL CHECKING ACCOUNT			
001626	AGUILAR/STEPHANY	111823	11/13/17	360.00
003615	AHRENS/PATRICK	111824	11/13/17	870.00
001219	ALHAMBRA	111825	11/13/17	105.65
000789	ALLEN & ASSOCIATES/JAMES	111826	11/13/17	1,237.50
001670	AT &T	111827	11/13/17	3,452.82
000097	AT&T	111828	11/13/17	9.31
000565	BANK OF NEW YORK MELLON/	111829	11/13/17	250.00
000614	BATTERIES PLUS	111830	11/13/17	74.10
001822	BC LABORATORIES INC.	111831	11/13/17	30.00
001593	BENEDICT DDS/NANETTE	111832	11/13/17	86.90
000018	BRINK'S TROPHY SHOPPE	111833	11/13/17	85.40
001566	BUSINESS WITH PLEASURE	111834	11/13/17	42.86
003119	CALIFORNIA SOCIETY OF	111835	11/13/17	110.00
003174	CAPITAL ONE COMMERCIAL	111836	11/13/17	2,191.82
015008	CENTRAL HOME SUPPLY	111837	11/13/17	50.55
001546	CRAIG/ROBERT J	111838	11/13/17	125.00
000389	DASSEL'S PETROLEUM INC	111839	11/13/17	4,164.86
001362	DUNCAN AUTO TECH	111840	11/13/17	187.19
003248	EARTHWORKS	111841	11/13/17	22,580.00
000072	ECOLOGY ACTION OF SC	111842	11/13/17	4,620.00
000191	EMPLOYMENT DEV. DEPT.	111843	11/13/17	1,448.00
001597	ENVIRONMENTAL INNOVATION	111844	11/13/17	4,950.00
001991	FASTENAL	111845	11/13/17	291.85
001782	FLORES/CARLOS	111846	11/13/17	300.00
003626	HD BUILDERS	111847	11/13/17	29,277.00
000615	HOHMANN/PATRICK J.	111848	11/13/17	303.00
000283	HOSE SHOP	111849	11/13/17	608.34
001856	HUB INTERNATIONAL	111850	11/13/17	128.04
003266	INTERGRITY AUTOMOTIVE	111851	11/13/17	45.00
001903	JONES/KIMARIE	111852	11/13/17	380.00
000284	LOGAN & POWELL, LLP	111853	11/13/17	15,795.25
003565	MANAGEMENT PARTNERS	111854	11/13/17	7,658.44
000291	MBASIA	111855	11/13/17	8,968.19
003584	MENDOZA/FERNANDO	111856	11/13/17	190.00
003171	MICHALAK/GENE	111857	11/13/17	110.00
000218	MID VALLEY SUPPLY	111858	11/13/17	422.97
001418	MONTEREY REGIONAL	111859	11/13/17	1,384.50
000086	MOTION INDUSTRIES INC.	111860	11/13/17	86.02
000939	NATIONAL COMTEL NETWORK	111861	11/13/17	14.53
001988	O'REILLY AUTOMOTIVE, INC	111862	11/13/17	60.79
000089	OLIVE SPRINGS QUARRY INC	111863	11/13/17	113.98
000101	PACIFIC GAS & ELECTRIC C	111864	11/13/17	44,689.44
000101	PACIFIC GAS & ELECTRIC C	111865	11/13/17	154.75
000101	PACIFIC GAS & ELECTRIC C	111866	11/13/17	17.45
001787	PETRINI'S GARDENING SERV	111867	11/13/17	75.00
003503	PURETEC INDUSTRIAL WATER	111868	11/13/17	353.94
003559	ROBERTS/MEREDITH	111869	11/13/17	870.00
000134	S.V. WATER DISTRICT	111870	11/13/17	61.88

Check Register

BANK	VENDOR	CHECK#	DATE	AMOUNT	
BA	GENERAL CHECKING ACCOUNT				
000134	S.V. WATER DISTRICT	111871	11/13/17	12,564.51	
000820	SANTA CRUZ/COUNTY OF	111872	11/13/17	54.00	
003239	SCHERTZ/ALYCIA	111873	11/13/17	225.60	
000133	SCOTTS VALLEY SPRINKLER	111874	11/13/17	279.41	
001687	TYNDALL/KEITH	111875	11/13/17	15.00	
001366	U.S. BANCORP OFFICE	111876	11/13/17	1,260.35	
.15230	1440 MULTIVERSITY	111877	11/13/17	64,840.20	
	GENERAL CHECKING ACCOUNT			238,631.39	***

SCOTTS VALLEY ACCOUNTS PAYABLE
CITY OF SCOTTS VALLEY
11/13/2017 11:19:42
GL540R-V08.05 PAGE 3

Check Register

BANK	VENDOR	CHECK#	DATE	AMOUNT
REPORT TOTALS:				238,631.39

RECORDS PRINTED - 000119

GL540R

FUND RECAP:

FUND	DESCRIPTION	DISBURSEMENTS
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001	GENERAL	129,200.68
002	RECYCLING/ENVIRONMENTAL	54.00
004	RECREATION	2,877.23
010	WASTEWATER OPERATIONS	41,878.92
011	TERTIARY TREATMENT PLANT	116.02
025	GENERAL TRUST	1,237.50
028	SENIOR CENTER	641.57
050	PINEWOOD EST LNDSCP MAINT DT	9.59
077	SKYPARK MAINT ASSESS DIST	3,175.77
090	SV DRIVE A REDEMPTION	250.00
112	DENTAL INS INTERNAL SERV	1,165.50
123	COMMUNITY FACILITY CENTER	893.62
150	GENERAL CAPITAL IMPROVEMENTS	56,477.00
306	SUPPL LAW ENFORCEMENT SRVS	653.99
TOTAL ALL FUNDS		238,631.39

BANK RECAP:

BANK	NAME	DISBURSEMENTS
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BA	GENERAL CHECKING ACCOUNT	238,631.39
TOTAL ALL BANKS		238,631.39

SCOTTS VALLEY ACCOUNTS PAYABLE
11/16/2017 16:00:25 Check Register

CITY OF SCOTTS VALLEY
GL050S-V08.05 COVERPAGE
GL540R

Report Selection:

RUN GROUP... 111717 COMMENT... A/P AS OF NOV 17 2017

DATA-JE-ID DATA COMMENT

W-11172017-698 A/P AS OF NOV 17 2017

Run Instructions:

Jobq	Banner	Copies	Form	Printer	Hold	Space	LPI	Lines	CPI	CP	SP	RT
L		01		CASCPRT01	Y	S	6	066	10			

BANK	VENDOR	CHECK#	DATE	AMOUNT
BA	GENERAL CHECKING ACCOUNT			
000182	A SIGN ASAP	111878	11/17/17	21.80
003342	ACCENT CLEAN & SWEEP INC	111879	11/17/17	4,392.03
003457	ADAMS/TROY	111880	11/17/17	30.00
001219	ALHAMBRA	111881	11/17/17	226.64
003497	ALVAREZ INDUSTRIES, INC	111882	11/17/17	1,111.00
000620	ALVAREZ/TONY	111883	11/17/17	20.00
001009	ARD/KRISTIN	111884	11/17/17	30.00
000097	AT&T	111885	11/17/17	157.48
002011	B & B SMALL ENGINE	111886	11/17/17	71.40
001373	BAY TREE, LLC	111887	11/17/17	3,620.38
001822	BC LABORATORIES INC.	111888	11/17/17	288.00
000107	BIRT/DUSTIN	111889	11/17/17	20.00
000500	BOLANOS/DORENE	111890	11/17/17	20.00
000021	BOWMAN & WILLIAMS	111891	11/17/17	9,540.00
000018	BRINK'S TROPHY SHOPPE	111892	11/17/17	43.60
001633	CAL-WEST LIGHTING & SIGN	111893	11/17/17	1,087.87
001385	CALIFORNIA PUBLIC EMPLOY	111894	11/17/17	130,214.02
003521	CARD SERVICE CENTER	111895	11/17/17	5,586.93
002091	COMCAST	111896	11/17/17	275.33
002091	COMCAST	111897	11/17/17	267.93
002091	COMCAST	111898	11/17/17	153.22
003588	CONDUENT BUSINESS SVCS,	111899	11/17/17	1,734.47
001906	COSTCO MEMBERSHIP	111900	11/17/17	300.00
000037	CRYSTAL SPRINGS WATER CO	111901	11/17/17	31.30
000207	DEPARTMENT OF JUSTICE	111902	11/17/17	32.00
003632	DIAMOND STEEL CO, INC	111903	11/17/17	108.66
003248	EARTHWORKS	111904	11/17/17	40,480.00
000375	FIRST ALARM SECURITY & P	111905	11/17/17	74.32
001828	GONZALES/GABE	111906	11/17/17	20.00
000615	HOHMANN/PATRICK J.	111907	11/17/17	38.52
003266	INTERGRITY AUTOMOTIVE	111908	11/17/17	574.09
000430	INTERSTATE BATTERIES	111909	11/17/17	1,186.29
001903	JONES/KIMARIE	111910	11/17/17	20.00
003592	KAHN/JESSICA	111911	11/17/17	30.00
001333	LARA/JESUS D	111912	11/17/17	874.35
003321	LOPEZ/RENE	111913	11/17/17	20.00
003403	MAR-KEN INTERNATIONAL PO	111914	11/17/17	585.00
001591	MARKELL/ROD	111915	11/17/17	1,974.00
001815	MC GRATH/TRISH	111916	11/17/17	20.00
000195	MESITI-MILLER ENGINEERIN	111917	11/17/17	19,222.86
003171	MICHALAK/GENE	111918	11/17/17	110.00
000083	MISSION UNIFORM SERVICE	111919	11/17/17	1,136.02
001872	NORTH CENTRAL LABORATORI	111920	11/17/17	315.53
000089	OLIVE SPRINGS QUARRY INC	111921	11/17/17	108.28
001982	PEAVEY COMPANY/LYNN	111922	11/17/17	47.96
003323	POMPETTE/NICOLE	111923	11/17/17	20.00
003613	PRO SQUAD	111924	11/17/17	124.44
001097	PRODESSE PROPERTY GROUP	111925	11/17/17	3,523.52

Check Register

BANK	VENDOR	CHECK#	DATE	AMOUNT	
BA	GENERAL CHECKING ACCOUNT				
	001894 S.V. WATER DISTRICT - BU	111926	11/17/17	72.98	
	000294 SANTA CRUZ CNTY TAX COLL	111927	11/17/17	513.14	
	003478 SHARPS SOLUTIONS, LLC	111928	11/17/17	75.00	
	003085 SHRED-IT USA	111929	11/17/17	578.65	
	003599 SUN BADGE CO	111930	11/17/17	115.64	
	000153 THOMSON REUTERS-WEST	111931	11/17/17	308.30	
	003548 TORO PETROLEUM CORP	111932	11/17/17	2,382.25	
	001366 U.S. BANCORP OFFICE	111933	11/17/17	342.81	
	001342 WELCH/JAMES	111934	11/17/17	20.00	
	003008 WILLIAMS/JESSE	111935	11/17/17	20.00	
	002021 ZOOM	111936	11/17/17	527.01	
	GENERAL CHECKING ACCOUNT			234,845.02	***

SCOTTS VALLEY ACCOUNTS PAYABLE
CITY OF SCOTTS VALLEY
11/16/2017 16:00:25
GL540R-V08.05 PAGE 3

Check Register

BANK	VENDOR	CHECK#	DATE	AMOUNT
REPORT TOTALS:				234,845.02

RECORDS PRINTED - 000119

GL540R

FUND RECAP:

FUND	DESCRIPTION	DISBURSEMENTS
----	-----	
001	GENERAL	134,699.76
002	RECYCLING/ENVIRONMENTAL	4,392.03
004	RECREATION	7,192.49
010	WASTEWATER OPERATIONS	15,134.34
011	TERTIARY TREATMENT PLANT	2,703.66
019	AFFORDABLE HOUSING	1,974.00
023	SVRDA SUCCESSOR AGENCY	7,143.90
028	SENIOR CENTER	1,140.10
123	COMMUNITY FACILITY CENTER	761.88
150	GENERAL CAPITAL IMPROVEMENTS	59,702.86
TOTAL ALL FUNDS		234,845.02

BANK RECAP:

BANK	NAME	DISBURSEMENTS
----	-----	
BA	GENERAL CHECKING ACCOUNT	234,845.02
TOTAL ALL BANKS		234,845.02

SCOTTS VALLEY ACCOUNTS PAYABLE
11/22/2017 17:09:13 Check Register

CITY OF SCOTTS VALLEY
GL050S-V08.05 COVERPAGE
GL540R

Report Selection:

RUN GROUP... 112217 COMMENT... A/P AS OF NOV 22 2017

DATA-JE-ID DATA COMMENT

W-11222017-707 A/P AS OF NOV 22 2017

Run Instructions:

Jobq	Banner	Copies	Form	Printer	Hold	Space	LPI	Lines	CPI	CP	SP	RT
L		01		CASCPRT01	Y	S	6	066	10			

BANK	VENDOR	CHECK#	DATE	AMOUNT	
BA	GENERAL CHECKING ACCOUNT				
	000182 A SIGN ASAP	111937	11/22/17	52.70	
	003644 ACCURATE AIR ENGINEERING	111938	11/22/17	2,368.89	
	003457 ADAMS/TROY	111939	11/22/17	35.26	
	001405 AFLAC-FLEX ONE	111940	11/22/17	3,419.25	
	003408 ALLANIZ/LUPIA	111941	11/22/17	768.00	
	000563 APPI	111942	11/22/17	1,003.62	
	001009 ARD/KRISTIN	111943	11/22/17	31.35	
	000998 ASSOCIATED SERVICES CO.	111944	11/22/17	98.61	
	003643 AUNT LALI'S	111945	11/22/17	253.50	
	001822 BC LABORATORIES INC.	111946	11/22/17	254.00	
	001066 BEHAVIORAL HEALTH CARE I	111947	11/22/17	122.00	
	001593 BENEDICT DDS/NANETTE	111948	11/22/17	325.60	
	001040 BOGNER SHEET METAL	111949	11/22/17	65.44	
	000018 BRINK'S TROPHY SHOPPE	111950	11/22/17	81.75	
	000773 CENTRAL COAST LANDSCAPE	111951	11/22/17	383.00	
	001546 CRAIG/ROBERT J	111952	11/22/17	125.00	
	000037 CRYSTAL SPRINGS WATER CO	111953	11/22/17	62.30	
	000207 DEPARTMENT OF JUSTICE	111954	11/22/17	222.00	
	003500 ECOFERT, INC	111955	11/22/17	425.00	
	003206 ERNIE'S AUTO CENTER	111956	11/22/17	169.65	
	000202 FEDERAL EXPRESS	111957	11/22/17	241.71	
	003642 GOOD TIMES	111958	11/22/17	350.00	
	003575 HARUYAMA/JENNIFER	111959	11/22/17	40.00	
	001673 LINCOLN FINANCIAL GROUP	111960	11/22/17	1,396.96	
	000618 MANDEGO, INC.	111961	11/22/17	530.10	
	.15233 MONAGHAN/SEAN M	111962	11/22/17	250.00	
	000967 MONTEREY BAY SYSTEMS	111963	11/22/17	109.05	
	003425 MOUNTAIN MIKE'S PIZZA	111964	11/22/17	98.07	
	001779 MUSICAL ME, INC	111965	11/22/17	3,062.40	
	001615 OLIN CORP-CHLOR ALKALI	111966	11/22/17	2,125.50	
	001802 ONTRAC	111967	11/22/17	29.53	
	001133 PRZ CONSULTING	111968	11/22/17	1,500.00	
	.15231 REBHANN/THUY	111969	11/22/17	300.00	
	001883 S.W.R.C.B.	111970	11/22/17	8,539.00	
	000116 S&S ARTS & CRAFTS	111971	11/22/17	300.82	
	000122 SANTA CRUZ/CITY OF	111972	11/22/17	4,575.89	
	000129 SCOTTS VALLEY BANNER	111973	11/22/17	229.50	
	000131 SCOTTS VALLEY MEDICAL	111974	11/22/17	74.00	
	000133 SCOTTS VALLEY SPRINKLER	111975	11/22/17	23.17	
	000405 SILVERSTEIN/THOMAS	111976	11/22/17	4,426.75	
	.15232 SILVIA/DONNA	111977	11/22/17	61.49	
	001361 STEVENS DDS/JOHN A	111978	11/22/17	144.00	
	001831 USA BLUE BOOK	111979	11/22/17	217.68	
	003590 VARGAS ACADEMY OF GYMNAS	111980	11/22/17	2,086.00	
	001106 VERIZON WIRELESS	111981	11/22/17	1,008.38	
	003145 WAGE WORKS	111982	11/22/17	165.50	
	001625 YOSHIDA DDS/NOREEN	111983	11/22/17	253.50	
	002021 ZOOM	111984	11/22/17	10.99	
	GENERAL CHECKING ACCOUNT			42,416.91	***

Check Register

BANK	VENDOR	CHECK#	DATE	AMOUNT
REPORT TOTALS:				42,416.91

RECORDS PRINTED - 000085

GL540R

FUND RECAP:

FUND	DESCRIPTION	DISBURSEMENTS
----	-----	
001	GENERAL	9,289.31
002	RECYCLING/ENVIRONMENTAL	4,269.50
004	RECREATION	13,012.30
010	WASTEWATER OPERATIONS	14,340.81
011	TERTIARY TREATMENT PLANT	167.17
028	SENIOR CENTER	230.13
050	PINEWOOD EST LNDSCP MAINT DT	383.00
112	DENTAL INS INTERNAL SERV	723.10
123	COMMUNITY FACILITY CENTER	1.59
TOTAL ALL FUNDS		42,416.91

BANK RECAP:

BANK	NAME	DISBURSEMENTS
----	-----	
BA	GENERAL CHECKING ACCOUNT	42,416.91
TOTAL ALL BANKS		42,416.91

City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: December 6, 2017

TO: The Honorable Mayor and City Council

FROM: Steve Walpole, Chief of Police

APPROVED: Jenny D. Haruyama, City Manager

SUBJECT: **SECOND READING AND ADOPTION OF ORDINANCE NO. 159.1
MODIFYING SECTIONS 5.06.020, 5.06.030, 5.06.040 AND 5.06.080
OF CHAPTER 5.06 OF TITLE 5 OF THE SCOTTS VALLEY
MUNICIPAL CODE REGARDING BINGO**

SUMMARY OF ISSUES

The Scotts Valley Municipal Code Chapter 5.06 was adopted in 1994 and regulates bingo games played in the City of Scotts Valley. At the time of adoption, the Chapter 5.06 mirrored State of California Penal Code Section 326.5 which regulates all bingo games in California. Due to changes in State law, the City must amend Chapter 5.06 to comply with Penal Code Section 326.5.

To comply with State law, the following modifications to Chapter 5.06 are proposed:

Section 5.06.020

The definition of bingo must be modified.

Section 5.06.030

This section must be modified to increase the bingo game prize value from \$250 to \$500.

Sections 5.06.040 and 5.06.080

Only certain organizations are permitted to conduct bingo games in California. Currently, Scotts Valley Municipal Code Section 5.06.030 lists organizations permitted to conduct bingo games which include those who have a tax exempt status and "mobile home park associations and senior citizens organizations." However, California Penal Code 326.5(a) lists the same organizations permitted to conduct bingo games, however it also includes a few more tax exempt organizations under the California Revenue and Taxation Code

(specifically 23701d, 23701k, and 23701w) and “charitable organizations affiliated with a school district; and if the receipts of those games are used only for charitable purposes.” The proposed ordinance includes these other organizations. Similarly, Section 5.06.080 needed to be updated to include these additional organizations.

On November 15, 2017, the City Council approved the first reading and introduction of Ordinance No. 159.1, modifying Sections 5.06.020, 5.06.030, 5.06.040 and 5.06.080 to Title 5 of the Scotts Valley Municipal Code regarding Bingo.

FISCAL IMPACT

There is no fiscal impact to the City.

RECOMMENDATION

It is recommended that the City Council approve the second reading and adoption of Ordinance No. 159.1, modifying Sections 5.06.020, 5.06.030, 5.06.040 and 5.06.080 to Title 5 of the Scotts Valley Municipal Code regarding Bingo.

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ORDINANCE NO. 159.1

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SCOTTS
MODIFYING SECTIONS 5.06.020, 5.06.030, 5.06.040 AND 5.06.080
OF CHAPTER 5.06 OF TITLE 5 OF THE
SCOTTS VALLEY MUNICIPAL CODE REGARDING BINGO**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SCOTTS VALLEY AS
FOLLOWS:**

SECTION 1. Section 5.06.020 of Chapter 5.06 of Title 5 of the Scotts Valley Municipal Code is hereby amended to read as follows:

“5.06.020 – Bingo defined.

As used in this chapter, "bingo" means a game of chance in which prizes are awarded on the basis of designated numbers or symbol that are marked or covered by the player on a tangible card in the player's possession and that conform to numbers or symbols, selected at random and announced by a live caller. The game of bingo shall include tangible cards having numbers or symbols that are concealed and preprinted in a manner providing for distribution of prizes. Electronics or video displays shall not be used in connection with the game of bingo, except in connection with the caller's drawing of numbers or symbols and the public display of that drawing. The winning cards shall not be known prior to the game by any person participating in the playing or operation of the bingo game. All preprinted cards shall bear the legend, "for sale or use only in a bingo game authorized under California law and pursuant to local ordinance." Only a covered or marked tangible card possessed by a player and presented to an attendant may be used to claim a prize.”

SECTION 2. Section 5.06.030 of Chapter 5.06 of Title 5 of the Scotts Valley Municipal Code is hereby amended to read as follows:

“5.06.030 – Organizations permitted to conduct bingo games.

No person, organization or other legal entity shall be permitted to conduct bingo games in the incorporated area of the city unless such persons, organizations or other legal entities possess a valid certificate or letter from the Franchise Tax Board and the Internal Revenue Service stating that they are exempted from the payment of the bank and corporate tax by Sections 23701a, 23701b, 23701d, 23701e, 23701f, 23701g, 23701k, 23701w, and 23701l of the Revenue and Taxation Code and by mobilehome park associations, ~~and~~ senior citizens organizations, and charitable organizations affiliated with a school district ("authorized organizations"); provided that such authorized organization holds a valid license and pays a license fee pursuant to the provisions of this chapter; and provided that the authorized organization has been in continual existence within the city for a period of three years prior to the date application is made for bingo license; and provided that the receipts of those games are used only for charitable purposes.”

SECTION 3. Section 5.06.040 of Chapter 5.06 of Title 5 of the Scotts Valley Municipal Code is hereby amended to read as follows:

“5.06.040 – Rules and regulations.

J. Total Value of Prizes. The total value of prizes awarded during the conduct of any bingo games shall not exceed five hundred dollars (\$500) in cash or kind, or both, for each separate game which is held.

SECTION 4. Section 5.06.080 of Chapter 5.06 of Title 5 of the Scotts Valley Municipal Code is hereby amended to read as follows:

“5.06.080 – Application for license required— Contents of license.

C. Attached copies of certificates or letters evidencing exempt status under Section 170 c2 of the Internal Revenue Code of 1954, received from the Franchise Tax Board and the Internal Revenue Service or proof that the organization is a validly existing mobile home park association, senior citizens' organizations, or charitable organization affiliated with a school district.

SECTION 5. SEVERABILITY. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction such portion shall be deemed a separate, distinct and independent provision of such Ordinance and shall not affect the validity of the remaining portions thereof.

SECTION 6. REPEALS CONFLICTING ORDINANCES. All other ordinances of the City of Scotts Valley or provisions of the Scotts Valley Municipal Code which are in conflict with this Ordinance are hereby repealed to the extent of such conflict.

SECTION 7. CEQA COMPLIANCE. The City Council finds and determines that the enactment of this Ordinance is not a “project” as that term is used in the California Environmental Quality Act (“CEQA,” Cal. Pub. Resources Code Section 21000 et seq.) or the State CEQA Guidelines (Cal. Code of Regs., Title 14, Section 15000 et seq.). Therefore, no environmental assessment is required or necessary.

SECTION 8. EFFECTIVE DATE. This Ordinance shall take effect thirty (30) days after the date of its adoption. Prior to the expiration of fifteen (15) days from the date of adoption, this Ordinance shall be published in at least three (3) public places.

* * * * *

This Ordinance was introduced on the 15th day of November, 2017, and passed and adopted by the City Council of the City of Scotts Valley on the 6th day of December, 2017, by the following votes:

AYES: AGUILAR, DILLES, JOHNSON, LIND, REED

NOES: NONE

ABSTAIN: NONE

ABSENT: NONE

Randy Johnson, Mayor

ATTEST:

Tracy A. Ferrara, City Clerk

APPROVED AS TO FORM:

Kirsten Powell, City Attorney

City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: December 6, 2017

TO: Honorable Mayor and City Council

FROM: Scott Hamby, Public Works Director

APPROVED: Jenny Haruyama, City Manager

SUBJECT: UPDATE OF WASTEWATER PLANT OPERATOR-IN-TRAINING (OIT) JOB CLASS SPECIFICATION

SUMMARY OF ISSUE

At the November 15, 2017 City Council meeting, Council authorized the addition of a Wastewater Plant Operator-In-Training (OIT) position. Prior to any recruitment activity, the job class specification should be updated to reflect current industry standards and best practices. The job specification was last updated in September 1988.

The proposed modifications include requiring a Class C motor vehicle operator's license and eliminating the active possession of a Class B license at the time of application. The Class B license can be obtained within one year from the date of employment. Providing flexibility regarding this requirement will greatly increase the candidate pool. Additionally, the updated classification changes the required Grade I Operator certification time from 3 years to 18 months. Requiring a certification within 18 months helps to ensure the continued efficient operation of the plant and allows the operator to participate in on call schedule rotations.

The updated job classification language is reflected below:

Education, Experience and Licenses: Any combination equivalent to completion of high school, some experience in routine maintenance of electrical and motor driven equipment, and willingness to take the qualifying course for **operator** certification; possession of a valid California motor vehicle operator's Class **C B** license; **the ability to obtain a Class B license within one year from the date of employment.** The operator-in-training must successfully complete the requirements for Grade I certificate within **18 months ~~three years~~** from the date of employment. This position may require the use of respiratory protection. The wearing of beards or other facial hair which intrudes on the face piece-face seal may be prohibited.

FISCAL IMPACT

There is no fiscal impact associated with the modification of the OIT job specification.

STAFF RECOMMENDATION

It is recommended that the Council approve the proposed changes to the Wastewater Plant Operator-In- Training (OIT) job class specification.

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Job Class Specification for Wastewater Plant Operator-In-Training	3

CITY OF SCOTTS VALLEY CLASS SPECIFICATION

WASTEWATER PLANT OPERATOR IN TRAINING

JOB PURPOSE

Under supervision, to learn and assist in the operation and maintenance of the wastewater treatment plant; and to do related work as required. This is the entry level class in the wastewater operations series.

EXAMPLES OF DUTIES

Essential Duties:

- Learns, assists, and operates and checks the operation and maintenance of (wastewater treatment plant equipment and machinery such as valves, motors, chlorinators, filters, chemical feeders, and clarifiers;
- Performs lift station and collection system maintenance;
- Checks and regulates pressures and flow of wastewater;
- Reads gauges, dials and other instruments and records data;
- Oils, greases, and cleans equipment;
- Cleans, adjusts, and repacks valves and pumps;
- Collects and assists in performing various laboratory tests;
- Assists with mechanical repairs;
- Operates sewer jet truck and ten wheel dump truck;
- Performs maintenance work such as sweeping, cleaning, sanding, painting, mowing, and watering lawns and caring for plants and shrubbery.

Marginal Duties:

- Performs related work as required.

EMPLOYMENT STANDARDS

Education, Experience and Licenses: Any combination equivalent to completion of high school and some experience in routine maintenance of electrical and motor driven equipment, and willingness to take the qualifying course for [operator](#) certification; possession of a valid California motor vehicle operator's Class [CB](#) license; [the ability to obtain a Class B license within one year from the date of employment](#). The operator-in-training must successfully complete the requirements for Grade I certificate within [18 months](#) ~~three years~~ from the date of employment. This position may require the use of respiratory protection. The wearing of beards or other facial hair which intrudes on the face piece-face seal may be prohibited.

Ability to: Understand and follow oral and written instructions; lift heavy articles; learn wastewater treatment processes; operate a 10-wheel, 3-axle dump truck; learn to operate equipment used in a wastewater treatment plant; read and interpret gauges and recording devices reflecting plant operations; maintain effective working relationships with other employees; communicate in a courteous manner with the public; and be available for 24-hour on-call duty when assigned.

Knowledge of: The care and maintenance of mechanical equipment such as pumps, valves and electric motors; basic mechanical and mathematical principles; proper procedures for working safely; buildings and grounds maintenance practices.

CITY COUNCIL APPROVAL DATE: ~~September 21, 1988~~ December 6, 2017

City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: December 6, 2017

TO: Honorable Mayor and City Council

FROM: Laurie Grundy, Senior Accountant

APPROVED: Jenny Haruyama, City Manager

**SUBJECT: FY 2016/17 ANNUAL REPORT FOR DEVELOPMENT
IMPACT FEES**

SUMMARY OF ISSUE

In compliance with Government Code Section 66006, attached is a report of Development Impact Fee Funds for the year ended June 30, 2017. This report reflects:

1. Fund balances at the beginning of the fiscal year, July 1, 2016.
2. Impact fees received during the year.
3. Grant revenues received during the year.
4. Interest earned.
5. The amounts spent on projects during the year.
6. The percentage of the project expenditures funded with impact fees.
7. Ending fund balances at June 30, 2017.

Each project for which costs were incurred is listed. All projects on the list have previously been approved by the City Council as impact fee projects.

FISCAL IMPACT

The report shows that the City had \$4,024,578 in impact fee fund balances at June 30, 2017.

STAFF RECOMMENDATION

It is recommended that the City Council accept the FY 2016/2017 Annual Report of Development Impact Fees.

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CITY OF SCOTTS VALLEY
REPORT OF DEVELOPMENT IMPACT FEE FUNDS
FOR THE YEAR ENDED JUNE 30, 2017

FUND NO.	FUND NAME & PROJECT DESCRIPTION	FUND BALANCE 7/1/2016	2016 / 2017 FISCAL YEAR						% OF COSTS PAID BY IMPACT FEES	FUND BALANCE 6/30/2017
			IMPACT FEES	GRANTS	OTHER REVENUE	INTEREST EARNINGS	COST DETAIL	TOTAL COSTS		
7	STORM DRAINAGE FACILITIES Hacienda Storm Drain	\$ 20,173	\$ 12,734	\$ -	\$ -	\$ 137	(8,730)	\$ (8,730)	100%	\$ 24,314
8	STREETS & THOROUGHFARES City-wide Traffic Plan Sign Program Mt. Hermon Road Improvements Mt. Hermon Intersection (CIP)	1,214,447	117,085	-	-	6,291	(27,171) (3,942) (286,032) (188,594)	(505,739)	100% 100% 100% 0%	832,084
9	PARKS & RECREATION FACILITIES MacDorsa Park Play Structure Siltanen Park Improvements	442,683	104,743	-	-	2,392	(50,000) (11,813)	(61,813)	100% 100%	488,005
12	WASTEWATER TREATMENT FACILITIES SCADA & Alarm Migration Pasatiempo Encroachment	2,149,073	58,280	-	-	6,284	(42,670) (1,996)	(44,666)	100% 100%	2,168,971
21	GENERAL FACILITIES & EQUIPMENT	53,134	6,803	-	-	296		-		60,233
27	LAW ENFORCEMENT FACILITIES & EQUIPMENT	185,860	23,486	\$ -	\$ -	1,032		-		210,378
86	LIBRARY FACILITIES ADA Improvements	229,761	11,885	-	-	1,231	(2,284)	(2,284)	0%	240,593
GRAND TOTALS		<u>\$ 4,295,131</u>	<u>\$ 335,016</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ 17,663</u>		<u>\$ (623,232)</u>		<u>\$ 4,024,578</u>

City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: December 6, 2017
TO: Honorable Mayor and City Council
FROM: Laurie Grundy, Senior Accountant
APPROVED: Jenny Haruyama, City Manager
SUBJECT: 5-YEAR DEVELOPMENT IMPACT FEE REPORT

SUMMARY OF ISSUE

The City collects various development impact fees and currently has funds remaining in each of the accounts. Whether these funds are committed or uncommitted, Section 66001(d) of the Government Code Section requires certain findings stated below to be made every five years after the first deposit of the fees.

1. Identify the purpose to which the fee is to be put.
2. Demonstrate a reasonable relationship between the fee and the purpose for which it is charged.
3. Identify all sources and amounts of funding anticipated to complete financing in incomplete improvements.
4. Designate the approximate dates on which the funding is expected to be deposited into the appropriate account or fund.

The City last made these findings on December 19, 2012. The exhibits attached to Resolution 1613.4 makes the findings for each of the City's development impact fees. The exhibits project the collection of impact fees and investment earnings through the fiscal year ended June 30, 2030, the date of City build out per the City's General Plan.

FISCAL IMPACT

The City will continue to collect the development impact fees to construct the projects for which the fees were established.

STAFF RECOMMENDATION

It is recommended that that City Council approve Resolution No. 1613.4 making certain findings regarding the City's development impact fees.

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RESOLUTION NO. 1613.4

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SCOTTS VALLEY MAKING CERTAIN FINDINGS REGARDING DEVELOPMENT IMPACT FEES

WHEREAS, the City of Scotts Valley collects various development impact fees as established by Ordinance No. 143 which was adopted by the Scotts Valley City Council on January 16, 1991; and

WHEREAS, Section 66001(d) of the Government Code requires that for the fifth fiscal year following the first deposit into the account or fund, and every five years thereafter, the local agency shall make certain findings with respect to that portion of the account or fund remaining unexpended, whether committed or uncommitted; and

WHEREAS, the City last adopted Resolution No. 1613 on December 17, 1997; Resolution 1613.1 on November 20, 2002; Resolution 1613.2 on November 21, 2007, and Resolution 1613.3 on December 19, 2012 making such findings; and

WHEREAS, at June 30, 2017, monies had been collected by the City of Scotts Valley, deposited into the various Impact Fee Funds and not yet spent.

NOW, THEREFORE, the City Council of the City of Scotts Valley hereby, in accordance with Government Code Section 66001(d), incorporates by this reference the following as Exhibits A-G:

- Exhibit A - Storm Drainage Facilities Impact Fee Fund
- Exhibit B - Streets & Thoroughfares Facilities Impact Fee Fund
- Exhibit C - Parks & Recreation Facilities Impact Fee Fund
- Exhibit D - Wastewater Treatment Facilities Impact Fee Fund
- Exhibit E - General Facilities & Equipment Impact Fee Fund
- Exhibit F - Law Enforcement Facilities & Equipment Impact Fee Fund
- Exhibit G - Library Facilities Impact Fee fund

Each specific Exhibit makes those findings required by Section 66001(d) of the Government Code for each category of impact fee and these findings are hereby adopted.

The above and foregoing Resolution was duly and regularly adopted by the City Council of the City of Scotts Valley at a regular meeting held on the 6th day of December, 2017, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Approved: _____
Randy Johnson, Mayor

Attest: _____
Tracy A. Ferrara, City Clerk

EXHIBIT A

STORM DRAINAGE FACILITIES IMPACT FEE FUND

Purpose To Which Fee Is To Be Put:

Storm drainage facilities within the West Branch-Carbonera Creek, Carbonera Creek, Camp Evers Tributary, and Bean Creek sub-basins.

Relationship Between Fee and Construction of Improvements:

Ordinance 143 and the management services institute report, copies of which are on file in the office of the City Clerk, establishing development impact mitigation fees on all development within the City, did demonstrate and still do demonstrate a reasonable relationship between the fee and the purpose for which it is charged.

Sources and Amounts of Funding Anticipated To Complete Financing in Incomplete Improvements:

Anticipated
Dates

Fund Balance at 6/30/17 \$ 24,314

Projected Future Impact Fees:

<u>Sub-Basin</u>	<u>Fee Per Sq. Ft.</u>	<u># of Sq. Ft.</u>	<u>Total Revenue</u>		
Carbonera Creek	\$ 0.24	1,008,600	\$ 242,064		
Camp Evers Tributary	\$ 0.11	1,575,760	173,334		
Bean Creek	\$ 0.15	130,500	<u>19,575</u>	434,973	7/1/17 to 6/30/30

Projected Future Interest Earnings on Impact Fee Fund 3,250 7/1/17 to
6/30/30

Sum of Projected Revenues \$ 462,537

EXHIBIT B

STREETS & THOROUGHFARES IMPACT FEE FUND

Purpose To Which Fee Is To Be Put:

Street improvements.

Relationship Between Fee and Construction of Improvements:

Ordinance 143 and the management services institute report, copies of which are on file in the office of the City Clerk, establishing development impact mitigation fees on all development within the City, did demonstrate and still do demonstrate a reasonable relationship between the fee and the purpose for which it is charged.

Sources and Amounts of Funding Anticipated To Complete Financing in Incomplete Improvements:

Anticipated
Dates

Fund Balance at 6/30/17 \$ 832,084

Projected Future Impact Fees:

Type	Fee	# of Units/Sq. Ft.	Total Revenue		
Residential:					
Single-Family (Units)	\$ 5,775	210	\$ 1,212,750		
Multi-Family (Units)	\$ 3,426	737	2,524,962		
Commercial (Sq. Ft.)	\$ 11.48	341,469	<u>3,920,064</u>	7,657,776	7/1/17 to 6/30/30
Projected Future Interest Earnings on Impact Fee Fund			<u>65,000</u>		7/1/17 to 6/30/30
Sum of Projected Revenues			<u>\$ 8,554,860</u>		

EXHIBIT C

PARKS & RECREATION FACILITIES FEE FUND

Purpose To Which Fee Is To Be Put:

Park development and acquisition.

Relationship Between Fee and Construction of Improvements:

Ordinance 143 and the management services institute report, copies of which are on file in the office of the City Clerk, establishing development impact mitigation fees on all development within the City, did demonstrate and still do demonstrate a reasonable relationship between the fee and the purpose for which it is charged.

Sources and Amounts of Funding Anticipated To Complete Financing in Incomplete Improvements:

Anticipated
Dates

Fund Balance at 6/30/17 \$ 488,005

Projected Future Impact Fees:

Type	Fee	# of Units	Total Revenue		
R-R-2.5 Rural	\$ 10,255	11	\$ 112,805		
R-140-Estate	\$ 10,255	15	153,825		
R-1-10-Single Family - Det.	\$ 10,255	45	461,475		
R-M-6/R-M-8-Two Family	\$ 7,985	316	2,523,260		
R-H-Multiple Family	\$ 5,126	540	2,768,040		
Mobile Homes / 2nd Unit	\$ 5,331	20	106,620	6,126,025	7/1/17 to 6/30/30
Projected Future Interest Earnings on Impact Fee Fund				26,000	7/1/17 to 6/30/30
Sum of Projected Revenues				\$ 6,640,030	

EXHIBIT D

WASTEWATER FACILITIES IMPACT FEE FUND

Purpose To Which Fee Is To Be Put:

Wastewater facility improvements

Relationship Between Fee and Construction of Improvements:

Ordinance 143 and the management services institute report, copies of which are on file in the office of the City Clerk, establishing development impact mitigation fees on all development within the City, did demonstrate and still do demonstrate a reasonable relationship between the fee and the purpose for which it is charged.

Sources and Amounts of Funding Anticipated To Complete Financing in Incomplete Improvements:

Anticipated
Dates

Fund Balance at 6/30/17 \$ 2,168,971

Projected Future Impact Fees:

<u>Type</u>	<u>Fee</u>	<u># of Units</u>	<u>Total Revenue</u>		
Residential:					
Single-Family	\$ 6,137	210	\$ 1,288,770		
Multi-Family	\$ 4,440	737	3,272,280		
Commercial / Industrial	\$ 26.12	341,469	<u>8,919,170</u>	13,480,220	7/1/17 to 6/30/30
Projected Future Interest Earnings on Impact Fee Fund				<u>260,000</u>	7/1/17 to 6/30/30
Sum of Projected Revenues				<u><u>\$ 15,909,191</u></u>	

EXHIBIT E

GENERAL FACILITIES & EQUIPMENT FEE FUND

Purpose To Which Fee Is To Be Put:

Corporation Yard improvements, renovation of Civic Center,
City maintenance fleet expansion, and Scotts Valley Senior Center.

Relationship Between Fee and Construction of Improvements:

Ordinance 143 and the management services institute report, copies of which are on file in the office of the City Clerk, establishing development impact mitigation fees on all development within the City, did demonstrate and still do demonstrate a reasonable relationship between the fee and the purpose for which it is charged.

Sources and Amounts of Funding Anticipated To Complete Financing in Incomplete Improvements:

Anticipated
Dates

Fund Balance at 6/30/17 \$ 60,233

Projected Future Impact Fees:

Type		Fee	# of Units	Total Revenue		
Residential	(Units)	\$ 438	947	\$ 414,786		
Commercial	(Acres)	\$ 1,157	7.84	<u>9,071</u>	423,857	7/1/17 to 6/30/30

Projected Future Interest Earnings on Impact Fee Fund	<u>7,800</u>	7/1/17 to 6/30/30
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Sum of Projected Revenues	<u><u>\$ 491,890</u></u>	
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EXHIBIT F

LAW ENFORCEMENT FACILITIES & EQUIPMENT FEE FUND

Purpose To Which Fee Is To Be Put:

Construction of a new police facility, equipment, and training for additional officers and dispatchers, police fleet expansion, and records management system upgrade.

Relationship Between Fee and Construction of Improvements:

Ordinance 143 and the management services institute report, copies of which are on file in the office of the City Clerk, establishing development impact mitigation fees on all development within the City, did demonstrate and still do demonstrate a reasonable relationship between the fee and the purpose for which it is charged.

Sources and Amounts of Funding Anticipated To Complete Financing in Incomplete Improvements:

Anticipated
Dates

Fund Balance at 6/30/17 \$ 210,378

Projected Future Impact Fees:

<u>Type</u>	<u>Fee</u>	<u># of Units</u>	<u>Total Revenue</u>		
Residential (Units)	\$ 1,013	947	959,311		
Commercial / Industrial (Acres)	\$ 23,260	7.84	<u>182,358</u>	1,141,669	7/1/17 to 6/30/30
Projected Future Interest Earnings on Impact Fee Fund			<u>26,000</u>		7/1/17 to 6/30/30
Sum of Projected Revenues			<u><u>\$ 1,378,047</u></u>		

EXHIBIT G

LIBRARY IMPACT FEE FUND

Purpose To Which Fee Is To Be Put:

Tier II Library

Relationship Between Fee and Construction of Improvements:

Ordinance 143 and the management services institute report, copies of which are on file in the office of the City Clerk, establishing development impact mitigation fees on all development within the City, did demonstrate and still do demonstrate a reasonable relationship between the fee and the purpose for which it is charged.

Sources and Amounts of Funding Anticipated To Complete Financing in Incomplete Improvements:

Anticipated
Dates

Fund Balance at 6/30/17 \$ 240,953

Projected Future Impact Fees:

<u>Type</u>	<u>Fee</u>	<u># of Units</u>	<u>Total Revenue</u>		
R-R-2.5 Rural	\$ 1,165	11	12,815		
R-140-Estate	\$ 1,089	15	16,335		
R-1-10-Single Family - Det.	\$ 858	45	38,610		
R-M-6/R-M-8-Two Family	\$ 858	316	271,128		
R-H-Multiple Family	\$ 858	540	463,320		
Mobile Homes / 2nd Unit	\$ 745	20	<u>14,900</u>	817,108	7/1/17 to 6/30/30

Projected Future Interest Earnings on Impact Fee Fund

19,500 7/1/17 to
6/30/30

Sum of Projected Revenues

\$ 1,077,561

City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: December 6, 2017

TO: Honorable Mayor and City Council

FROM: Taylor Bateman, Acting Community Development Director

APPROVED: Jenny D. Haruyama, City Manager

SUBJECT: **ACCEPT INFORMATIONAL REPORT REGARDING ADA
ACCESSIBILITY COMMITTEE WORK PLAN**

SUMMARY OF ISSUE

On August 16, 2017, the City Council reviewed the ADA Committee's recent work and discussed future work plans. It was recommended that the Committee continue to provide input on the ADA Transition Plan, Capital Improvement Program, and public facility ADA improvements. In response to this Council direction, the Committee prepared a list of various City sidewalks that might benefit from accessibility improvements. The Committee requested that the Public Works Department review the recommended list and provide input on how and when accessibility improvements could be made.

FISCAL IMPACT

There is no fiscal impact associated with the request; however, it will require staff time and compete with other city-wide priorities.

STAFF RECOMMENDATION

It is recommended that Council accept the attached informational report. Public Works will evaluate the ADA Accessibility Committee's recommended list of City sidewalks and present a proposed work plan to Council at a later date.

City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: December 6, 2017

TO: Honorable Mayor and City Council

FROM: Taylor Bateman, Acting Community Development Director

APPROVED: Jenny Haruyama, City Manager

**SUBJECT: CONSIDER APPROVAL OF GLENWOOD OPEN SPACE
PRESERVE LONG TERM MANAGEMENT PLAN**

SUMMARY OF ISSUE

In 2003, the City Council approved the creation of the 170 acre Glenwood Open Space area and an accompanying Phase I Open Space Management Plan. The Phase I plan was developed with extensive monitoring requirements to establish a base line of information which could be used for the long term management of the property. In 2009, the City Council authorized staff and the Land Trust of Santa Cruz County (Land Trust) to begin preparing a Phase II Long Term Management Plan for the property. At that time, the City hired environmental consultants WRA to prepare the Glenwood Open Space Preserve Long Term Management Plan (LTMP) in coordination with the US Fish and Wildlife Service. The LTMP has recently been completed and embodies a collaborative effort between the City of Scott Valley and the Land Trust of Santa Cruz County to steward the Glenwood Open Space Preserve (Preserve).

The Preserve is located in the area between Scotts Valley High School, Canham Road, Tabor Road, Vine Hill Elementary School and Siltanen Park. The Preserve is divided into parts by Glenwood Drive with the West Preserve, adjacent to the High School and the East Preserve, adjacent to Siltanen Park. The majority of the property is owned by the City and several smaller parcels are owned by the Land Trust. In 2003, the City granted a Conservation Easement to the Land Trust for the Preserve. Since that time the Preserve has been managed by the Land Trust.

LONG TERM MANAGEMENT PLAN

The LTMP lays out management and monitoring strategies to preserve the endangered and sensitive species and habitats that occur on the property, including the Ohlone tiger beetle, Scotts Valley spineflower, wetlands and riparian areas. The plan authorizes public access, and presents the opportunities and constraints for building and maintaining public access trails to ensure that the species and habitats are protected. The details of future trails, access points and parking areas will be determined in a future community engagement process.

Under the Plan, habitat management will continue to be performed primarily through livestock grazing, with additional vegetation management and erosion control activities. Pursuant to the Federal and State regulations public access management strategies are incorporated into the plan to ensure that public use is consistent with the protection and enhancement of sensitive species and habitats, and the grazing operations necessary to achieve that goal.

TRAIL PLANNING

With the completion of the Long Term Management Plan the City and Land Trust can start the planning process for future trails, access points, and general Preserve rules and regulations. Due to the fact that the West Preserve has few constraints it is anticipated that public access can be enhanced there quickly. Recently, the City and Land Trust have started trail planning for the West Preserve and will be collaborating with community members, the High School, and Salvation Army Camp Redwood Glen (the neighbor to the west). A collaborative effort is envisioned where community volunteers build the trails with design, supervision and training by professionals working under contract with the Land Trust. The Land Trust has a fundraising campaign underway dedicated to trails and it is anticipated that there will be some funding available for trails in the West Preserve. Planning for trails and access for the East Preserve will require more extensive community engagement, as there are neighborhoods adjacent to the property. It is anticipated that that trail planning will commence immediately with the goal of constructing trails on the West Preserve in 2018. The Public Works Department and Parks and Recreation Division will oversee this phase of the project.

PRESERVE MANAGEMENT

To date the Management of the Glenwood Preserve has been a collaborative effort between the City and the Land Trust. It is anticipated that this relationship will continue and that the City and Land Trust will enter into a new long-term management agreement, consistent with the Plan, which outlines roles and responsibilities. For example, the Land Trust would lead habitat enhancement, coordinate grazing and maintain related infrastructure, coordinate volunteer patrols, and continue to raise funds for trail construction. The City would lead public access planning, maintain public access infrastructure, and enforce rules.

Additionally, at the direction of the Scotts Valley Fire Protection District, the City will perform mowing and/or disking of fire fuel breaks within the Glenwood Open Space Preserve. In coordination with the District and the Land Trust, the City actively performs the disking of fire breaks within the preserve area on an annual basis.

FISCAL IMPACT

In 2003, grant funds from the California Wildlife Conservation Board were used to establish an endowment of \$1,070,000 for the protection of wildlife habitat and biodiversity on the property. That endowment, with expenditures overseen by the city, has supported management to date and has grown to approximately \$1.5 million. These

funds are projected to be sufficient for long-term planning purposes for habitat management and restoration. The endowment may not be used for the construction or maintenance of facilities such as parking areas, restrooms, and trails.

Staff time will be necessary to complete the public access planning process. There may be an increase in law enforcement and emergency services calls related to public access. Costs associated with the maintenance of trail facilities will be determined as part of the public access planning process. As noted above, the Land Trust has a fundraising campaign underway dedicated to trails and it is anticipate that there will be some funding available for trails.

ENVIRONMENTAL DETERMINATION

Adoption of the LTMP is exempt from the California Environmental Quality Act (CEQA) pursuant to Categorical Exemptions 15307 and 15308 as the LTMP enhances protection of natural resources and the environment.

STAFF RECOMMENDATION

It is recommended that the City Council:

- 1. Approve Glenwood Open Space Preserve Long Term Management Plan.
- 2. Direct Staff to update the MOU with the Land Trust for the ongoing management of the Glenwood Preserve.
- 3. Direct Staff to proceed with planning for public access on the Glenwood Preserve.

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LONG TERM MANAGEMENT PLAN
WITH AN EMPHASIS ON
THE OHLONE TIGER BEETLE,
SCOTTS VALLEY SPINEFLOWER,
AND SCOTTS VALLEY POLYGONUM

GLENWOOD OPEN SPACE PRESERVE
SCOTTS VALLEY, CALIFORNIA

Prepared for:

Land Trust of Santa Cruz County

City of Scotts Valley

Prepared by:

WRA, Inc.

Entomological Consulting Services, Ltd.

LD Ford, Rangeland Conservation Science

Biotic Resources Group

November 7, 2017

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1.0 INTRODUCTION

1.1 Overview

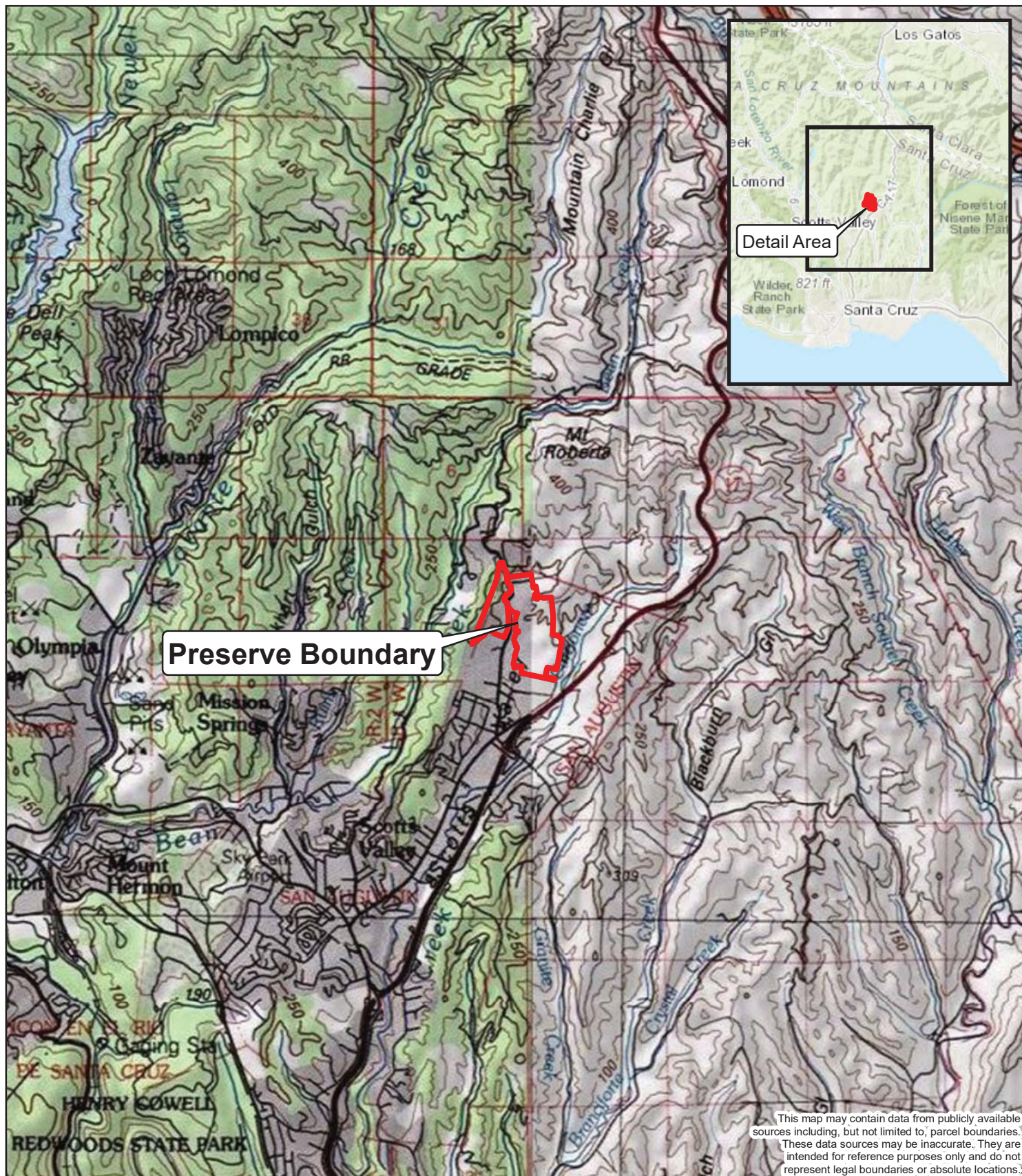
This Long Term Management Plan (LTMP) has been developed by the City of Scotts Valley (City) and the Land Trust of Santa Cruz County (Land Trust) for the Glenwood Open Space Preserve in Scotts Valley, California. This LTMP describes the long-term management and monitoring of species listed under the Federal Endangered Species Act (FESA) and the California State Endangered Species Act (CESA), and other sensitive species and habitats within the Glenwood Open Space Preserve. The LTMP also describes management and public use of the Glenwood Open Space Preserve including construction and maintenance of a public access trail system and associated pasture infrastructure designed to enhance and protect sensitive species habitat.

Near-term activities include the construction of a public access trail system that will be phased in based on available funding. Long-term activities include management of sensitive species habitats, through grazing, and management of public access with the primary goal of enhancing and protecting special-status, sensitive, and listed species and sensitive habitats (e.g. native grasslands, wetlands).

1.2 Property Description

The Glenwood Open Space Preserve is approximately bounded by the Salvation Army Redwood Glen Camp and Conference Center to the west, Canham Road to the north, Tabor Road neighborhood to the east, and Scotts Valley High School, Siltanen Park, and Vine Hill Elementary School to the south (Figure 1). Glenwood Drive bisects the Glenwood Open Space Preserve into two units, referred to herein as the East Preserve and West Preserve. The East Preserve consists of four pastures and a stock pond divided by internal fences. The Glenwood Open Space Preserve is located on the Felton and Laurel U.S. Geological Survey 7.5' Quadrangles. The Glenwood Open Space Preserve contains 170 acres and is divided into nine parcels owned by the City (with APN: 023-241-16; 023-241-17; 023-241-18; 023-241-19; 023-241-20; 023-241-21; 023-241-22; 023-241-23; 023-241-24), one parcel owned by the Land Trust (APN 023-241-25) and portions of one parcel owned by Scotts Valley Water District (APN 023-241-13).

The Glenwood Open Space Preserve is occupied by the Federally Endangered Ohlone tiger beetle (OTB, *Cicindela ohlone*) and Scotts Valley spineflower (*Chorizanthe robusta* var. *hartwegii*). Additionally, the Glenwood Open Space Preserve resides within Critical Habitat for Scotts Valley spineflower and Scotts Valley polygonum (*Polygonum hickmanii*); therefore, the latter species, although not observed within the Glenwood Open Space Preserve, is covered in this LTMP.



1.3 Glenwood Open Space Preserve History

Table 1 outlines the history of the Glenwood Open Space Preserve, beginning prior to 2001 through present time.

Table 1. Glenwood Open Space Preserve History

Dates	History
Prior to 2001	Various development and conservation alternatives were considered for the property. A formal project proposal in the 1990s included plans for 145 new houses placed throughout the property. The development would have impacted native species, riparian areas and wetlands. In response to City regulations and community concern, the developer reduced the scope to a smaller housing development in an area that would have less impact on natural resources. As a part of the approval process the developer granted an Offer to Dedicate a conservation easement over several lots (C, D, E and the residential Lots 45, 46, 47, 48 and 49 (Tabor Drive Lots)).
2001	The reduced Glenwood Residential Development project with 44 units went forward with approval of the Glenwood Project Environmental Impact Report (EIR) and associated Mitigation and Monitoring Reporting Program. This EIR called for coordination with the US Fish and Wildlife Service (the Service) when public access was contemplated and preparation of an Open Space Management Plan to guide management of sensitive resources. A Development Agreement for the subdivision was prepared which was approved by the City Council on September 5, 2001. This Development Agreement required the housing development to manage the Glenwood Open Space Preserve until June 30, 2009 at which time management reverted to the City.
2003	The Land Trust entered into a grant agreement with the Wildlife Conservation Board of the State of California (WCB) for \$3,100,000 to protect natural resources on the property, and designate a portion of those funds to the City. The City used \$1,437,000 to purchase Lots C, D and the Tabor Drive Lots from the developer. The developer donated Lot B to the City. Lot E came into City ownership as well. The City granted a Conservation Easement to the Land Trust over Lot B. The City then donated a separate Conservation Easement to the Land Trust over Lots C, D and the Tabor Drive Lots. The Land Trust used \$1,070,000 from WCB funds to purchase Lot E from the City. The City then paid \$1,070,000 to the Land Trust, which established an endowment with those funds for the purpose of funding ecosystem management responsibilities. The Conservation Easements: • Are a restriction in the property deeds and can be enforced as legally binding • Cover the entire property, except the inholding (Lot E) that is owned by the Land Trust, • Prohibit development, billboards, dumping, • Protect sensitive vegetation and biotic resources, with exceptions for management of those resources. The Open Space Management Plan (June 2003): • Prohibits public access until an LTMP is developed. • Define the responsibilities of the Glenwood Open Space Preserve Manager under this LTMP as: - o Oversee monitoring and maintenance of existing conditions of the habitat occupied by the OTB and Scotts Valley spineflower; - o Maintain existing habitat values for other sensitive species and special-status habitat areas; - o Implement and manage a grazing program and fencing for the East Preserve;

	- o Develop and implement a public awareness program to restrict public access to the Glenwood Open Space Preserve and; - o Install and maintain educational and interpretive signing around sensitive habitat areas. The City of Scotts Valley Management Memorandum of Understanding (MOU): • Directs the City and Land Trust to prepare and execute an LTMP Management Contract under which the Land Trust acts as the Glenwood Open Space Preserve Manager in charge of management and monitoring obligations following the Interim Period (during which the developer was responsible for these activities) • Outlines the creation and management of the \$1,070,000 endowment.
2009	The City of Scotts Valley Management MOU Amendment • Management Contract between City and Land Trust is postponed until the LTMP is completed (City and Land Trust now prefer an MOU to a contract). • LTMP should assess the feasibility of the endowment to fund the plan's management and monitoring requirements.
2001 - 2015	Consulting services from Phil Greer (Wetland Research Associates now WRA, Inc.), Richard Arnold (Entomological Consulting Services, Ltd.), Kathleen Lyons (Biotic Resources Group), and Lawrence Ford (Lawrence D. Ford, Rangeland Conservation Science) included preparation of the Open Space Management Plan (2003), management of the Preserve and preparation of a draft Long Term Management Plan. • Coordination with the Service indicated the potential need for take authorization, for the federally listed species that inhabit the property. This was due to the potential for take associated with recreational use and public access of the site.
2016	• Through further coordination with the Service, it was determined that take authorization is not currently required for trail building and public access if impacts to federally listed species are avoided. The Service recommended that the Glenwood Open Space Preserve apply for a Section 10(a)(1)(A) permit if OTB colonize areas outside of currently occupied habitat. The Service indicated that the potential for take of federally listed species is unlikely, but may occur in the future, outside of a 100' buffer around occupied and historic OTB habitat. To ensure unlawful take of federally listed species is avoided, the Service requested: • The City and the Land Trust submit a copy of the LTMP. • Share with the Service a copy or outline of the Final Agreement (MOU) between the Land Trust and the City. • The Glenwood Open Space Preserve works with a qualified biologist (Richard Arnold or other) to implement a monitoring strategy that characterizes OTB population and take in occupied and historically occupied habitat. • Submits annual monitoring reports. • Immediately contact the Service in the event of take of OTB associated with recreational use of the site. • The Glenwood Open Space Preserve conduct annual monitoring of the trail system to survey for OTB. Trails are considered a recovery action due to the suitable habitat they will create through increased bare ground that serves as breeding habitat. • Avoid trail building in occupied Scotts Valley spineflower habitat. • Continue to survey for Scotts Valley polygonum within potential habitat.
2017	This LTMP is completed.

2.0 SITE DESCRIPTION AND BIOLOGICAL RESOURCES

2.1 Site Description

2.1.1 Climate

The climate of the Glenwood Open Space Preserve is Mediterranean with cool, wet winters and warm, dry summers. Summer daytime temperatures range from approximately 65°F to 90°F, night temperatures range from approximately 47°F to 53°F, with average high temperature of 77°F. Winter daytime temperatures range from approximately 55°F to 75°F, night temperatures range from approximately 38°F to 53°F and average low temperature of 45°F. Annual precipitation is approximately 30.5 inches (UC-IPM 2009). Most precipitation falls as rain. The rainy season is from approximately October to April, with the majority of rainfall occurring between December and March.

2.1.2 Geology and Soils

Elevation of the Glenwood Open Space Preserve ranges from 650 to 1,010 feet. Topography is dominated by a north to south sloping valley formed by Carbonera Creek. The Glenwood Open Space Preserve includes the adjacent slopes to the west and east up to the ridgeline.

Underlying geology is dominated by Purisima sandstone and Santa Cruz mudstone with substantial open ridgetops of exposed rock and shallow soils. Soils are mapped as Bonnydoon loams, Danville loams, Nisene-Aptos complex, and Soquel loam (USDA 1980).

Soils in the valleys are primarily of Danville loams, which are deep, well-drained soils with slow permeability found on alluvial fans and valley bottoms. Soil on the slopes and ridges is Bonnydoon loam, which is a shallow, somewhat excessively drained soil with moderate permeability. Soils in the northern portion of the Glenwood Open Space Preserve are primarily of the Nisene-Aptos complex, which are deep, well-drained soils derived from residuum weathered from siltstone or sandstone. The area occupied by OTB has been determined by NRCS to be an inclusion of Watsonville loam.

2.1.3 Hydrology

Glenwood Open Space Preserve is located in the San Lorenzo River watershed. The West Branch of Carbonera Creek and the smaller tributary along Glenwood Drive to the west run from north to south through the Glenwood Open Space Preserve. Carbonera Creek is a seasonal to perennial flowing stream with dense willow and oak-bay riparian along sections. A perennial stock pond resides in the central portion of the Glenwood Open Space Preserve, with a spillway that drains into the east branch of Carbonera Creek. This spillway contains a natural bedrock and soil bottom. Several ephemeral drainages drain the ridges within the Glenwood Open Space Preserve into either branch of Carbonera Creek.

2.1.4 Vegetation

The Glenwood Open Space Preserve is composed of several upland and aquatic plant communities common to coastal California. Previous studies documented aquatic communities (e.g., Section 404 wetlands, Section 1600 streams). The boundaries of upland communities were not mapped; however, these communities have been described in detail through several studies. The dominant tree community within the Glenwood Open Space Preserve is coast live oak-bay woodlands (*Quercus agrifolia-Umbellularia californica*) with groves of coast redwood (*Sequoia*

sempervirens). Patches of shrubland are spread throughout the Glenwood Open Space Preserve, with coyote brush (*Baccharis pilularis*) the dominant shrub species. The remainder of the Glenwood Open Space Preserve is composed of herb-dominated communities, primarily non-native grasslands with patches of native grassland and wildflower fields.

2.1.4.1 Upland

Vegetation within the Glenwood Open Space Preserve consists of approximately 60 percent non-native annual grassland with the remainder consisting of wetlands, willow riparian, wildflower fields, native grassland, coyote brush scrub, oak-bay forest, and redwood forest. Herbaceous communities within the Glenwood Open Space Preserve (i.e. grasslands, wildflower fields) exhibit temporal and spatial shifts related to topographic, climatic, and edaphic conditions as well as current and long-term land use practices including fire suppression, dairy ranching, horse, and cattle grazing. For example, observations over three years of sky lupine (*Lupinus nanus*) in non-native annual grasslands in central California noted that lupine blooms have a statistically higher bloom density and duration during years experiencing fall drought (November and December) followed by favorable winter rains (January through March) (Knops and Barthel 1996). Annual monitoring of transects in the Glenwood Open Space Preserve conducted by WRA resulted in similar findings, with areas classified as non-native annual grasslands frequently exhibiting dominance or sub-dominance of both native and non-native forbs (WRA 2009). Therefore, drawing sharp distinctions between non-native annual grassland, wildflower fields, and native grasslands is likely to reflect abiotic factors affecting species dominance and richness for that particular monitoring year.

Non-native annual grassland is found primarily on ridgetops and slopes. In general, these grasslands are dominated by annual grasses, including silver hair grass (*Aira caryophyllea*), slender wild oat (*Avena barbata*), small rattlesnake grass (*Briza minor*), soft chess (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), Mediterranean barley (*Hordeum marinum*), foxtail barley (*H. murinum*), and Italian ryegrass (*Festuca perennis* [*Lolium multiflorum*]). However, years experiencing substantial winter drought, are often accompanied by an increase in, and at times a dominance of, forb species including redstem filaree (*Erodium botrys*), sheep sorrel (*Rumex acetosella*), red sandspurry (*Spergularia rubra*), as well as swaths of native annual forbs (see below).

Wildflower fields are located on relatively shallow soils and all aspects, but tend to be on or near ridgelines. Dominant species may shift annually dependent on favorable or unfavorable climatic conditions, and include a suite of non-native annual grasses as well as native forbs including rusty popcornflower (*Plagiobothrys nothofulvus*), miniature lupine (*Lupinus bicolor*), sky lupine, cream cups (*Platystemon californicus*), California goldfields (*Lasthenia californica*), and owl's-clovers (*Castilleja densiflora*, *C. exserta*).

Native grasslands tend to be located on shallower, often stony, soils on south- and west-facing ridge and hillslopes. Dominants include a suite of non-native grasses with substantial or characteristic cover of purple needlegrass (*Stipa pulchra* [*Nassella pulchra*]¹), six-weeks fescue (*Festuca microstachys* [*Vulpia microstachys*]), and California oat grass (*Danthonia californica*).

The Glenwood Open Space Preserve contains substantial grassland areas with low vegetative cover associated with exposed fractured bedrock and adjacent shallow soils on ridges and upper

¹ Plant species scientific nomenclature follows the *Jepson Manual, 2nd Edition* (Baldwin et al. 2012), with *Jepson Manual, 1st Edition* (Hickman 1993) in brackets. *Jepson Manual, 1st Edition* names included herein to retain continuity with previous documentation for the Glenwood Open Space Preserve.

slopes. Some of these areas support Scotts Valley spineflower and Mt Diablo cottonweed (*Micropus amphibolus*). An approximate 3-acre area in the southwest portion of the Glenwood Open Space Preserve contains level clay loam soil with bare ground patches that provide habitat for OTB.

Coyote brush scrub is found primarily on ridges and slopes bordering grasslands and is dominated by coyote brush and non-native annual grasses. Oak-bay forests and woodlands occur primarily on north-facing slopes and consist of coast live oak (*Quercus agrifolia*), California bay (*Umbellularia californica*), California buckeye (*Aesculus californica*), and a mixed understory of grasses and forbs. Redwood forests are found in the northeast and northwest portions of the Glenwood Open Space Preserve, primarily on north-facing slopes, and are dominated by coast redwood, Douglas fir (*Pseudotsuga menziesii*), California bay, Sonoma rose (*Rosa spithamea*), sword fern (*Polystichum munitum*), and a mix of native forbs. These forests are primarily second growth, with only a few trees exhibiting old-growth characters (e.g. epicormic branching, broken tops, cat faces).

2.1.4.2 Wetlands and Riparian

Glenwood Open Space Preserve contains approximately 8.5 acres of state and federal jurisdictional wetlands and 4 acres of riparian area. The wetlands are located primarily in the East Preserve. In the Canham Pasture wetland swales receive runoff from an offsite low-density residential development. Surface flow enters well-defined vegetated channels at the northern boundary of the Glenwood Open Space Preserve through two culverts under Canham Drive. At the lower end of the Canham Pasture the channels join and form a wide wetland meadow. Vegetation is dominated by Italian ryegrass, pennyroyal (*Mentha pulegium*), Mediterranean barley, meadow barley (*H. brachyantherum*), semaphore grass (*Pleuropogon californicus*), iris-leaved rush (*Juncus xiphioides*), and seep monkeyflower (*Mimulus guttatus*).

A large wetland swale and wetland meadow complex occurs in the southern portion of the East Preserve in the Tabor Pasture. Hydrology is primarily from adjacent upland slopes directed through undefined swales. Flow slows in the flatter, bottomlands in this area. Vegetation is dominated by Mediterranean barley, pennyroyal, rabbit's-foot grass (*Polypogon monspeliensis*), hyssop loosestrife (*Lythrum hyssopifolia*), Choris's popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*), annual bluegrass (*Poa annua*), and fiddle dock (*Rumex pulcher*). Choris's popcornflower is a sensitive wetland species that was monitored 2003 – 2009 (California Native Plant Society (CNPS) Rank 1B.2).

A large contiguous riparian area occurs along the West Branch of Carbonera Creek and the smaller tributary along Glenwood Drive to the west. These channels contain a distinct bed and bank with sorted sediments, occasional debris deposits, and water stains on the banks. Hydrology of Carbonera Creek is primarily seasonal to nearly perennial with pools often remaining until the return of autumn rains. The smaller tributary contains seasonal hydrology supplied by the large wetland meadow complex in Canham Pasture. The vegetation of both riparian areas is dominated by arroyo willow (*Salix lasiolepis*), red willow (*S. laevigata*), coyote brush, coast redwood, coast live oak, California bay, elderberry (*Sambucus nigra* [*S. mexicana*]), California blackberry (*Rubus ursinus*), and herbaceous wetland species.

2.1.5 Existing Land Use and Adjacent Land Uses

Currently, the Glenwood Open Space Preserve is managed as open space without public access. Historically, the area was grazed with dairy cattle, then by horses. Since 2014, a small herd of cow/calf pairs have been utilized as the primary management strategy for the sensitive species

and habitats present in the Glenwood Open Space Preserve. Scotts Valley Water District maintains a storage tank in and a paved access road through the northeast portion of the Glenwood Open Space Preserve.

Adjacent land uses include low density, rural residential to the north, medium density residential to the east and south, accessible open space to the west, and a high school to the southwest.

2.2 Special-Status Wildlife Species

Certain species are tracked by the California Department of Fish and Wildlife (CDFW), regardless of their Federal legal or protection status. This list is referred to as the special-status species list. Species on this list include, for example, (1) those that are biologically rare, very restricted in distribution, or declining throughout their range but not currently threatened with extirpation, (2) species considered by CDFW to be a species of special concern, and (3) those species officially listed or proposed for listing under FESA and CESA.

2.2.1 Ohlone Tiger Beetle

2.2.1.1 Status and Distribution

The OTB is a federally-listed endangered species (USFWS 2001). The primary threat to this species is the loss and alteration of its coastal terrace prairie habitat. Freitag et al. (1993) noted that the OTB is restricted to clay-based, marine terraces, which support native grassland remnants in the coastal mid-Santa Cruz County area. Much of its former habitat in Santa Cruz, San Mateo, and Monterey counties had been converted for development or other land uses before the species was recognized in 1993.

Of the approximately 110 species of tiger beetles that have been described in North America (Boyd and Associates 1982), OTB exhibits one of the most restricted geographic ranges. Historically, it has been reported at only 17 coastal terrace locations, on Watsonville loam soil, at low- to mid-elevations (less than 1,200 feet) in central and western Santa Cruz County, but is currently known to occur at only nine of those sites.

2.2.1.2 Species Description

Collection records indicate that most adult OTB are active from mid-January through mid-May, although the duration and timing of the adult activity period can vary from year-to-year and between places within a particular year. Specifically, beetles have been observed in the range from January 17 through May 11 (Freitag et al. 1993, BUGGY Data Base 2015).

The diurnally active adults and larvae of OTB are associated with sunny areas of bare or sparsely vegetated ground. Adults run rapidly in and near the larval habitat. They are strong flyers, at least for short distances. Because they are cold-blooded, are active during the winter and spring months, and favor microhabitats that are sparsely vegetated and can become quite warm during their activity period, adults and larvae typically spend a considerable portion of their daily activity thermoregulating.

Both adults and larvae of tiger beetles are opportunistic, preying on smaller, soft-bodied insects and invertebrates. Adults possess good visual acuity and are found on sunny glades of bare or sparsely vegetated soil, where they actively search for potential prey. In contrast, larvae remain in their tunnels, and ambush prey that wander within their striking distance. Primary prey items

of OTB are ants. Prey for other species of tiger beetles have been identified as ants, adult and larval stages of flies (*Diptera*), other tiny insects, small beetles, and worms (Larochelle 1974).

The OTB has one generation per year and four life stages: egg, larva, pupa, and adult. Throughout the adult activity period, females lay eggs after they emerge and mate. Eggs are laid singly in the soil, immediately below the surface. In about two weeks, a tiny larva emerges and digs a shallow tunnel, or larval burrow, in the ground at the same location where the egg was laid. Larvae are active until the onset of the following rainy season, usually in late October or early November. During this several-month period, they molt three times, with each stage between molts referred to as an instar. With each larval instar, the diameter and depth of the burrow is enlarged to maximum sizes of about 5-6 mm in diameter and 10-20 cm in depth. Upon occurrence of the first ground-soaking rain in the fall, the larva plugs the upper portion of its burrow and pupates. In the following winter or early spring, a new adult beetle emerges from the larval burrow.

2.2.1.3 Habitat Characteristics and Use

OTB inhabits areas characterized by remnant stands of native grassland, in particular coastal terrace prairie. California oat grass and purple needlegrass are two native grasses known to occur at all sites. Within these grasslands, the beetle has been observed where the vegetation is sparse or bare ground is prevalent, primarily on level ground and less frequently on slopes. The substrate at each known beetle location consists of shallow, poorly drained clay or sandy clay soils that have accumulated over a layer of bedrock known as Santa Cruz Mudstone (Freitag et al. 1993). According to the Soil Survey of Santa Cruz County, the soils present at most known OTB sites are Watsonville Loams (USDA 1980). Although the county's soil map (USDA 1980) does not indicate that Watsonville Loam is present at a few of the OTB sites, including Glenwood Open Space Preserve, NRCS test pits within the occupied habitat on these sites confirmed inclusions (i.e. areas too small to map) of Watsonville Loam. This work is captured in the methods section of a paper on OTB (Knisley and Arnold 2013).

The larvae of most tiger beetles occur in a narrower range of microhabitats than their adult stages; presumably because they tolerate less variation in many physical factors, especially soil type, moisture, composition, and temperature (Pearson 1988, Shelford 1907, Shelford 1909). Larvae of other tiger beetle species that live in grasslands typically build their tunnels at the edges of the bare or sparsely vegetated portions of the grassland where adult beetles are most commonly observed. The larvae of the OTB follow a similar pattern, as larval burrows are found along dirt trails and at the edges of barrens or sparsely vegetated areas.

2.2.1.4 Occurrence in the Glenwood Open Space Preserve

The OTB adults and larval burrows have been observed in the most southerly portion of the East Preserve on a sparsely vegetated, relatively flat ridge (Figure 2 and Figure 3). Between 2000 and 2017 repeated seasonal transect counts were used to census adults (Table 2), while larval burrow censuses have been conducted annually since 2003 (Table 3). During this period, the area occupied by larval burrows has ranged from 0.07 to 0.35 acre, with considerable year-to-year fluctuations in adult and burrow numbers as well as occupied area (indicated as "Occupied Ohlone Tiger Beetle Larval Burrow Area" in Figure 2 and Figure 3). At the present time, adults are routinely observed along portions of the trails and in bare spots within the grassland that lie outside of the occupied burrow area within the Beetle Pasture (indicated as "Occupied Ohlone Tiger Beetle Adult Area in Figure 2 and Figure 3). Historically, adult OTB has been observed elsewhere in the Beetle Pasture, i.e., outside the occupied burrow area. For example, prior to past fire control management practices that included disking and mowing of the southern and eastern pasture boundaries with neighboring properties, both adults and larval burrows were

observed adjacent to the fences (indicated as “Historic Ohlone Tiger Beetle Adult / Larval Area in Figure 2 and 3). Shrub establishment, adjacent tree growth, irrigation runoff from adjacent homes, and many years without grazing in the panhandle area (grazing has returned to this area since 2014) may have further reduced habitat suitability in this area.

In 2006, an adult OTB was observed along the trail between the OTB pasture and the pond; the vicinity was surveyed and no larval burrows were observed. It is not unusual for some adults to occasionally disperse from the Beetle Pasture in search of prey items or oviposition sites, but since the monitoring surveys are focused within the Beetle Pasture, these events have not been detected routinely. During a capture-recapture study (Arnold and Knisley, unpublished), adults were observed moving as far as 485 meters between sightings. Other tiger beetles have been documented to disperse as far as 25 kilometers (Knisley and Schultz 1997).

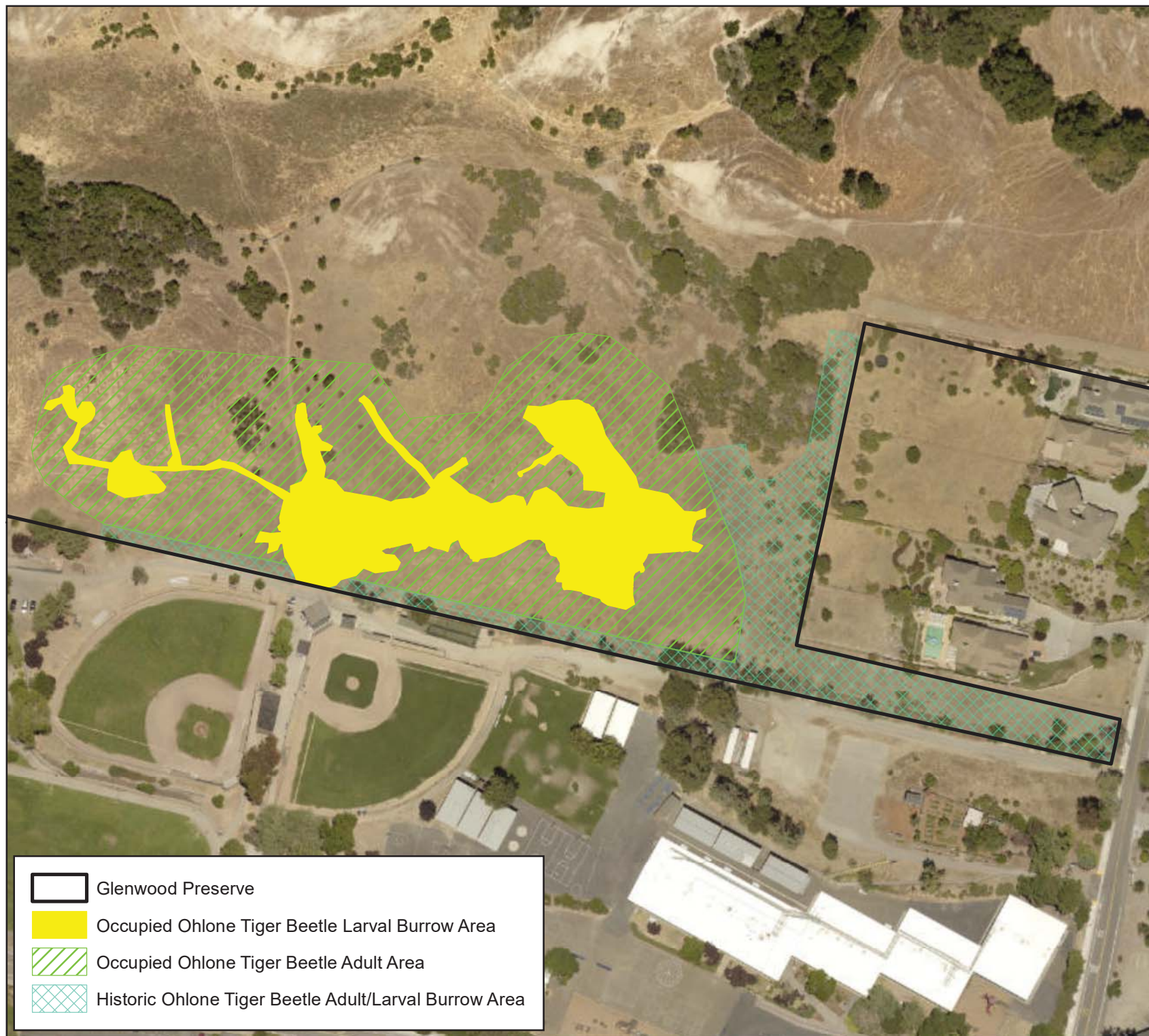
Table 2. Summary of Adult Ohlone Tiger Beetle Census 2004 – 2017

Transect Survey Year	Ohlone tiger beetle Numbers by Transect Interval							Transect Total
	A	B	C	D	E	F	G	
2004	0	40	23	30	33	113	N/A	239
2005	0	5	5	6	14	49	N/A	79
2006	0	2	4	31	15	46	N/A	98
2007	0	4	10	53	37	51	2	157
2008	0	29	14	15	41	17	0	116
2009	0	23	21	46	30	6	1	127
2010	0	8	8	37	25	3	0	81
2011	0	8	18	34	35	11	0	106
2012	0	18	44	57	41	8	9	177
2013	0	17	60	102	83	5	14	281
2014	7	16	35	165	74	12	11	320
2015	8	32	45	178	80	8	12	363
2016	4	77	45	331	30	69	34	590
2017	0	22	7	294	3	60	79	465

Glenwood Preserve

Scott's Valley,
California

Figure 2.
Ohlone Tiger Beetle
Observations



-  Glenwood Preserve
-  Occupied Ohlone Tiger Beetle Larval Burrow Area
-  Occupied Ohlone Tiger Beetle Adult Area
-  Historic Ohlone Tiger Beetle Adult/Larval Burrow Area



0 50 100 200
Feet

Map Prepared Date: 11/3/2017
Map Prepared By: [Name]
Base Source: Esri Satellite Imagery
Data Source(s): WRA, Land Trust Santa Cruz
County, Entomological Consulting Services, Ltd.

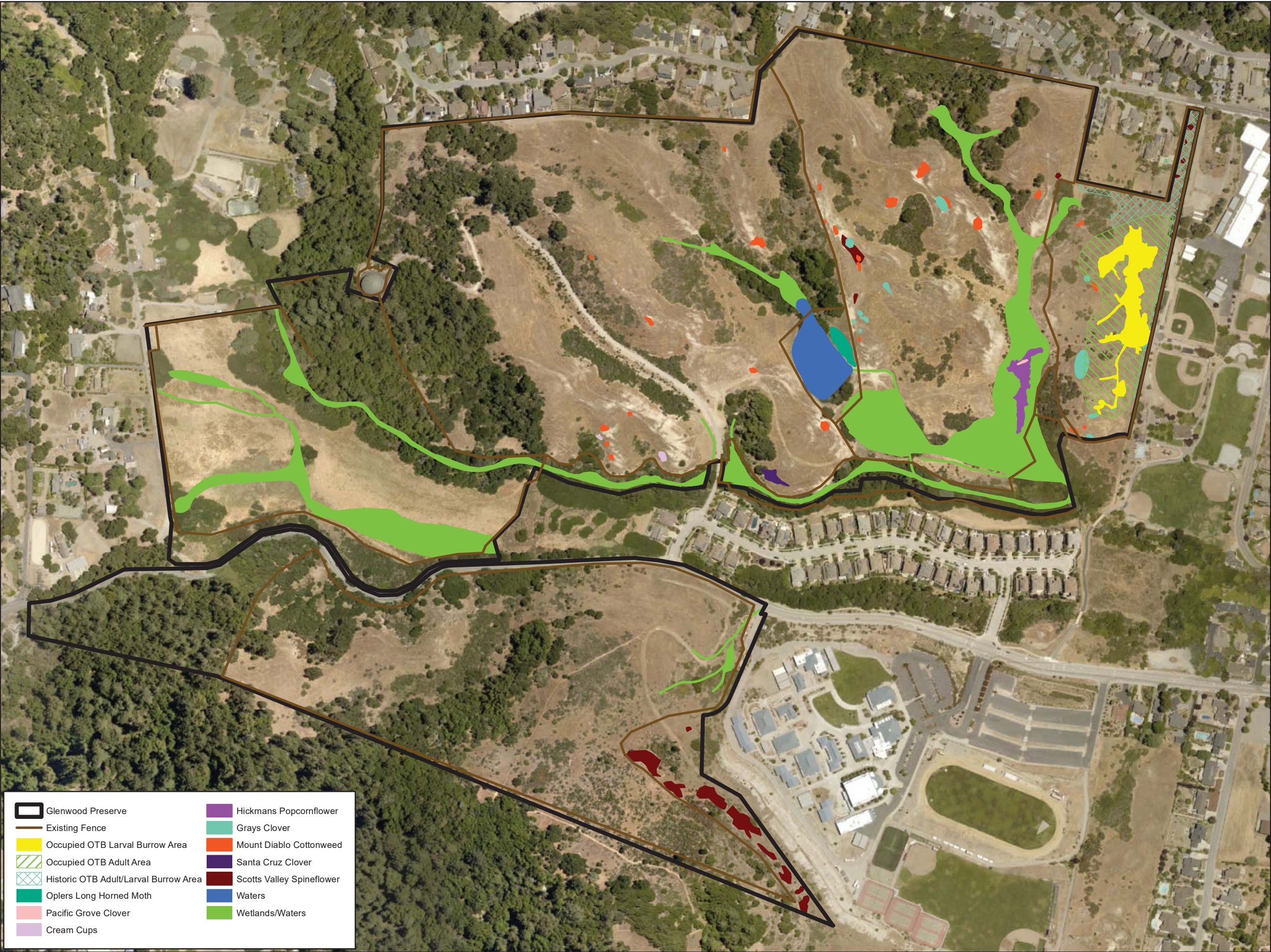
Table 3. Summary of Ohlone Tiger Beetle Larval Burrow Census 2003 – 2017

Larval Survey Year	Observed Numbers by Larval Instar			
	1.5 – 2.3 mm 1 st Instar	2.4 – 3.5 mm 2 nd Instar	3.6 – 6.0 mm 3 rd Instar	Total
2003 (July)	3	21	532	556
2004 (June)	2	57	288	347
2005 (July)	2	23	142	167
2006 (June)	7	38	226	271
2007 (July)	18	58	227	303
2008 (June)	48	90	445	583
2009	34	47	389	470
2010	13	42	356	411
2011	17	38	373	428
2012	60	108	1,061	1,229
2013	27	42	438	507
2014	34	54	858	946
2015	16	34	534	584
2016	11	22	566	599
2017	5	8	162	175

The population sizes of the adult OTB generation in 2016 and 2017 was estimated using a new census technique described by Holmes and Arnold (2015). The transect count data was used in conjunction with the frequencies of observed adult lifespans obtained from a mark-release-recapture (also known as “capture-recapture”) study (Arnold, unpublished) to estimate the number of adults in the OTB generation. Using this new method, estimated OTB population sizes for every year since 2000 are also reported herein for comparison of annual results (Figure 4).

Even though numbers of adult beetles and larval burrows, plus the area occupied by larval burrows, have fluctuated annually, larval burrow densities have remained relatively steady since 2003 (Arnold 2014). Figure 5 of this report contains two graphs that illustrate the number of OTB larval burrows observed annually since 2003 and the densities of larval burrows. Lines illustrating the averages for the period of 2003 through 2017 are also provided. The observed number of OTB larval burrows have exceeded the average of 505/year in six of the 15 years of this monitoring program. During this same period, burrow densities have exceeded the average of 6.26 burrows/100 ft.² in 8 years.

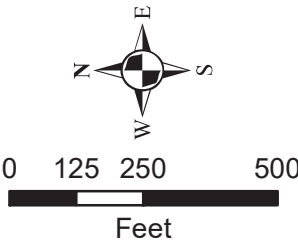
Previously, potential larval burrows were observed on a grassy, sparsely vegetated knoll east of the stock pond; however, no OTBs were observed at this location in either 1996 or 2000. Subsequent to the 2000 report, ground-nesting bees were observed emerging from such burrows (Arnold, personal observation). The National Resource Conservation Service (NRCS) examined soils at this location and found them to be shallow and rocky. The OTBs are known to be restricted to soils that are deeper and in which it is easier to burrow. The limited occurrence of suitable Watsonville loam soil conditions for the OTB to inhabit may explain its restricted distribution within the Glenwood Open Space Preserve.



Glenwood Preserve

Scotts Valley,
California

Figure 3.
Special-status Species
Observations



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Figure 4. Estimated Adult Ohlone Tiger Beetle Population Sizes at Glenwood 2000 – 2017

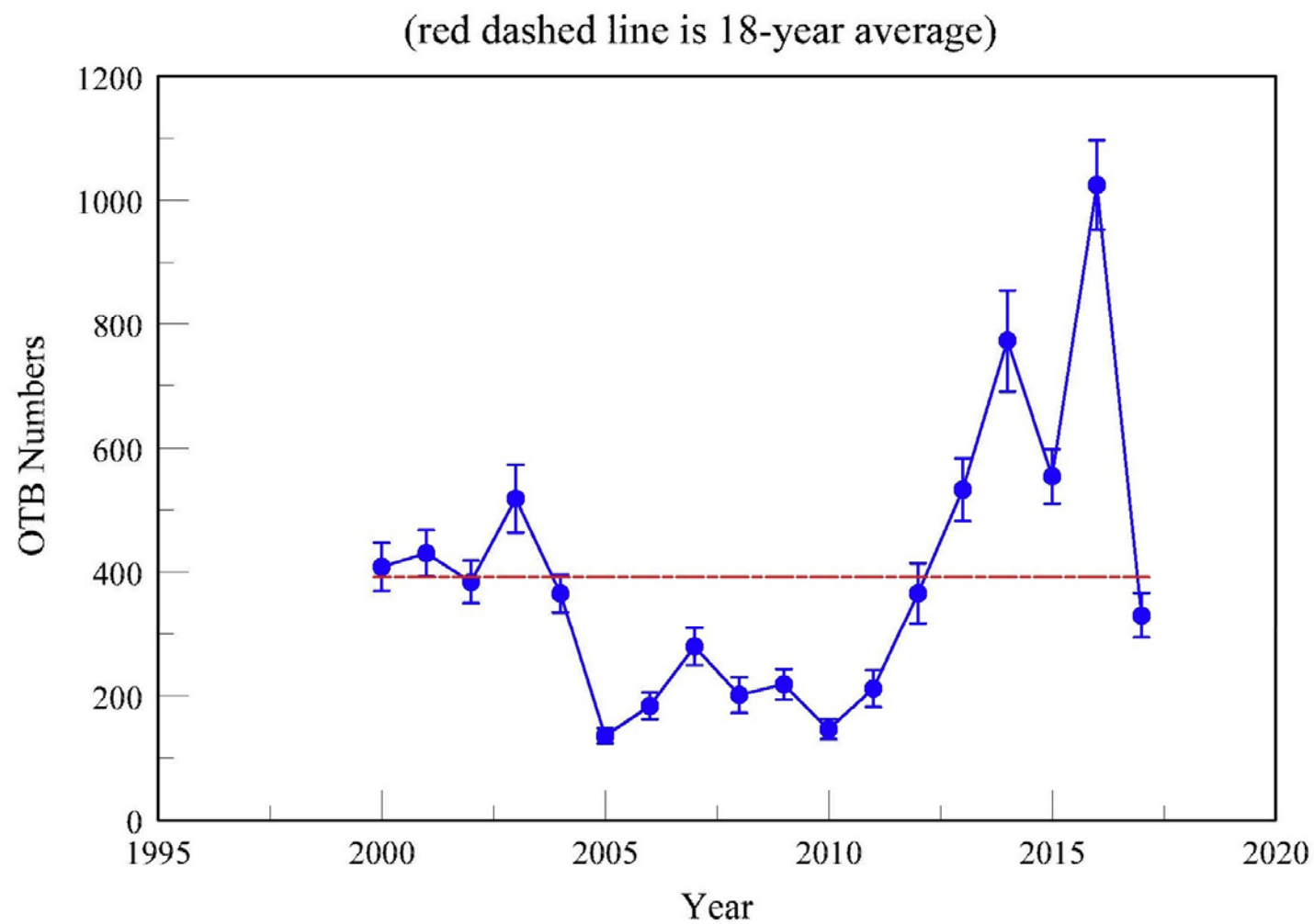
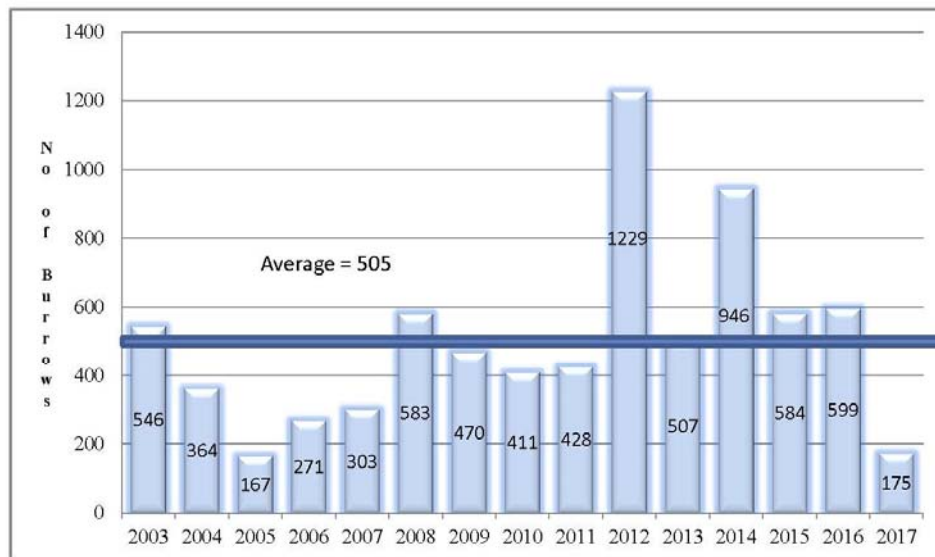
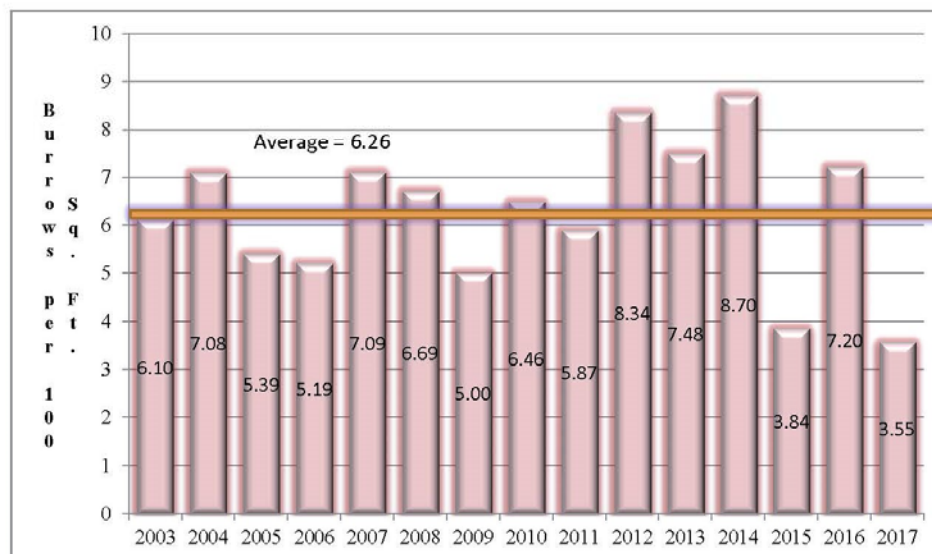


Figure 5. Number and Density of Ohlone Tiger Beetle Burrows from 2003 – 2017

Graph showing the Number of Ohlone Tiger Beetle Burrows Observed 2003 - 2017



Graph showing the Number of Ohlone Tiger Beetle Burrows Observed per 100 Sq. Ft. of Burrow Area On the Scotts Valley - Glenwood Site



2.2.1.5 Habitat Management

Habitat management for OTB is focused on the Beetle Pasture. As the highest priority special management area, the Beetle Pasture is grazed at times that optimize the benefits to OTB and minimize any negative effects on native grasses (refer to “Beetle” column and notes in Table 13). The gates to this pasture are left open during most times of year when grazing is also beneficial in Pond and Tabor Pastures. The cattle may be concentrated in the Beetle Pasture when growth of the herbaceous plants is rapid or its mass significantly exceeds the target levels. Grazing will continue when rainfall and temperatures are sufficient to initiate and maintain fall and winter growth and through the spring. During winter, if heavy rainfall occurs, and the soils are saturated, grazing will be excluded to protect the eggs near the surface. Cattle will graze through late spring or early summer (May, June, or July) until the defined limits of RDM, native grass herbivory, and heterogeneity of herbaceous height are reached. After then, there is no need to graze the Beetle Pasture until the following winter.

We do not know the full distribution of Watsonville loam soils within the Beetle Pasture and it should be a priority to determine this fundamental habitat requirement for the OTB to guide future habitat management efforts. While we anticipate that take of OTB along trails outside of occupied or historically occupied habitat may be unlikely, as the species is very rarely observed in those areas, there is no guarantee that beetles will not occupy future bare ground where it is created. Take of OTB along trails inside of occupied and historically occupied habitat will be minimized by limiting access to periods of the year when vulnerable life stages are not expected to be present above ground. There is a chance of take of OTB in both settings. Monitoring for OTB occurrence will also record any observed take. If take is observed, it will be reported to the Service, which may result in changes to management and trail use.

2.3 Special-Status Plant Species

2.3.1 Scotts Valley Spineflower

2.3.1.1 Status and Distribution

Scotts Valley spineflower is listed as Federal Endangered and CNPS Rank 1B.1, but is not listed under the CESA (USFWS 2002, CNPS 2009). It is limited in its occurrence to rock outcrops and thin soils within grasslands in the Scotts Valley region.

In general, members of the *Chorizanthe* genus are endemic to specific substrate and/or site conditions. They are known from habitats along the coast and inland. However, due to the patchy distribution of these unique soil resources, many species of *Chorizanthe* are highly localized in their distribution. The ranges of many *Chorizanthe* species overlap; however, there is no range overlap between the Scotts Valley spineflower, the related robust spineflower (*C. robusta* var. *robusta*), or the Ben Lomond spineflower (*C. pungens* var. *hartwegiana*).

The Scotts Valley spineflower is known from two sites in the northern end of Scotts Valley, the Glenwood Unit, and the Polo Ranch Unit. The Polo Unit is located east of Highway 17 and north of Navarra Drive. In 2005, Scotts Valley spineflower was recorded at 21 locations and comprised approximately 7,799 individuals. The Glenwood Unit is located north of Casa Way and both east and west of Glenwood Drive. Colonies of Scotts Valley spineflower are scattered throughout the unit, however the largest number of colonies are located west of Glenwood Drive. This unit includes spineflower colonies on properties owned by the Salvation Army, Scotts Valley Unified School District (SVUSD), and the City.

Critical habitat for Scotts Valley Spineflower and Scotts Valley Polygonum has been designated by the U.S. Fish and Wildlife Service (Service) (Figure 6), 287 acres of which occur within the Glenwood Open Space Preserve (USFWS 2002). Critical habitat is defined as specific areas supporting physical or biological features that are essential to the conservation of the species, including areas that may require special management considerations or protection. The primary elements of critical habitat for the Scotts Valley spineflower are:

- Presence of thin soils developed over outcrops of Santa Cruz mudstone or Purisima sandstone;
- Presence of wildflower field habitat (grasslands developing on thin soil areas);
- Presence of a grassland plant community that is stable over time;
- Area to allow each population to survive catastrophic events and re-colonize suitable sites;
- Pollination activity between colonies;
- Seed dispersal between existing colonies, and;
- Sufficient protection of the watershed above spineflower habitat to maintain soil and hydrologic conditions that provide seasonally wet substrate for the species' growth and reproduction.

In addition to these primary constituent elements, the Service also stated that management considerations or protections might be needed for the species (USFWS 2002). The Service found that in some cases, protection of existing habitat and current ecological processes may be sufficient to ensure the maintenance of populations; however, active management may be needed in some areas to preserve the primary elements. The most likely management actions identified by the Service include limiting the application of herbicides, fertilizers and soil amendments, avoid over spray from irrigation, limit habitat fragmentation through construction of roads and fencing that limits movement of pollinators and wildlife dispersal agents, control occurrences of invasive, non-native plant species, and protect sites from heavy disturbances during the species' critical growth and reproduction period.

2.3.1.2 Species Description

The spineflower genus, *Chorizanthe*, is in the Polygonaceae (Buckwheat family). The overall appearance of Scotts Valley spineflower is of a low-growing herb that is stiff, hairy, and bright reddish in color. A short-lived annual, the plant is typically branched from the base with a spreading or prostrate habit, with rose-pink modified leaves surrounding a small white-rose flower. Flowers form dense, rounded heads, measuring approximately 0.5 inch in diameter. Each flower produces one seed enclosed in spines lending to the common name, spineflower.

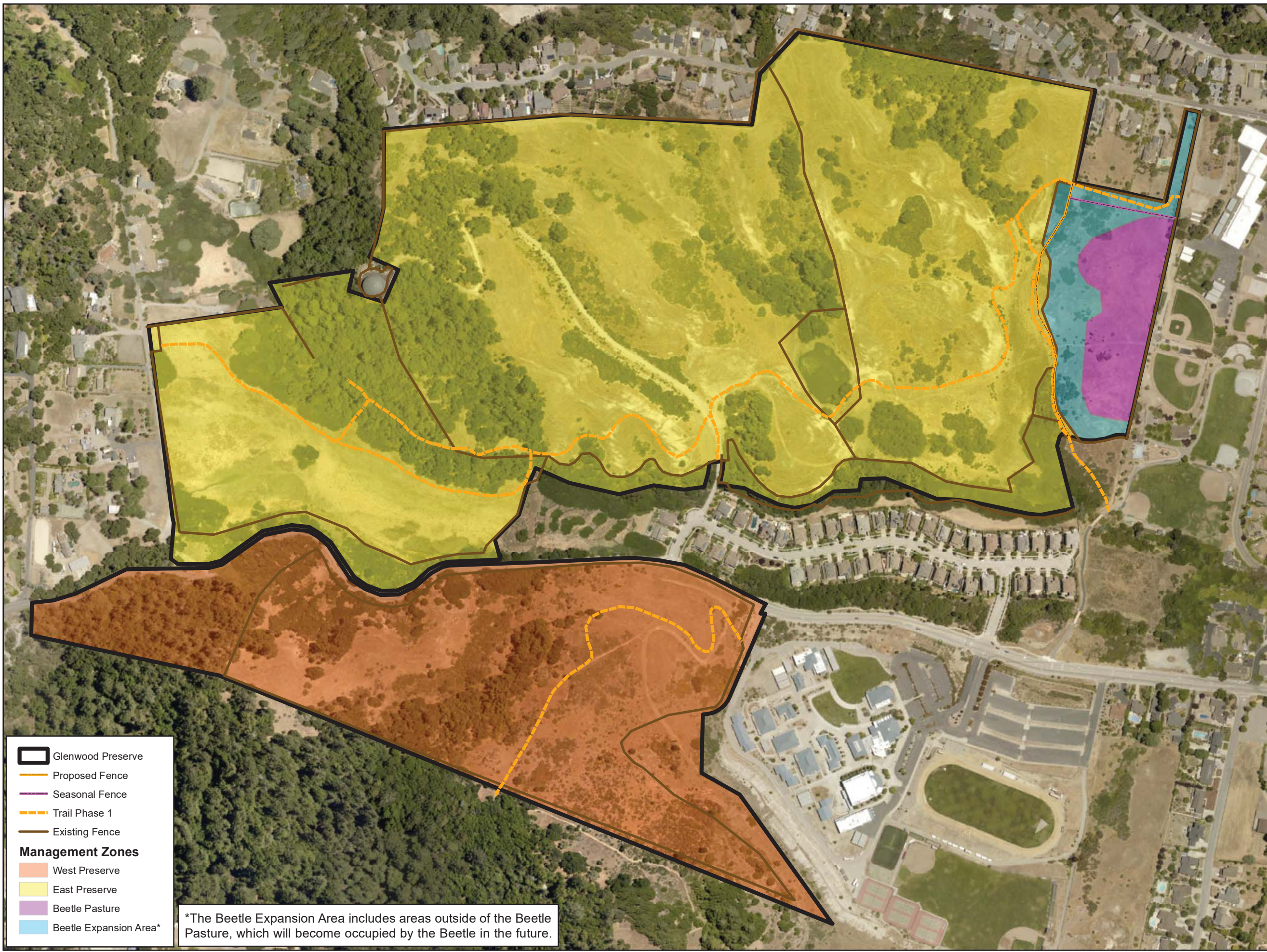
The Scotts Valley spineflower germinates during the winter months and flowers from April through June, with seeds maturing by August. The seed cases shatter from the plant during the late summer and the spiny seed covering may facilitate seed dispersal, as the spiny bracts are expected to easily attach to animals and can therefore be transported. Black-tailed hares (*Lepus californicus*) and California ground squirrels (*Otospermophilus beecheyi*) have been observed to browse on other members of the *Chorizanthe* genus and other animals likely contribute to seed dispersal (USFWS 2002).

Glenwood Preserve

Scotts Valley, California

Figure 8.

Management Zones



Glenwood Preserve

Proposed Fence

Seasonal Fence

Trail Phase 1

Existing Fence

Management Zones

West Preserve

East Preserve

Beetle Pasture

Beetle Expansion Area*

*The Beetle Expansion Area includes areas outside of the Beetle Pasture, which will become occupied by the Beetle in the future.



0 125 250 500

Feet

Map Prepared Date: 11/3/2017
 Map Prepared By: sgillespie
 Base Source: Esri Streaming Imagery
 Data Source(s): WRA, Land Trust Santa Cruz County,
 Entomological Consulting Services, Ltd.

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Pollinators for other *Chorizanthe* species are varied and include leaf cutter bees, butterflies, flies and wasps. Where pollinator access is limited, seed production is lowered (USFWS 2002). It is expected that the Scotts Valley spineflower is protandrous, which is a reproductive strategy that facilitates cross-pollination. In species that are protandrous, the anthers (male) mature and shed pollen one to two days before the style (female) matures. This promotes cross-pollination by insects. If, however, cross-pollination does not occur within 1-2 days, self-pollination may occur. The relative importance of insect pollination and self-pollination to seed formation (and viable seed) is not known. However, studies of Monterey spineflower (*Chorizanthe pungens* var. *pungens*) have shown that seed viability was lower in areas with poor pollination access (USFWS 2002).

2.3.1.3 Habitat Characteristics and Use

Scotts Valley spineflower grows on gently sloping to nearly level areas where fine-textured shallow soils of the Bonnydoon series occur over Santa Cruz mudstone or Purisima sandstone outcrops in Scotts Valley. Some of these areas have bedrock intermixed with scree and/or scree intermixed with a thin soil layer (USFWS 2002).

Scotts Valley spineflower habitat is typically isolated rock outcrops or thin soils surrounded by non-native annual grassland on deeper soils. Rock outcrop or thin soil habitat is typically sparsely vegetated and composed of native wildflowers and low-growing grasses. Many of the areas support lichen and mosses, indicating that the areas have high seasonal soil moisture. It is postulated that the Polo Ground and Glenwood Units historically supported native grasslands, wherein the Scotts Valley spineflower (and associated wildflower species) grew on the rock outcrops and in openings amid the perennial bunch grasses (USFWS 2002).

2.3.1.4 Occurrence in the Glenwood Open Space Preserve

The Glenwood Open Space Preserve historically supported 17 colonies of Scotts Valley spineflower (data from 1992). In the surveys from 2004 through 2010), plants were documented from ten of these colonies, and in 2015 survey it had dropped to 8 colonies. Scotts Valley spineflower occurs on south-facing slopes with sparse, low-growing vegetation. Two primary populations persist, one in the eastern portion of the Glenwood Open Space Preserve on thin soils and one in the western portion immediately north of Scotts Valley High School on a rock outcrop. Although additional apparent suitable habitat areas (i.e. areas apparently suitable for the species, yet not occupied) occur in the Glenwood Open Space Preserve, these areas have not been colonized by this species based on focused annual searches 2004 – 2010 and 2015.

As an annual species, the number and location of aboveground plants varies annually. These variations are due to several factors, such as the amount and timing of rainfall, soil and air temperature, soil conditions and the extent and condition of the soil seedbank. Population data for the Glenwood Open Space Preserve have been collected in 1992, 2004 – 2010, and 2015. The largest population is in the western portion of the Glenwood Open Space Preserve. While there are larger areas of suitable soils on the eastern portion, fewer individuals have been observed in this area (Table 4). Refer to Figure 3 for locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Table 4. Scotts Valley Spineflower Population Estimates and Census 1992, 2004 – 2010, and 2015

Preserve	Estimate 1992	Census 2004	Census 2005	Census 2006	Census 2007	Census 2008	Census 2009	Census 2010	Census 2015
East	1,711 – 6,460	1,259	1,019	609	622	248	394	1189	860
West	22,601 – 51,510	23,978	27,099	10,033	10,579	9,203	16,375	28,710	40,030
TOTAL	28,500 – 55,000	25,237	28,118	10,642	11,201	9,451	16,375	29,899	40,890

2.3.1.5 Habitat Management

Grasslands within the Glenwood Open Space Preserve have a history of livestock grazing, dating to the settlement of the valley in the early 1800s. As recently as the late 1960s, the Glenwood Open Space Preserve was a local dairy operation. Since the 1980s, the areas west of Glenwood Drive have not been grazed, while horse grazing has continued on the east side of the Glenwood Drive for the last 20 years with 14 to 28 horses year-round. This grazing regime on the property is believed to have been an amenable management regime (or, at least, not deleterious) to the growth of the spineflower. Concurrent with construction of the Scotts Valley High School in 1999, a mowing management program was implemented for a population in SVUSD Preserve. In 2013, mowing was replaced by year-round grazing with two horses.

Reliable information on palatability and grazing effects on Scotts Valley spineflower was not found. At the Glenwood Open Space Preserve, there is low grazing use of its bare, grassy, or rocky slope habitat. Nonetheless, it is probably benefited by selective reduction of competing non-native annual grasses through grazing herbivory or another similar management method.

2.3.2 Scotts Valley Polygonum

2.3.2.1 Status and Distribution

Scotts Valley polygonum is listed as Federal Endangered, State Endangered, and CNPS Rank 1B.1 (USFWS 2003, CNPS 2009). It is limited in its occurrence to rock outcrops and thin soils within grasslands in the Scotts Valley region and is often associated with Scotts Valley spineflower.

Scotts Valley polygonum is closely associated with Scotts Valley spineflower; however, the polygonum is more restricted in numbers of individuals and colonies. Primary constituent elements and management considerations listed in the critical habitat for Scotts Valley polygonum are the same as those listed for Scotts Valley spineflower (Figure 6).

2.3.2.2 Species Description

The polygonum genus, *Polygonum*, is in the Polygonaceae (Buckwheat family). The overall appearance of Scotts Valley polygonum is of a low-growing herb that is small, erect with either a single stem or branched stems from near the base. A tap-rooted annual, the plant has linear leaves tipped with a singular spine. Flowers are white with two outer and three inner tepals, and are singular in bract axils.

The Scotts Valley polygonum germinates during the late fall or winter months and flowers from May to August. Seeds may range in number from a few dozen to two hundred. Seed predation and subsequent dispersal in other *Polygonum* species include black-tailed hares, pocket mice, ground squirrels, gray squirrels, striped skunks, opossums, and raccoons (USFWS, 2003). Pollinators for Scotts Valley polygonum are not known; however, a single visit by a sphecid wasp has been observed (USFWS 2003).

2.3.2.3 Habitat Characteristics and Use

Similar to Scotts Valley spineflower, Scotts Valley polygonum grows on gently sloping to nearly level areas where fine-textured shallow soils of the Bonnydoon series occur over Santa Cruz mudstone or Purisima sandstone outcrops in Scotts Valley. Some of these areas have bedrock intermixed with scree and/or scree intermixed with a thin soil layer (USFWS 2003).

Scotts Valley polygonum is typically found in the shallowest soils within isolated rock outcrop or thin soil habitat surrounded by non-native annual grassland. Scotts Valley spineflower is closely associated with the Scotts Valley polygonum; however, the spineflower may be found on slightly deeper soils with higher cover of competitive native and non-native herbaceous species (USFWS 2003).

2.3.2.4 Occurrence in the Glenwood Open Space Preserve

Similar to Scotts Valley spineflower, Scotts Valley polygonum is known from two sites in the northern end of Scotts Valley: the Glenwood Unit, and the Polo Ranch Unit. The Glenwood Unit encompasses the Glenwood Open Space Preserve, where the Scotts Valley polygonum has not been observed, and the SVUSD Preserve, which supports the species. In 1998, Scotts Valley polygonum was recorded within six colonies comprised of approximately 3,400 individuals (CDFW 2009).

To date, annual surveys for Scotts Valley polygonum have yielded no observations within the Glenwood Open Space Preserve. Focused surveys have been conducted at the time of census counts for Scotts Valley spineflower, typically in late May or early June. Additional vegetation transect surveys in the Glenwood Open Space Preserve have yielded negative observations for the polygonum. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

2.3.2.5 Habitat Management

Reliable information on palatability and grazing effects on Scotts Valley polygonum was not found. At the Glenwood Open Space Preserve, there is low grazing use of its potential grassy or rocky slope habitat. Nonetheless, it would probably be benefited by selective reduction of competing non-native annual grasses through grazing herbivory or another similar management method.

2.4 Other Sensitive Species and Habitats

2.4.1 Sensitive Wildlife Species

2.4.1.1 Opler's Longhorn Moth

Status and Distribution

Opler's longhorn moth is a former federal species of concern that was considered but rejected for listing in 1994. It currently is recognized as a special animal species by CDFW (CDFW 2015). The moth is endemic to grasslands where its larval food plant, cream cups (*Platystemon californicus*), grows. The Glenwood Open Space Preserve site supports the only known location of Opler's longhorn moth in Santa Cruz County. Furthermore, the Glenwood Open Space Preserve site is also unique because it is the only known location to support the species not characterized by serpentine grassland habitat.

In recent years Opler's longhorn moth has been recorded from sites extending along the west side of San Francisco Bay, Alameda County, Marin County, Sonoma County, Santa Cruz County, Santa Clara County, and the inner Coast Ranges (A. Launer, pers. comm., 1997, J. Powell, pers. comm., 1997 in USFWS 1998b). Field observations suggest that the dispersal scale for this moth is small, approximately hundreds of meters, thus limiting its ability to colonize new areas easily.

Species Description

Descriptions of the life history and early stages of this moth are incomplete. Opler's longhorn moth completes the active portions of its life cycle during the winter-spring wet season (Powell 1969). Adults fly, mate, and lay their eggs between mid-March and late April, although this timing varies depending on seasonal weather conditions. Eggs are deposited directly into the unopened flowers of the larval food plant, cream cups. A few weeks later, the larvae emerge after they have consumed the developing seeds. Larvae of related longhorn moths, whose life cycles are better understood, enter diapause (a period of suspended development during unfavorable environmental conditions) during the summer and re-emerge after the winter rains to continue feeding until they are large enough to pupate. Presumably, larvae of the Opler's longhorn moth follow a similar procedure. Adults visit the flowers of cream cups.

Habitat Characteristics and Use

Opler's longhorn moth was previously thought to occur only in areas of serpentine soil where its exclusive host plant is found. Areas underlain by serpentine or other low fertility soils often support higher densities of native forbs and grasses including cream cups. Therefore, the moth is found in close association with low fertility soils that support a sufficient density of cream cups.

Occurrence in the Glenwood Open Space Preserve

The Glenwood Open Space Preserve is the only known location of this species that is not associated with serpentine grassland. On the Glenwood Open Space Preserve, cream cups are found on north-facing slopes containing high cover of native perennial grasses and herbs. Surveys conducted in 1996 and 2000 found cream cups at seven locations within the Glenwood Open Space Preserve. Adults were observed only at the cream cup location on the north-facing hillside above the reservoir during both surveys. Between 2004 and 2009, monitoring of the moth has focused on adult counts during the flight season and shows variability between years (Table

5). Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Table 5. Summary of Opler's Longhorn Moth Census for Monitoring Years 2004 – 2009 and 2015

2004	2005	2006	2007	2008	2009	2015
48	37	16	22	35	62	58

Habitat Management

The Opler's longhorn moth is dependent on cream cups. To maintain, and expand, the population of moths, populations of cream cups must be managed. Grazing is a suitable management tool to reduce competition from other plants and accumulated thatch that inhibit cream cup growth. However, grazing must not impact flowers in which moths lay eggs or moth larvae that diapause in leaf duff. In addition, some thatch accumulation is necessary for diapausing larvae to survive the dry season. Thus, grazing will be light or infrequent enough to maintain some thatch (the exact amount required is not known, and should be studied along with other habitat requirements). If grazing is not feasible, then some manual removal of ground cover and accumulated thatch should be done.

Cream cups germinate and grow best in sparse ground cover. Grazing helps reduce competition with cream cups from other herbaceous plants. Cattle are restricted from the area during the periods of larval activity, which begins with the emergence of cream cup flowers (usually March or April) when adult moths lay eggs in the flower buds. When the larvae emerge from eating the developing seeds, they presumably enter diapause in the duff at the base of the plants. Grazing continues to be restricted through the summer due to soil and pond habitat sensitivities, and the need to focus grazing elsewhere. Otherwise, during the time of diapause (all seasons except spring), cattle can graze the Santos Pond region until significant rains occur and saturated soils are vulnerable and until flowering and egg-laying becomes active again. Initial testing to compare fall and winter versus summer grazing found that winter to early spring grazing is preferred to benefit cream cups and minimize effects on soils.



Opler's longhorn moth.
Photo by Land Trust of
Santa Cruz County

2.4.1.2 Western pond turtle

Status and Distribution

Western pond turtle (*Emys marmorata*) has a NatureServe conservation status of G3G4 S3 (vulnerable) and is a CDFW Species of Special Concern. The historical range of the species extended from Washington or British Columbia to northern Baja California; many populations still exist, and human-made reservoirs and ponds now provide habitat throughout much of the range. The species is locally numerous, but distribution and abundance in the northern and southern parts of the range as well as the Central Valley have been reduced as a result of habitat loss and degradation, introduced species, and (locally) disease (NatureServe Explorer site accessed September 6, 2017).

Species Description

Western pond turtle is a small to medium-sized drab dark brown, olive brown or blackish turtle with a low un-keeled carapace. The shell length is 3.5 to 8.5 (8.9 to 21.6 cm) (Stebbins 2003). Hatchlings are approximately 1 inch (2.5 cm) in shell length. Most individuals feature a pattern of lines or spots radiating from the centers of the scutes. The plastron (under-shell) lacks hinges, and has six pairs of shields, which can be cream or yellowish in color with large dark brown markings, or unmarked. The legs have black speckling and may show cream to yellowish coloring. The head usually has a black network or spots and may show cream to yellowish coloring. Males usually have a light throat with no markings, a low-domed carapace (a flatter shell), and a concave plastron. Females usually have a throat with dark markings, a high-domed carapace (a taller shell), and a flat or convex plastron which tends to be more heavily patterned than that of the male (California Herps, accessed 9-5-2017 <http://www.californiaherps.com/turtles/pages/a.marmorata.html#originaldescription>)

Habitat Characteristics and Use

Western pond turtles nest in terrestrial habitats, and are vulnerable to predation or injury while traveling between upland nest sites and aquatic habitat. Hatchlings are particularly vulnerable to predation. In aquatic habitat, individuals often use floating logs and overhanging banks for basking and thermal regulation. As per a Study by Rosenberg (2013), hatchlings detected in water were always within 3.3 ft. (1 m) of shore and in areas with dense submerged vegetation and/or woody debris.

Western pond turtle populations appear to often be limited by predation. Predation by bullfrogs and non-native fishes such as largemouth and smallmouth bass may have significant effects on populations. Competition with non-native red-eared sliders (turtles) for basking sites may also have population effects (Rosenberg et al 2009).

Occurrence at Glenwood Preserve

Western pond turtles are likely to occur at the Glenwood Preserve in Santos Pond, although this is not confirmed. This region of Santa Cruz County is in the overlap zone of the northern western pond turtle and southern western pond turtle populations, which some authorities consider separate species (California Herps 2017).

Abundant terrestrial habitat surrounds the pond. Some of these areas include soft soils or thick duff that may be suitable for turtle nesting. The pond has little vegetation along its margins, and little evidence of submerged woody debris, such as branching tree limbs, that would shelter young

turtles. The pond has no floating logs. Santos Pond also hosts non-native turtle species, including red eared sliders, and abundant populations of aquatic predators, including bass and bullfrogs. Raccoons and coyotes have been observed in the area. As such, western pond turtles present in the area may not be successfully reproducing.

Habitat management

The following measures are recommended to improve habitat quality for western pond turtle:

- Mowing and disking around the pond should be minimized to avoid potential impacts to the species.
- Nearshore vegetation and woody debris should be protected and enhanced to provide shelter for young turtles, but pond margins facing south and west should be left free from tall vegetation to support basking habitat.
- To the extent to which it is consistent with other management priorities, logs that are 8 to 12 inches in diameter should be anchored near the middle of the pond as basking sties.
- Predatory mammals may be attracted to the pond by poor trash management. Wildlife proof trash cans will be necessary if trashcans are provided, to ensure raccoons and coyotes do not become habituated to the site.
- To the extent to which it is consistent with other management priorities, invasive species control of non-native predators and competitors may be performed. Invasive species control shall be performed in a humane manner, preferably following methods that involve permitted relocation if possible, for example, by working with California Turtle & Tortoise Club (Silicon Valley Chapter) or similar agency or facility, to return non-native turtles to captivity. Management of these species by euthanasia should only be initiated if it is part of a comprehensive plan that is highly likely to successfully eradicate the species from the site, sustain the eradication for at least 10 years, and which is supported by a sufficient commitment of resources to ensure long-term success. If euthanasia of wildlife is required, procedures shall adhere to the American Veterinary Medical Association Guidelines for Euthanasia of Animals.

2.4.2 Sensitive Plant Species

2.4.2.1 Santa Cruz Clover

Status and Distribution

Santa Cruz clover (*Trifolium buckwestiorum*) is listed in CNPS's California Rare Plant Rank as 1B.1.

It grows around the Monterey Bay area and at a few locations in western Sonoma and Mendocino counties.

Species Description

According to Calflora, "It is an annual herb growing upright or decumbent in form, with hairless green or reddish herbage. The leaves are made up of finely toothed, oval shaped leaflets up to 1.5 centimeters long and bristle-tipped stipules. The inflorescence is a head of flowers roughly a centimeter wide, the flowers held in a bowl-like involucre of wide, jagged-toothed bracts. Each flower has a calyx of sepals that narrow into fine bristles and a pink corolla under one centimeter long." Flowering occurs from May to June.

Habitat Characteristics and Use

It grows in grassy or disturbed areas below 2,300 feet.

Occurrence in the Glenwood Open Space Preserve

One population was mapped in 2008 (WRA 2009), but there was no population estimate associated with the site. The site was visited in March and April 2015 and through June in 2017, but no plants were detected. This species was not included in the 1992 surveys nor in the Open Space Management Plan (WRA 2003). Local clover expert, Randall Morgan, said that it is unlikely to occur on the property (R. Morgan, pers. comm., 2017). Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

Although no plants were detected in 2015 or 2017, the site conditions were suitable for the species, which grows in coastal prairie habitat. There may have been plants that were not detected or the survey dates may have missed the optimal period for detection. Current management practices are appropriate for this species, therefore continued grazing is recommended. Annual surveys should be conducted to detect plants.

2.4.2.2 Pacific Grove Clover

Status and Distribution

At one time considered part of the species *Trifolium variegatum*, recent taxonomic evidence and publications recognize *Trifolium polyodon* as a distinct species (Baldwin et al. 2012) listed in CNPS's California Rare Plant Rank as 1B.1. Both species co-occur on Glenwood Open Space Preserve. There is no critical habitat designation for this species as it is not an endangered/threatened species.

The Pacific Grove clover grows on the Monterey Peninsula and in Santa Cruz County.

Species Description

The plants are annuals with spreading stems. The leaflets are 5-20 mm, widely elliptic to obovate with rounded tips. The flowers are in a head-like inflorescence with an involucre that is cut to the middle. The corolla is 8-10 mm, pink to white with a purple tip. It flowers from April to June.

Al Keuter and Randall Morgan collected a type series to describe the local variety as *T. polyodon* var. *oligodon*. This was not done earlier because the species were not well understood taxonomically.

Habitat Characteristics and Use

This species is known from moist meadows, closed-cone coniferous forests, stream sides, and mesic sites in coastal prairie habitat on the coastal side of the Central Coast Ranges below 1000 feet (Calflora 2015, eFlora 2015, Baldwin et al. 2012, Morgan et al. 2005).

Occurrence in the Glenwood Open Space Preserve

In 2017, *T. polyodon* and variegated clover (*Trifolium variegatum*, a common species closely related to *T. polyodon*) were confirmed by Randall Morgan. They both grew along the trail that

crosses the wet meadow in Tabor Pasture. *T. variegatum* flowered earlier than *T. polyodon*, though flowering time overlapped some. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

Pennyroyal has spread throughout the wet meadow in southwest Tabor Pasture and is the primary threat to native plants. Clovers are currently only seen in the trail that is disturbed sufficiently to reduce the competition from the pennyroyal. Given the extensive rhizomatous root structure of pennyroyal and its occurrence in the wetland amongst many desirable plants, typical management techniques (grazing, pulling, and herbicide) are ineffective or difficult on a large scale. However, small-scale treatments of pennyroyal in the immediate area of this species may help the rare plant populations persist. Ultimately, the goal should be to investigate or develop management strategies to significantly reduce the pennyroyal population.

2.4.2.3 Choris's Popcornflower and Hickman's Popcornflower

Status and Distribution

Choris's popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*) and Hickman's popcornflower (*P. c.* var. *hickmanii*) are listed in CNPS's California Rare Plant Rank as 1B.2 and 4.2, respectively. These taxa have overlapping distribution, with documented records of both occurring along the central coast from San Francisco to Monterey County.

Species Description

Both of these popcornflowers are fibrous-rooted annuals with several decumbent to prostrate stems. Flowers are white with yellow "pillows" located at the union of the fused tube (lower) and free petals (upper). According to Jepson eFlora, Choris's popcornflower flowers March through June, while Hickman's popcornflower flowers April through July.

Primary diagnostic discrepancies between taxa include frequent erect habit in Choris's popcornflower; lower leaves fused in Choris's popcornflower; stem branching in upper axils in Choris's popcornflower; pedicel length greater than calyx in Choris's popcornflower; and a larger corolla limb (6-10 mm diameter) in Choris's popcornflower.

Habitat Characteristics and Use

Choris's popcornflower grows in grassy, moist places, ephemeral drainages, coastal scrub, and chaparral below 2,000 feet. Hickman's popcornflower is limited in its occurrence in seasonal wetlands, vernal pools, swales, and depressions underlain by heavy clay soils from San Francisco County to Monterey County below 600 feet (Calflora 2012, CCH 2012).

Occurrence in the Glenwood Open Space Preserve

Approximately 560 individuals of Choris's popcornflower were observed in the Glenwood Open Space Preserve during surveys conducted in 2015 (Biotic Resources Group 2015). Within wetland meadow habitat, eight separate patches were observed. This variety was not found in 2017, only var. *hickmanii* was seen.

Within the Glenwood Open Space Preserve, Hickman's popcornflower grows in wetlands in the Tabor Pasture. The *Plagiobothrys chorisianus* was first identified as var. *hickmanii* in 2017. Prior

to this, all surveys associated with the Glenwood project recorded the variety as *chorisianus*. Initially, it was assumed that the previous surveys had misidentified the plant, but photos confirm that var. *chorisianus* was present in earlier surveys. Additionally, specimens collected in 2003 were reviewed by WRA botanists in September 2017 with corollas measuring 5.5-7 mm and elongated pedicels suggesting a trend toward Choris's popcornflower. Evidently, both varieties grow at this site, however no plants were found in 2017 with the characteristics of var. *chorisianus*. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

Although the invasive pennyroyal has spread throughout the wet meadow, the populations of *Plagiobothrys chorisianus* numbers were stable at 500 through the 2015 census. Botanists were unaware that both varieties grew at the site, so all *P. chorisianus* were assumed to be var. *chorisianus*. In 2017, there were no Choris's popcornflower found and the Hickman's popcornflower population was probably less than 50 plants, almost entirely within the trail that crosses the wet meadow. Sections of pennyroyal should be removed adjacent to the trail to allow the two varieties to expand.

2.4.2.4 Mount Diablo Cottonweed

Status and Distribution

Mount Diablo cottonweed (*Micropus amphibolus*) has a CNPS California Rare Plant Rank 3.2 (CNPS 2015), but does not have a Federal or State listing. The species occurs in the Coast Ranges from Lake County south to Monterey County (Calflora 2015, CCH 2015). There is no critical habitat designation for this species.

Species Description

The overall appearance of Mount Diablo cottonweed is a very diminutive, low-growing forb typically no taller than 10 cm, with one primary stem. A shallowly tap-rooted annual, this species has short linear to lanceolate leaves, with cobwebby to tomentose hairs throughout the plant. Flowers are diminutive and encased in swollen phyllaries covered in tomentose hairs.

Mount Diablo cottonweed germinates during the winter months, flowers from March to May, and sets seed in late spring to early summer.

Habitat Characteristics and Use

It is limited to relatively bare areas on shallow, rocky soils on ridgelines, hillslopes, trails, and roadsides in foothill grassland, open scrub, and open woodland habitats from 100 – 3,000 feet elevation.

Occurrence in the Glenwood Open Space Preserve

Within the Glenwood Open Space Preserve, Mount Diablo cottonweed is located on several ridgelines underlain by shallow, rocky mudstone soils in the Pond and Tabor Pastures. In the original survey of 1992, 51 populations were found with an estimated total of 100,000 plants. In 2015, 25 colonies were found for a total of 4-5,000 plants (Biotic Resources Group 2015). Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

Reliable information on palatability and grazing effects on Mount Diablo cottonweed was not found. At Glenwood Open Space Preserve, there is low grazing use of its bare, grassy, or rocky slope habitat. Nonetheless, it is probably benefited by selective reduction of competing non-native annual grasses through grazing herbivory or another similar management method. It is recommended that grazing continue with a goal of keeping competition from herbaceous growth low. In addition to grazing to reduce competition, invasive weeds should be removed where they compete with Mount Diablo cottonweed.

2.4.2.5 Grassland Microseris

Status and Distribution

Grassland microseris (*Stebbinsoseris heterocarpa*) has neither a federal nor state listing, nor a CNPS ranking. The Santa Cruz CNPS Chapter recognizes grassland microseris as locally rare, having few documented occurrences in the county (Morgan et al. 2005). There is no critical habitat designation for this species as it is not a listed species. The plant grows in the coastal mountains from northern Mexico to Marin County.

Species Description

Per Jepson eFlora, the plant is 8-60 cm tall with erect basal leaves 5-35 cm long. The flower ligules are yellow or white. It flowers from April to June.

Habitat Characteristics and Use

This species is known from valley and coastal grasslands underlain by rocky to clay soils (Calflora 2015, Baldwin et al. 2012). It grows below 5,500 feet.

Occurrence in the Glenwood Open Space Preserve

Grassland microseris once occurred on the Glenwood Open Space Preserve, but there are no confirmed occurrences during the baseline studies, monitoring period, or other records (CCH 2015, Calflora 2015). Randall Morgan (R. Morgan, pers. comm., 2017) has seen it in the vicinity of the cream cups near Santos Pond.

The census conducted in 2015 was the first time that the species was included. Prior to this, the botanists were unaware of the local concern for the species. No plants were found in 2015. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

This species should benefit from grazing to reduce competition.

2.4.2.6 California Sandwort

Status and Distribution

California sandwort (*Minuartia californica*) does not have a special-status, but is considered locally rare by Santa Cruz CNPS Chapter.

This species grows throughout much of California.

Species Description

California sandwort is a delicate, branching annual 2-12 cm tall. The leaves are small at 2-5 mm long. It has 5-part, white flowers. The plant flowers from February to April.

Per Randall Morgan (pers. comm. 2017), the plants in Scotts Valley are an unpublished new variety that is endemic to Polo Ranch and Scotts Valley High School Preserve and near extinction.

Habitat Characteristics and Use

It grows on gravelly, sandy slopes, grassy ridges, chaparral, serpentine or not, below 4,500 feet.

Occurrence in the Glenwood Open Space Preserve

California sandwort has not been documented on Glenwood Open Space Preserve, but may grow there. Searches in 2017 found its close relative *M. douglasii*, but not the smaller *M. californica*. The plant, furthermore, was not found at its known location at the high school in 2017. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

Continue grazing will reduce competition from annual grasses.

2.4.2.7 Gray's Clover

Status and Distribution

Gray's clover (*Trifolium grayi* [*T. barbigerum* var. *andrewsii*]) has no CNPS California Rare Plant Rank, or federal or state listing. This species was considered but rejected by the state CNPS, but is considered sensitive by the Santa Cruz CNPS Chapter.

It grows along the coast from Mendocino to San Luis Obispo counties. There is no critical habitat designation for this species.

Species Description

The overall appearance of Gray's clover is a very low-growing forb with few to several stems. A shallowly tap-rooted annual, this species has compound leaves, with short hairs. Inflorescences are an involucred head with small purple and white-tipped flowers. Gray's clover germinates during the late fall and winter months, flowers from April to June, and sets seed in late spring and early summer. The coastal plants are more robust than inland individuals. In 2017, Al Keuter and Randall Morgan collected a type series to describe the Scotts Valley variety of Gray's clover.

Habitat Characteristics and Use

Gray's clover is limited to mesic sites in wet meadows, foothill slopes, pine woodlands, mixed evergreen forests, and redwood forests in the Coast Ranges and Sierra Foothills from Mendocino County south to San Luis Obispo County (Calflora 2015, Baldwin et al. 2012, CCH 2015).

Occurrence in the Glenwood Open Space Preserve

Within the Glenwood Open Space Preserve, Gray's clover is located on north-facing slopes in the Tabor & Beetle Pastures. Surveys conducted in 1992 found 66 stands of Gray's clover with an overall estimate of 77,000 individuals. Monitoring from 2003 to 2008 mapped between zero and five representative stands; however, monitoring efforts conducted by WRA in this period focused on several sensitive habitats and plants considered rare, statewide. Locally rare plants, such as Gray's clover, were incidentally monitored when time allowed, but there were no focused efforts to monitor the populations of Gray's clover. In 2015, no plants were found (Biotic Resources Group 2015). In 2017, however, the species rebounded with nine stands mapped in the Beetle Pasture and two stands mapped in the Tabor Pasture. More were present, but not mapped. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

Reliable information on palatability and grazing effects on Gray's clover was not found. However, another species in its genus, *Trifolium repens*, is highly nutritious to cattle. Therefore, this and other clover species might be vulnerable to livestock herbivory or trampling. The clovers at the Glenwood Open Space Preserve persisted for many years with horse grazing, indicating that the plants can withstand grazing and may benefit from it. At the Glenwood Open Space Preserve, there is low grazing use of its grassy hillside habitat. The grazing, or another similar management method, probably benefits the clover by selective reduction of competing non-native annual grasses.

2.4.2.8 Common Lomatium

Status and Distribution

Common lomatium (*Lomatium utriculatum*) has neither a federal nor state listing, nor a CNPS ranking. It grows throughout most of California. In Santa Cruz County, however, except for a 1935 collection from the Castle Rock State Park area, this species' only known sites are on the Glenwood Open Space Preserve. It is, therefore, important to track these occurrences.

This species is known from coastal sage scrub, sagebrush scrub, yellow pine forest, foothill woodland, chaparral, and valley grassland communities (Calflora 2017). There is no critical habitat designation for this species as it is not an endangered/threatened species.

Species Description

Jepson eFlora describes the plant as 1-5 dm tall with pinnately dissected leaves and a conspicuous cauline leaf petiole that sheaths throughout. The flowers have yellow corollas. Flowering occurs from February to May.

Habitat Characteristics and Use

The species grows in open grassy slopes, meadows, and woodland from 150 to 5,000 feet.

Occurrence in the Glenwood Open Space Preserve

It was known by Randall Morgan to have occurred in the grassland upstream from Santos Pond (R. Morgan, pers. comm., 2017). It was found at a second location in the northern end of the

Pond Pasture in 2017. This species was not included in the 2015 census. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

No special management is recommended for this species. The known locations should be visited annually starting in early April to track its persistence.

2.4.2.9 Leptosiphon (formerly Linanthus)

Status and Distribution

There are members of the genus *Leptosiphon* (*Leptosiphon* = *Linthanthus*) that are not well understood taxonomically. *Leptosiphon* does not have a federal or state listing, or CNPS ranking, however the Santa Cruz CNPS chapter considers this genus locally rare. Because baseline studies did not distinguish between small-flowered (*L. parviflorus*) and others of the genus, in the future all members of this genus should be confirmed as to their species. Randall Morgan (outlined by Aaron Schusteff on CalPhotos 2015) discovered that the *L. parviflorus* on the Glenwood Open Space Preserve should be called *L. longitubus* ssp. *longitubus*. There is no critical habitat designation for these species as they are not endangered/threatened species.

Species Description

According to Jepson eFlora, *L. parviflorus* is a hairy annual 4 – 40 cm tall. The inflorescence is a head of flowers that close at night. The corolla forms a long tube opening at the top to lobes that are 4-8mm long. The corollas vary greatly in color, thereby giving the plant its common name of variegated leptosiphon.

The species that is likely to be identified for Glenwood Open Space Preserve is *L. longitubus* ssp. *longitubus*, which differs in the following characteristics:

- the corolla tube is relatively long and uniform in diameter (not tapering above),
- the throat is entirely yellow,
- there is a pair of red spots at the base of each lobe, and
- stamens are closely grouped (attached deeper in the throat and less spreading).

Additionally, *L. longitubus* ssp. *longitubus* grows in the relatively northern and coastal region in grassland habitat.

Habitat Characteristics and Use

Leptosiphon species are known from openings or partial shade of oak woodlands, chaparral, and valley and coastal grasslands throughout cismontane California except for most the Central Valley (CCH 2015, eFlora 2015, Calflora 2015, Baldwin et al. 2012).

Occurrence in the Glenwood Open Space Preserve

Variable linanthus (*L. parviflorus*) was historically and has recently been reported in the Glenwood Open Space Preserve (CCH 2015, EIR plant list). In 2017, three populations were mapped east of Glenwood Drive, north of the water district road. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

Concerted efforts to map members of the *Leptosiphon* have not been conducted within the Glenwood Open Space Preserve because these species were not well understood taxonomically at the time of surveys/monitoring and all were considered common at the statewide level. The Glenwood Open Space Preserve has habitat that supports *Leptosiphon* species. The current management with grazing should be beneficial for this species.

2.4.2.10 Purple Owl's Clover

Status and Distribution

Purple owl's clover (*Castilleja exserta* ssp. *exserta*) does not have a special-status listing but is considered locally rare by the Santa Cruz CNPS Chapter.

It grows in coastal California, primarily from San Diego to Sonoma counties, and in the Central Valley.

Randall Morgan (pers. comm. 2017) reported that this species is has only been found at Glenwood and Sandhills within the County. Calflora does show records outside that area.

Species Description

Purple owl's clover is an annual that grows 10-45 cm tall. The leaves have 509 lobes that are threadlike. The inflorescence is 2-20 cm tall and 2-4 cm wide of bracts and flowers with colors of white, pale yellow, rose, and purple. Flowering occurs from March to May.

Habitat Characteristics and Use

It grows in open fields and grasslands below 4,800 feet.

Occurrence in the Glenwood Open Space Preserve

This species was not included in the regular surveys, but Randall Morgan (pers. comm. 2017) was aware of a population of this species in the northeast area of Tabor Pasture. That population was confirmed in 2017. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

Current management practices are appropriate for this species, therefore continued grazing is recommended. Annual surveys should be conducted to detect plants.

2.4.2.11 Indian Clover

Status and Distribution

Indian clover (*Trifolium albopurpureum*) does not have a special-status listing, but is considered locally rare by the Santa Cruz CNPS Chapter.

It grows in California's coastal counties from Mendocino south and in the Central Valley.

Species Description

This is a hairy, annual with a stem that can be decumbent to erect. The inflorescence is a spike that is 5-20 mm wide with purple and white flowers. Flowering occurs from March to June.

Habitat Characteristics and Use

It grows in coastal dunes, grassland, wet meadows, open slopes, oak chaparral, Pine woodland, roadsides and disturbed areas below 6,300 feet.

Occurrence in the Glenwood Open Space Preserve

This species was not known to occur on Glenwood Open Space Preserve until it was noticed in 2017. It was found on the edge of grassland north of the water district road. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

This grassland species does not need any special management.

2.4.2.12 Dwarf Sack Clover

Status and Distribution

Dwarf sack clover (*Trifolium depauperatum* var. *depauperatum*) does not have a special-status listing but is considered locally rare by the Santa Cruz CNPS Chapter. Thomas flora calls this rare in Santa Cruz Mountains region.

It grows in northern California in the Central Valley and the Coast Ranges.

Species Description

Dwarf sack clover is a small, glabrous annual. The leaflets are generally truncate with occasional notches at the tips. The inflorescence is a head of three to many flowers that are pink to purple with white tips. The banner inflates when it matures in to a fruit. Flowering occurs from March to May.

Habitat Characteristics and Use

This taxa is known from wet meadows, grassland, roadsides, and open vernal mesic areas underlain by heavy soils, at elevations below 1,800 feet.

Occurrence in the Glenwood Open Space Preserve

Randall Morgan (pers. comm. 2017) never saw it in more than a couple of sites at Glenwood Open Space Preserve. In 2017, however, it was common. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

Habitat Management

Current management practices are appropriate for this species, therefore continued grazing is recommended. Annual surveys should be conducted to detect populations.

2.4.2.13 Cream Cups

Status and Distribution

Cream cups (*Platystemon californicus*) do not have any rare plant status. It is, however, the host plant for the Opler's longhorn moth and for this reason, it is surveyed on the Glenwood Open Space Preserve.

This species grows in most of California.

Species Description

Jepson eFlora describes the plant as a 3-30 cm tall hairy annual. It has basal leaves. Each stalk leads to a single nodding bud that blooms as a cream/yellow-colored flower. Flowering occurs from March to May.

Habitat Characteristics and Use

The species grows in open grassland, sandy soil and burns below 3,000 feet.

Occurrence in the Glenwood Open Space Preserve

Six colonies of this species were observed in grasslands east of Glenwood Drive in 2015 (Biotic Resources Group 2015). The populations range from a couple plants to about 100. Refer to Figure 3 for details on locations of special-status, sensitive and listed species within the Glenwood Open Space Preserve.

The south bank of Santos Pond hosts the largest population of cream cups on the property. In 2017, the combination of grazing that reduced the thatch and a very wet year produced the largest number seen in years. Opler's longhorn moth has only been seen at this pond location.

Habitat Management

Management of cream cups is described above under Opler's longhorn moth (Section 2.4.1.1).

2.4.3 Sensitive Habitats and Natural Communities

The Glenwood Open Space Preserve contains several vegetation types identified by CDFW as sensitive natural communities. Native grasslands and wildflower fields are general structural vegetation types that encompass many specific floristic vegetation types (alliances) that occur throughout California, particularly in the Coast Ranges and Sierra Foothills. Native grasslands have diminished in extent by upwards of 90 percent, largely due to over-grazing, development, type conversion, and the spread of non-native species, particularly annual grasses. Grazing management is frequently utilized to reduce competitive pressure from non-native annual grass species. Remnant stands are often located in isolated terrain or unique soil types (e.g. mudstone, serpentine) that limit the growth and expansion of non-native grasses. Native species diversity and density are typically high in these habitats; however, non-native grasses are usually a characteristic, sometimes dominant, component of these landscapes. Within the Glenwood Open

Space Preserve, native grasslands primarily composed of purple needlegrass grasslands (*Stipa pulchra* Herbaceous Alliance, (Sawyer et al. 2009)) and California oat grass (*Danthonia californica* Herbaceous Alliance, (Sawyer et al. 2009)) occur on south- and west-facing slopes and ridgelines underlain by shallow, rocky soils derived from mudstone. Substantial cover of non-native annual grasses persists within these communities; however, native grasses comprise a characteristic to subdominant component, with a relative cover of 25 percent or greater.

At Glenwood Open Space Preserve, herbaceous plant communities that are dominated by sensitive and/or common native forb (broadleaf) species can be classified as wildflower fields under the Holland classification system (1986). Wildflower fields are located on ridgelines, slopes and some flats where thin soils over shallow sandstone or mudstone bedrock reduce competition from non-native annual grasses. This generalized community is typically dominated or characterized by one or more native forbs, which shift annually dependent on climatic conditions (e.g. lupines dominate in years of sustained early winter drought followed by moderate to heavy rainfall in the late winter/early spring [Knops and Barthel 1996]). Common native forb species include rusty popcornflower, sky lupine, miniature lupine, purple owl's clover, dense flower owl's clover, cream cups, and California goldfields. Sensitive species include Scotts Valley spineflower, Choris's popcornflower, Gray's clover, Mount Diablo cottonweed, Pacific Grove clover, leptosiphon, and grassland microseris.

2.4.3.1 Habitat Management

Native grasslands respond positively to grazing that is directed to reduce competition from non-native grasses and forbs. This is achieved by adjusting the number of animals and the timing of their grazing. The Rangeland Ecologist would monitor the grazing closely and provide direction to the Grazing Operator to achieve these goals.

Rare species (not including OTB, and Scotts Valley spineflower, spineflower or Scotts Valley polygonum) are ranked in Table 6 below in order of legal status and local importance. Information is also included on the species' required conditions, research needs, and management recommendations.

Table 6. Rare Species Information

Common Name	Latin Name	Status	Local Importance	Most Recent Status on Glenwood	Required Conditions	Research Needs	Management Recommendation	Comments
Santa Cruz clover	<i>Trifolium buckwestiorum</i>	CNPS Rank 1B.1	Most records are in Santa Cruz County	None found	Coastal prairie	Determine if population is extant	Graze to reduce herbaceous plant competition.	Population mapped in 2008, but no size estimated. Randy Morgan is doubtful that it grows at Glenwood (R. Morgan, pers. comm., 2017)
Pacific Grove clover	<i>Trifolium polyodon</i> var. <i>oligodon</i>	CNPS Rank 1B.1	The swale at Glenwood was designated the type locality, and first discovery site, of this rare northern variety	2015: Not surveyed 2017: <i>T. variegatum</i> and <i>T. polyodon</i> var. <i>oligodon</i> confirmed.	Usually wetland, but occasionally in non-wetland. Also coastal prairie.	What control measures for pennyroyal are feasible and will not harm TRPO	Graze to reduce competition Census to document species and populations	<i>T. variegatum</i> and <i>T. polyodon</i> . grow at this site, with the former blooming first. 1996 record of <i>T. polyodon</i> from N. Tabor Pasture (Morgan, R.)
Choris' popcornflower Hickman's popcornflower	<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i> <i>Plagiobothrys chorisianus</i> var. <i>hickmanii</i>	CNPS Rank 1B.2 CNPS Rank 4.2		2015: 560 individuals (Choris's) 2017: ~10 plants (Hickman's)	Wetland	What control measures for pennyroyal are feasible and will not harm PLCH	Reduce pennyroyal cover	Hickman variety known by Randall Morgan to exist, but first identified in plan in 2017. Plants were almost completely restricted to the trail zone.
Mt. Diablo cottonweed	<i>Micropus amphibolus</i>	CNPS Rank 3.2		2015: 25 populations, 4-5,000 plants	Sparsely vegetated slopes of mudstone soils	None	Graze to reduce competition	The OSMP recommends closing grazing periodically to allow plants to grow and reproduce
Grassland microseris (aka grassland silverpuffs)	<i>Stebbinsoseris heterocarpa</i>	None	Santa Cruz CNPS: locally rare	2015: Not reported	Grasslands with underlain rocky to clay soils	None	Census to document species and populations	Not surveyed prior to 2015. The species' range is from Marin County to northern Mexico, but there are few occurrences in Santa Cruz County.

Common Name	Latin Name	Status	Local Importance	Most Recent Status on Glenwood	Required Conditions	Research Needs	Management Recommendation	Comments
California sandwort (endemic variety)	<i>Minuartia californica</i>	None	Santa Cruz CNPS: Rare	2015: Not surveyed 2017: Surveyed, not found	Sparsely vegetated soil	None	Graze to reduce competition Watch for species during April	Per Randall Morgan (pers. comm. 2017), this unpublished new variety is endemic to Polo Ranch and SVHS Preserve and near extinction. Not found at SVHS in 2017.
Gray's clover	<i>Trifolium grayi</i>	None	Santa Cruz CNPS Sensitive	2015: None found 2017: Many pops seen.	Grassland, especially north-facing.	None	Graze to reduce competition	Populations of this plant crashed from 77,000 (66 populations) in 1992 to no plants in 2015. Surveys from 2003-8 found between 0 and 5 populations. It rebounded in 2017, not all populations were documented, but it was seen frequently, including 9 populations in the Beetle Pasture. A type series was taken in 2017 to describe the Scotts Valley race.
Common lomatium	<i>Lomatium utriculatum</i>	None	Santa Cruz CNPS: Rare	2015: Not surveyed 2017: 1 site documented	Grassland	None	Graze to reduce competition	Currently, the only known sites for this species in the county are at Glenwood Preserve and a 1935 collection from Castle Rock

Common Name	Latin Name	Status	Local Importance	Most Recent Status on Glenwood	Required Conditions	Research Needs	Management Recommendation	Comments
Variable linanthus	<i>Leptosiphon (Linanthus) parviflorus</i> (new name will be <i>L. longitubus</i>)	None	Santa Cruz CNPS: Rare	2015: Not surveyed 2017: 3 populations recorded	Grassland	<i>Leptosiphon parviflorus</i> at Glenwood may be renamed <i>L. longitubus</i>	Graze to reduce competition	This species was not mapped before 2017 because the plants were considered common. New taxonomic info shows it is a different species. (Randall Morgan, pers. comm. 2017) Santa Cruz CNPS believes them to be rare.
Purple owl's clover	<i>Castilleja exserta</i>	None	Santa Cruz CNPS: Rare	2015: Not surveyed 2017: Found at one site	Grassland	None	Graze to reduce competition	Randall Morgan (pers. comm. 2017) says that this species is only found at Glenwood and sandhills for the county. Calflora does show records outside that area.
Indian clover	<i>Trifolium albopurpureum</i>	None	Santa Cruz CNPS: Rare	2015: Not surveyed 2017: Discovered from one site	Grassland	None	Graze to reduce competition	The 2017 occurrence was the first record for Glenwood Preserve. It occurs in a few sites in the county.
Dwarf sack clover	<i>Trifolium depauperatum</i> var. <i>depauperatum</i>	None	Santa Cruz CNPS: Rare	2015: Not surveyed 2017: Many populations. Some documented	Grassland	None	Graze to reduce competition	Thomas flora calls this rare in Santa Cruz Mountains region. Randall Morgan (pers. comm. 2017) never saw it in more than a couple of sites at Glenwood. In 2017 it was common at Glenwood.

Common Name	Latin Name	Status	Local Importance	Most Recent Status on Glenwood	Required Conditions	Research Needs	Management Recommendation	Comments
Cream cups	<i>Platystemon californicus</i>	None	Host plant for Opler's longhorned moth	2015: 240 at pond. 5 other pops some less than 20 plants 2017: No count, but larger footprint than 2015 at pond. 1 other pop found.	Minimal competition from other herbaceous plants	Optimal timing of grazing	Graze to reduce thatch and competition from other herbaceous plants. Grazing must not harm flowers, which is where adult moths lay eggs. Grazing must not trample moth larvae which likely go through diapause in leaf duff. Survey annually for cream cups	This species has an affinity for serpentine soil, though serpentine doesn't occur at Glenwood. This site is an anomaly.

Table 7 below is a calendar of monitoring and management actions related to certain rare species (not including Ohlone tiger beetle, Scotts Valley spineflower or Scotts Valley polygonum)

Table 7. Monitoring and Management Actions

ACTION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Graze Beetle Pasture												
Graze Tabor Pasture												
Graze Pond Pasture												
Graze Canham Pasture												
Graze Moth Zone												
Monitor for Opler's longhorn moth adults												
Monitor for cream cups, Mt. Diablo cottonweed, Gray's clover, common lomatium, Indian clover, dwarf sack clover and variable linanthus												
Monitor for Santa Cruz clover, Choris's popcornflower, Hickman's popcornflower, Pacific Grove clover												
Monitor for grassland microseris												
Identify and remove weeds that threaten rare species												

Figure 7. Photos of Rare Plants



*Santa Cruz clover.
Photo used with
permission from
Kerry Heise*



*Pacific Grove
clover, previously
considered
variegated clover.
Note it is more pink.
Photo by Land
Trust of Santa Cruz
County*



*Variegated clover.
Note it is more
purple than Pacific
Grove clover. Photo
by Land Trust of
Santa Cruz County*



Choris's popcornflower.
Note the pedicel is longer than the calyx. Photo by Phil Greer, WRA.



Mt. Diablo cottonweed. Photo used with permission.
©Dylan Neubauer

Hickman's popcornflower.
Note pedicels are shorter than calyx. Photo by Land Trust of Santa Cruz County.





Grassland microseris.
Photo by Debra Cook



California sandwort.
Photo by
© 2007 Carol
W. Witham



Gray's clover.
Photo by Land
Trust of Santa
Cruz County



*Common
lomatium.
Photo by
Land Trust
of Santa
Cruz County*



*Variable
linanthus.
Photo by Land
Trust of Santa
Cruz County.*



*Purple owl's clover.
Photo by
© Keir Morse 2009*



*Indian clover.
Photo by Land
Trust of Santa
Cruz County*



*Dwarf sack clover.
Photo by Land
Trust of Santa
Cruz County*



*Cream cups. Photo
by Land Trust of
Santa Cruz County*

3.0 MONITORING AND MANAGEMENT GUIDELINES

3.1 Glenwood Open Space Preserve Management Goals and Objectives

The goals and objectives for this LTMP were developed based on the biology of sensitive species, threats to sensitive species, and potential effects of habitat management and public access on sensitive species. Below are descriptions of the goals and objectives developed for this LTMP.

Goal 1: Manage for the benefit of special-status, sensitive and listed species

Objective 1.1: Prohibit trail-building and prohibit public recreational access to OTB habitat occupied at the time of this plan (2017), while allowing seasonally restricted educational access along an existing trail in historically occupied OTB habitat.

Objective 1.2: Coordinate vegetation management (i.e. grazing and invasive plant management) within OTB habitat to achieve optimum habitat conditions (i.e. bare ground) with minimum adverse effects.

Objective 1.3: Avoid use of pesticides that would directly negatively affect OTB and other rare plants and animals.

Objective 1.4: Prohibit trail building and restrict public access to existing livestock paths within documented Scotts Valley spineflower populations (potential Scotts Valley polygonum habitat).

Objective 1.5: Coordinate vegetation management (i.e. grazing, control of woody succession into grassland, and invasive plant management) in spineflower and polygonum habitat to achieve optimum habitat conditions (i.e. reduce non-native annual grass cover) with minimum effects (i.e. erosion).

Objective 1.6: Avoid use of pesticides that would directly negatively affect spineflower and polygonum or negatively affect potential pollinators of spineflower and Polygonum.

Objective 1.7: Implement / continue vegetation management (i.e. grazing, control of woody succession into grassland, and weed whacking of designated trail habitat) to maintain bare ground and control competitive non-native annual herbaceous species.

Objective 1.8: Conduct / continue monitoring, of OTB, Scotts Valley spineflower, and Scotts Valley polygonum habitat to guide future management plans and to adapt those plans and management actions for improved results. To the extent possible, monitor sensitive plant and animal species that are not federally listed.

Goal 2: Manage risk of wildfire.

Objective 2.1: Prohibit discing and mowing in or near sensitive habitat. Consultation with the Land Trust should be conducted prior to any discing or mowing to ensure protection of sensitive species and habitat. In November 2015, City of Scotts Valley Public Works wrote that discing and vegetation management for fire protection was feasible while avoiding the Scotts Valley spineflower habitat above the high school.

Objective 2.2: Conduct regular livestock grazing to help reduce fire hazards. Fuel breaks should be maintained in strategically important grassland areas with grazing

by placing mineral/molasses licks to attract greater grazing there or other means as specified by the Scotts Valley Fire Protection District. The City and the Land Trust will continue to cooperate with local fire management authorities to develop and refine fire management plans for the Glenwood Open Space Preserve.

Goal 3: Use cattle grazing to meet vegetation management targets.

Objective 3.1: Allow horse or cattle grazing year-round, as prescribed by a certified rangeland manager and overseen by the Glenwood Open Space Preserve Manager, within the OTB, Opler's longhorn moth, and wetland habitat areas. Grazing is designed to achieve specified objectives while minimizing impacts and maintaining a healthy rangeland ecosystem.

Goal 4: Provide public access consistent with Goals 1 and 3.

Objective 4.1: Provide restricted access through signage for designated trails, designated entry points, and seasonal limitations / restrictions; however no such access will be provided through occupied OTB habitat (Objective 1.1).

Objective 4.2: Allow public access using existing livestock paths within the Glenwood Open Space Preserve to the extent feasible. New trails to provide Glenwood Open Space Preserve access in areas where existing livestock paths are absent, to avoid wetlands, and to connect to access and staging areas should meet the following objective:

Objective 4.3: Constructed trails should avoid occupied federal and state listed species habitat and minimize impacts to other sensitive species habitats and natural communities; designation of public access trails that follow existing livestock paths (and are not constructed) should also avoid such habitat.

3.2 Roles and Responsibilities

The roles and responsibilities outlined in Table 8 will help guide the long-term management of the Glenwood Open Space Preserve. A new MOU will provide guidance on these roles and responsibilities based on the 2003 MOU.

Table 8. Roles and Responsibilities

Responsible Party	Roles and Responsibilities
City	• Leading the management of public access. • Engaging the public for planning on specifics related to public access. • Providing environmental review of plan and component projects. • Overseeing infrastructure associated primarily with public access such as parking, rules and regulations signage, waste management (including wildlife-proof receptacles), benches and picnic tables, trail brushing, graffiti management, etc. • Overseeing public safety and emergency response. • Providing rules enforcement, particularly those that support grazing, such as no dogs and no bicycles on the east side of the Glenwood Open Space Preserve, and preventing the intentional or accidental release of cattle by visitors. • Holding ultimate responsibility for land management, but may delegate responsibility to the Land Trust or other party. • Reviewing and approving expenditures under the endowment. • Fulfilling obligations of the MOU between the LTSCC and the City in order to provide clear guidance on the roles and responsibilities of the City and the LTSCC.
Land Trust	• Acting as the Glenwood Open Space Preserve Manager. • Overseeing overall ecosystem management. • Coordinating with the City on recreation management to ensure recreation and ecosystem management are compatible. • Managing contractors, in consultation with the City, including, but not limited to: - o Grazing Operator - o Rangeland Ecologist - o Entomologist - o Botanist • Acting as easement holder - o Monitoring and enforcing the conservation easement • Managing the endowment - o Investing according to the Land Trust investment policy (approximately \$1.5 million as of May 2017). Reimbursement for spending from the endowment must be approved by the City.
Preserve Manager (Land Trust Staff)	• Coordinating with the Scotts Valley Fire District on fire protection planning. Collaborating with the Scotts Valley Fire District on their plan for the Glenwood Open Space Preserve. • Patrolling the Glenwood Open Space Preserve on a weekly or more frequent basis. Assisting in the prevention of additional vandalism that could result in cattle escapes. • Receiving training from the project Entomologist to perform monitoring of the OTB, and obtain appropriate state and federal permits for this monitoring. The Land Trust applied for a Section 10(a)(1)(A) recovery permit in 2017. • Analyzing, or supporting the analysis of, OTB data to understand the relationship between management and population trends. • Preparing an annual monitoring report per standards outlined in this LTMP in order to maintain compliance with the terms and conditions of this LTMP, and submit the report to the Service. • Conducting weed-whacking activities in the Beetle Pasture Management Zone in order to provide optimal bare ground conditions for OTB. • Conducting reconnaissance monitoring on a quarterly basis, in collaboration with the Rangeland Ecologist, to inform grazing and other land management actions.

Table 8. Roles and Responsibilities

Responsible Party	Roles and Responsibilities
	• Fulfilling obligations of the MOU between the LTSCC and the City in order to provide clear guidance on the roles and responsibilities of the City and the LTSCC. • Monitoring weeds and treating those that threaten special-status, sensitive, and/or listed species or sensitive habitat. • Developing and implementing an erosion control plan. Erosion projects should be prioritized for design and implementation. • Monitoring fences and gates for cattle containment. • Assessing water trough locations and design to ensure they will be efficient and effective. • Maintaining the property GIS. • Establish and maintain interpretive and wayfinding signage, in collaboration with the City • Coordinate with Vine Hill School for educational access through the Beetle Pasture
Grazing Operator	• Rotating cattle in coordination with the Rangeland Ecologist and Glenwood Open Space Preserve Manager. • Coordinating with the Glenwood Open Space Preserve Manager and City staff to facilitate interface between cattle and recreational use. • Keeping cattle on the property. Ensuring cattle do not cause property damage or escape through broken fences from the Glenwood Open Space Preserve. • Monitoring and repairing gates and fences to ensure cattle do not escape. • Removing thatch from Opler's longhorn moth habitat to improve habitat conditions for this species. • Maintaining water troughs for cattle to ensure they have a reliable water source at all times.
Rangeland Ecologist	• Monitoring the condition of forage and soil. • Making recommendations regarding grazing locations, frequency, and intensity to achieve desired ecological outcomes. • Providing a grazing assessment report to the Grazing Operator and Preserve Manager by the end of October each year. Review the management objectives related to grazing, mowing, and other vegetation management. Provide clear guidance to the Grazing Operator as needed. • Closely manage cattle grazing in the Beetle Pasture Management Zone in order to ensure optimal bare ground conditions are maintained for OTB. • Quantitatively monitor grassland conditions in the fall and spring of each year in order to ensure optimal vegetation height is achieved for special-status, sensitive, and listed species.
Entomologist	• Performing monitoring of the OTB and Opler's longhorn moth in order to maintain compliance with this LTMP. Survey results will inform management objectives for the following year and recovery actions for OTB. • Training Land Trust staff or others in monitoring of OTB and Opler's longhorn moth. • Analyzing, or supporting the analysis of, OTB data to understand the relationship between management and population trends. • Recommending management activities to sustain and enhance the OTB population.
Botanist	• Conducting periodic monitoring for special-status, sensitive and listed plants. • Coordinating with the Glenwood Open Space Preserve Manager to leverage botanists in the community to make surveys efficient.

3.3 Endowment Use and Management

The endowment will be used for the management and restoration of biotic resources, including, to a limited extent, facilities, or activities that enable biotic resource enhancement concurrent with public access. For example, relocating cattle fencing to accommodate trails, adding gates in cattle fences, providing receptacles for waste fishing line, and installing signage for implementation and resource protection.

The endowment will also be responsible for management planning to ensure biotic resources are protected as future uses are contemplated, including public access.

The endowment will not be responsible for the maintenance of facilities such as parking areas, restrooms, and trail construction.

Budget management under this LTMP is assigned to the Land Trust, subject to review and approval by the City. Review and approval of the annual budget will be conducted by the City. Spending authority will be consistent with the budget will be the responsibility of the Land Trust. Deviations from the budget will require approval by the City.

The endowment may be used for biotic resource management activities outlined in this LTMP. Other, presently unanticipated, biotic resource management activities may also be eligible. An annual work plan overview, along with the budget, will be shared with the City. Deviations from the LTMP will require approval by the City.

3.3.1 Costs of Plan Implementation

Costs to implement the conservation strategy described in this LTMP are listed in Table 9. Operational costs estimated for the Land Trust habitat management capital costs for pasture infrastructure was estimated, amortized over 20 years, and included in the annual cost. Total estimated annual operational cost was rated as a multiple of the minimum cost. To allow all potential habitat management options to be evaluated in the LTMP, no threshold of acceptability or rejection was established for operational cost. For long-term financial sustainability, costs will be cut below present levels by increasing efficiency, bringing consulting expenses in-house, and reducing the frequency of certain activities, such as mapping.

An endowment established as a condition of approval for the Glenwood Open Space Preserve is the primary source of funding for the conservation activities and management of biological resources covered in this LTMP. Under an agreement with the City as landowner of the Glenwood Open Space Preserve, the Land Trust will hold the endowment and conduct or oversee all biological management and monitoring activities. The Land Trust holds the endowment of approximately \$1,125,000 with a projected increase of 3 percent after inflation annually based on conservative estimates of annual interest earned. Costs related to public access management, infrastructure, maintenance, and public safety will be the responsibility of the City.

Table 9. Estimated LTMP Operational Costs

Glenwood Open Space Preserve Financial Analysis Land Trust of Santa Cruz County April 2017		
<u>Endowment Cash Flow</u>		Notes
Account value	\$1,500,000	1
Anticipated loss in next bear market	25%	2
Account value after next bear market	\$1,125,000	3
Safe yield	3.0%	4
Sustainable annual budget	\$33,750	

<u>Future Management Costs</u>		
Monitoring (cattle, beetle, plants)	\$10,000	5
Field work (patrols, vegetation management)	\$7,000	6
Management (contracts and coordination)	\$3,000	7
Projects	\$6,500	8
Contingency	\$5,000	9
Total	\$31,500	10

<u>Reference Management Costs (2010-2014)</u>		
Beetle monitoring	\$5,680	
Grazing monitoring and coordination	\$11,400	11
Plant mapping and weed control	\$9,600	12
Land Trust field work and management	\$15,700	13
Total	\$42,380	

Notes	
1 75%/25% invested in stocks and bonds	
2 Average of various scenarios	
3 Reduced by anticipated bear market loss. Provides emergency buffer.	
4 Assumes annual returns of 6% and inflation of 3%	
5 Division among beetle, habitat condition and spineflower TBD	
6 Land Trust field staff at 12 hours/month, plus expenses	
7 Land Trust manager at 5 hours/month	
8 E.g. fencing, invasives and erosion management, habitat enhancement	
9 For short term, intensive monitoring, field work, management, projects	
10 Future management costs are assumed to increase with inflation	
11 Included one-time cost related to transition to cattle	
12 Included one-time cost related to invasive plant mapping	
13 Included one-time cost related to transition to cattle	

3.4 Habitat Management

3.4.1 Management Zones

Four management zones will be created as a part of this LTMP. These four zones include the following:

- Beetle Pasture – Bounded by the fencing around the Beetle Pasture and encompassing all known OTB habitat.
- Beetle Expansion Area – Includes areas outside of the Beetle Pasture, which become occupied by the OTB. There is no land in this management zone at present.
- East Side Preserve – Includes areas on the east side of Glenwood Drive that are not part of the Beetle Pasture or the Beetle Expansion area.
- West Side Preserve – Includes areas on the west side of Glenwood Drive.

Additional details regarding each zone are outlined below and shown in Figure 8.

3.4.1.1 Beetle Pasture Management Zone

The Beetle Pasture Management Zone is bounded by the present alignment of the Beetle Pasture fence, the area of habitat occupied and historically occupied by the OTB, and adjacent areas inside the Beetle Pasture, including:

- Occupied breeding area where burrows are present
- Occupied areas where adults have been observed
- Areas that were historically occupied by OTB
- Adjacent areas where no OTB or burrows have been observed
- A 100-foot buffer around occupied and historically occupied habitat (a portion of that buffer extends outside the Beetle Pasture at the northeast part of the Beetle Pasture)

The buffer provides some physical separation between the OTB and visitors, but OTB may move into the buffer or through it into other areas. There are planned restoration activities in the buffer area and in other parts of the Beetle Pasture Management Zone, such as the removal of brush and other woody vegetation, and the establishment of a trail on the far eastern side of the Beetle Pasture. If management is successful, those areas will become occupied, and the ‘buffer’ will not be a buffer anymore; it will become occupied habitat. Whether buffer or habitat, the areas inside the Beetle Pasture will be subject to the same management approach.

Goals

The goals for management of this area are to:

- Sustain and increase populations of OTB
- Enhance and expand OTB habitat
- Conduct ongoing grazing to sustain and expand habitat
- Conduct monitoring to track the efficacy of management
 - o the planned trail to the East Preserve from Vine Hill School will be monitored for burrow activity to determine if the species becomes re-established in area
 - o take observed in the area will be recorded and reported to the Service
 - o if range expansion is observed, there would likely be a net benefit to the species, and such take may be added to the recovery permit at that time

- Avoid take of the OTB while accomplishing other objectives

Management Practices

Management activities that may be performed throughout the year, when authorized by a qualified biologist with expertise in OTB biology, include

- Grazing and maintenance of grazing infrastructure necessary to support grazing, including perimeter fencing, gates, and signage as well as water troughs
- Weed-whacking and other vegetation management that minimizes soil disturbance and is necessary to enhance OTB habitat (Appendix A)
- No discing for fire protection, grazing only

Certain activities may be conducted between September 1 and December 15 to avoid the adult activity period and sensitive juvenile life stages of OTB. These activities include:

- Vegetation management that may result in soil disturbance such as brush removal
 - o Perform habitat management activities to create open grassland and bare soil conditions, including shrub and tree removal
- Installation of interior signage and seasonal fencing along the segment of trail from Vine Hill school into the preserve
- Establishment and visitor use of trails

Trails

A single trail along the eastern side of the Beetle Pasture Management Zone may be provided as an interpretive trail and access intended primarily for students and teachers of Vine Hill School. The trail must avoid occupied habitat, and only pass through historically occupied or unoccupied habitat. Allow the trail to form through use, scraping and/or constructing a trail is prohibited. Only existing soil surface trails are allowed, no imported soil material will be used.

Trail management will follow the guidelines outlined below:

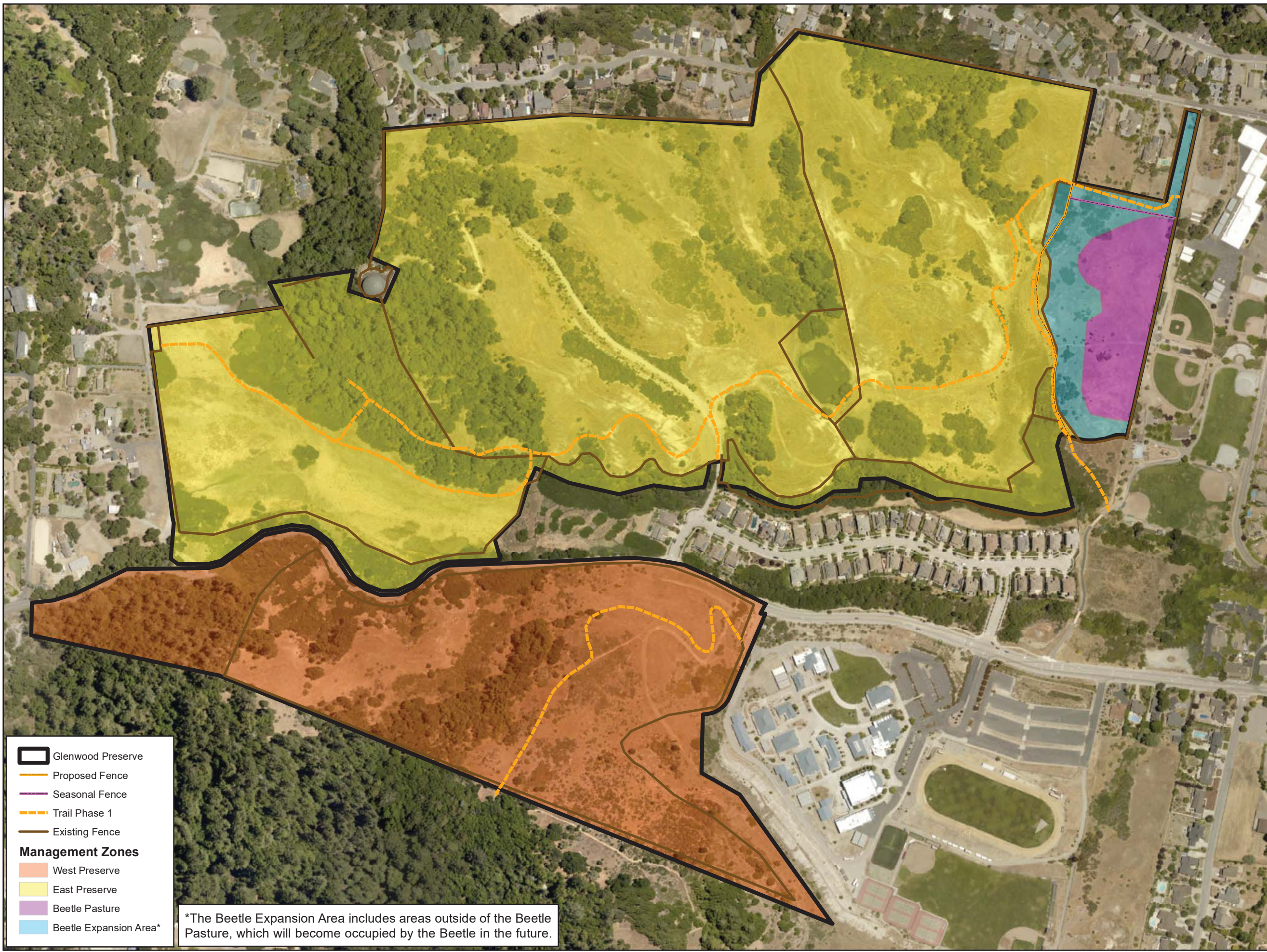
- Prohibit visitor access generally from December 15 through September 1, but subject to provisions below
- Prohibit visitor access unless monitoring demonstrates that no life stages of the beetle are present along the trail, and that the soil is dry and firm
- Prohibit visitor access once the rains soften the soil if vulnerable life stages are present
- Prohibit visitor access when cattle are in the pasture
- No bicycles
- No dogs
- At the entrance to this trail, signage will direct the public to the primary trailhead at or near the footbridge
- The Land Manager will coordinate with staff of Vine Hill School for access, and not broadly advertise access

Glenwood Preserve

Scotts Valley, California

Figure 8.

Management Zones



Glenwood Preserve

Proposed Fence

Seasonal Fence

Trail Phase 1

Existing Fence

Management Zones

West Preserve

East Preserve

Beetle Pasture

Beetle Expansion Area*

*The Beetle Expansion Area includes areas outside of the Beetle Pasture, which will become occupied by the Beetle in the future.



0 125 250 500

Feet

Map Prepared Date: 11/3/2017
 Map Prepared By: sgillespie
 Base Source: Esri Streaming Imagery
 Data Source(s): WRA, Land Trust Santa Cruz County,
 Entomological Consulting Services, Ltd.

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A seasonal fence system will be installed in the eastern Beetle Pasture along the boundary between currently occupied and historic OTB habitat will add a visual barrier that will help to divert visitors away from occupied OTB habitat (Figure 11). The installation of the fence should minimize ground disturbance, e.g. blocks and posts resting on the ground with wooden rails between them. The fence will be installed during a period when schools may access the property. The fence will be removed when cattle are in the pasture.

An unofficial existing trail through the center of the Beetle Pasture will be allowed and abide by the following guidelines:

- Leave existing informal climb-over structure in the boundary fence to discourage trespass that damages the fence
- At this structure, replace the "No Trespassing" sign with signage directing people to official entrance and stating that this area is closed to protect special-status, sensitive and listed species
- Assess the fence and gate along the north side of the pasture, and make changes to discourage entry to the closed area and discourage vandalism, while prioritizing actions that keep the cattle management facilities intact, even if that means some trespass occurs
- Respond quickly to monitoring showing heavy adult OTB use in this area with additional effort to exclude unauthorized persons from the area between December 15 through September 1.

Vegetation management will include the following:

- Weed-whacking of designated trail habitat to maintain bare ground and control competitive non-native annual herbaceous species (Appendix A)
- Brush should be removed periodically

The Vine Hill School trail and all unofficial trails in the Beetle Pasture Management Zone, both inside and outside of occupied and historically occupied OTB habitat, will be monitored for adult and burrow activity.

3.4.1.2 Beetle Expansion Management Zone

Goals

One goal for management of OTB is to expand the extent of the habitat occupied by this species. If this occurs, then areas outside the Beetle Pasture Management Zone may become occupied habitat. The species has a strong affinity for Watsonville Loam series soils, and those soils are not mapped in detail in the area. As management proceeds, these and other areas may become occupied habitat.

In the future, if OTB are observed outside the Beetle Pasture Management Zone, then this newly occupied area, and a 100-foot buffer around it, will be designated the Beetle Expansion Management Zone. The designation will occur within three months of when the annual monitoring report delineates the extent of newly occupied habitat.

Management Practices

Ground disturbing activities in this area will be limited to the period between September 1 and December 15. No artificial soil or imported fill will be placed in these areas.

Each of the management practices employed in the Beetle Pasture Management Zone will be considered for this Beetle Expansion Area Management Zone and either adopted or rejected based on the likely benefit to OTB. The Land Trust will lead this process in coordination with the City, the Service and qualified biologists approved for monitoring OTB.

The goal will be to determine whether management of this newly occupied area should continue unchanged, as it may have contributed to the expansion of OTB into the area, or be changed to be consistent with the management of the Beetle Pasture Management Zone, for example, by excluding visitors between December 15 and September 1. There may be different management strategies that benefit OTB, which can also be trialed. Considerations will include the status of occupied burrows, weather, grazing activity, visitor use patterns and both potential and observed impacts.

Trails

A single trail along the eastern side of the Beetle Pasture Management Zone may be provided as an interpretive trail and access intended for students and teachers of Vine Hill School. The trail must avoid occupied habitat, and only pass through historically occupied or unoccupied habitat. Allow the trail to form through use; scraping and/or constructing a trail is prohibited. Only existing soil surface trails are allowed, no imported soil material will be used.

Trail management will follow the guidelines outlined below:

- Prohibit visitor access generally from December 15 through September 1, but subject to provisions below
- Prohibit visitor access unless monitoring demonstrates that both no life stages of the beetle are present along the trail, and that the soil is dry and firm.
- Prohibit visitor access once the rains soften the soil if vulnerable life stages are present
- Prohibit visitor access when cattle are in the pasture
- No bicycles
- No dogs
- At the entrance to this trail, signage will direct the public and all visitors during the closed period to the primary trailhead at or near the footbridge
- The Land Manager will coordinate with staff of Vine Hill School for access, and not broadly advertise access

3.4.1.3 East Preserve Management Zone

The East Preserve Management Zone is the area outside the Beetle Pasture on the east side of Glenwood Drive.

Goals

This area will be managed to support the grazing management program. Successful OTB management requires that the property support a grazing herd of cattle, which require extensive pastures distinct from the Beetle Pasture.

The primary objectives of this area are to

- Support the herd of cattle that sustains the OTB habitat in the Beetle Pasture
- Support native plant and insect habitat in the East Preserve
- Support a healthy watershed
- Provide for public access for the quiet enjoyment of nature

Management Practices

All fences, gates, and stiles must ensure adequate containment of cattle. The East Preserve Management Zone will be managed for public access. Any use that conflicts with the cattle operation will be discouraged or prohibited. Dogs and bicycles are prohibited.

Existing cattle trails may be used, however, all trails, including cattle trails, should be modified to conform to the trail standards below.

Interpretive signage will be installed at official entrances and will provide strategic locations to direct people to official entrances.

Various gullies and erosion features occur in the East Preserve. Many of the gullies are associated with altered hydrology, while bare soil conditions are associated with historic grazing practices. This erosion damages habitat, soil structure, and downstream aquatic resources. These erosion features will be assessed and addressed over time through individual projects.

Fire protection includes the following guidelines:

- Mow areas as needed for fire protection
- Limit discing to non-sensitive areas that have been disced previously and only where it is necessary for fire protection and mowing is infeasible
- Prohibit discing or vehicle mowing in sensitive habitats
- String trimming is permitted in OTB habitat, if deemed necessary. Person should follow protocols in Appendix A regarding weather conditions that minimize the chance of take of OTB.
- Management for fire protection is the responsibility of the Scotts Valley Fire Protection District

Trails

Trails may be built that conform to the following design standards:

- Trails should be no steeper than 15%. Trails should be no steeper than 10% for distances greater than 50 feet
- Trails should be oriented across the slope such that the gradient of the trail is less than half the gradient of the hillslope to facilitate drainage (for example, if the hillslope is 10% the trail gradient should be less than 5%)
- Areas with hillslope less than 10% should be avoided where possible as trails in such areas are prone to ponding
- Trails should have grade reversals at least every 100 feet and ideally every 50 feet to ensure adequate drainage
- Trail tread should use native soil material rather than imported material
- Maximum width of constructed trail tread should be three feet; maximum width of graded area should be five feet
- Constructed trails must avoid habitat occupied by federally protected species
- Constructed trails should avoid habitat occupied by rare plants and potential habitat for federally protected species
- Existing cattle paths may be used as trails temporarily, but, where cattle paths do not conform to the standards above, visitor use should be diverted onto constructed trails
- No bicycles
- No dogs

Trail building and fence management may occur any time, consistent with local, state, and federal regulations.

Appropriate erosion control measures should be taken during winter season trail construction, such as completing trails in short segments with drainage features rather than opening extensive segments of rough grade without drainage features.

3.4.1.4 West Preserve Management Zone

The West Preserve Management Zone is located on the west side of Glenwood Drive.

Goals

It is to be managed as per the East Preserve, with the primary exception that it will not be grazed (at least initially). Scotts Valley spineflower occupies habitat in this area. However, the spineflower habitat is in steep areas, such that visitor impacts are unlikely to be significant.

Management Practices

The West Preserve Management Zone will be managed to protect Scotts Valley spineflower with signage and, if necessary, fencing. Hiking, dogs, and bicycles will be allowed near the plants; however, trails, fencing, and signage will be used to keep visitors out of occupied habitat.

This area will not be grazed initially, but it may be grazed in the future, as this would be beneficial to native plants. However, this would require the exclusion of dogs. No grazing is planned for at least 5 years after implementation of this LTMP. Disturbance is not expected to be necessary to sustain the spineflower habitat because of the rocky and low-nutrient status of the soils.

Discing would be limited for fire protection. Discing for fire protection is the only management activity identified as a threat to special-status, sensitive and listed species. Discing should not be performed on the Glenwood Open Space Preserve near occupied Scotts Valley spineflower habitat. Discing should be performed only on the adjacent property of the Scotts Valley High School. Mowing will also be conducted for fire protection and habitat enhancement to the extent feasible.

Trails

Trails may be built so long as they conform to the same standards as the East Preserve Management Zone. Dogs and bicycles may be allowed. If bicycles are allowed, additional care must be taken in trail design and maintenance to ensure excessive erosion does not occur. Existing trails that do not conform to these standards should be decommissioned and replaced with re-designed trails.

3.4.2 Grazing

The grazing and related management strategy described here aims to maximize the conservation benefits and minimize the impacts of such management at the Glenwood Open Space Preserve, particularly focusing on the special-status, sensitive and listed plants and wildlife and other special resources. All resources with the potential to be affected by grazing in rangelands were assessed.

This strategy includes the goals, objectives, and performance standards for grazing and related management. It recommends the use of yearlong horse or cattle grazing, with carefully timed deferments and distribution incentives within the OTB, Opler's longhorn moth, and wetland habitat areas, as the primary vegetation management tool throughout the Glenwood Open Space Preserve. Grazing is further designed to reduce fire hazards and to optimize ecological conditions for the special-status, sensitive and listed plants, riparian woodlands, wetlands, native grasses, and other special resources dependent on such management. It recommends the use of grazing and non-grazing management tools, to achieve other goals at areas designated for special management. The grazing prescription is designed to achieve specified objectives while minimizing impacts, maintaining a healthy rangeland ecosystem, and providing the conditions for a cooperative and productive relationship between the Glenwood Open Space Preserve Manager and Grazing Lessee. The grazing capacity assessment provides the baseline for expected herbaceous forage available to graze and the appropriate initial stocking rates for each Management Zone depending upon annual weather. The strategy relies on the cooperation and tactical decision making by the Glenwood Open Space Preserve Manager and Grazing Lessee within a framework they can understand and appreciate, and flexibility to achieve the performance standards. It describes the circumstances to sustain the horse or cattle grazing operations, which in turn enable the use of grazing as an effective and flexible conservation management tool. It also defines monitoring and adaptive management measures to assure the goals are achieved over the long-term.

3.4.2.1 Summary of Current Conditions Affected by Grazing

Habitat of Special-Status and Other Sensitive Plants

Fourteen special-status plants were either observed or could occur at Glenwood Open Space Preserve. The habitats of the plants with at least potential occurrence warrant special management where they might be vulnerable to or benefit from planned livestock grazing, in particular, planned winter and spring grazing. High stocking rates (of horse or cattle) could

damage these special-status, sensitive and listed plants due to soil compaction, erosion, and higher grazing herbivory pressure (Arthur, pers. comm. 2010). However, the prescription to graze at low stocking density is expected to avoid harm to these plants due to the relatively higher palatability (and thus selective preference by livestock) of the green growing grasses, thus reducing the chance that such forbs will be grazed even if they are palatable. In addition, exclusion from grazing could cause more harm than benefit. No negative impacts to any of the plants are expected because of the grazing prescription, and conditions for their conservation are expected to improve.

No science-based information on grazing effects or palatability was found for Gray's clover or Pacific Grove clover. However, another species in the same genus, *Trifolium repens*, is considered fair to good forage for both horses and cattle (Coladonato 1993). Therefore, these species might be vulnerable to herbivory or trampling. It is possible that exclosure from grazing would be detrimental to these populations because they persisted while the site was grazed with horses and dairy cattle. These and the other special-status, sensitive and listed species are likely to be harmed more by the exclusion of grazing and the resulting negative effects of competition from the non-native annual grasses, than by continued grazing.

Habitat of Special Status and Other Sensitive Wildlife Affected by Grazing

Historic grazing apparently was the main management factor that maintained the required grassland habitat qualities for persistence of special-status OTB, Opler's longhorn moth, and special-status, sensitive and listed plants within the Glenwood Open Space Preserve. Little evidence is available to determine the prehistoric range and habitat characteristics for these species. However, inferences can be suggested based on the ecological conditions where these species persist. Occupied habitat is mainly where the soils are shallow or where relatively heavy grazing by cattle or horses or some other means of creating and maintaining bare soil surfaces (such as lightly-used bicycle or human foot trails, dirt vehicle roads, scraping, and burning) has occurred. These site conditions and management activities result in reduced height and density of the dominant non-native grassland plants (and thus reduced competition for space, sunlight, moisture, and nutrients with the species), and reduced encroachment of scrub and woodlands into the grasslands.

Recent studies of OTB habitat and its management by Arnold, Bartolome, Ford, and Rao (2012a and 2012b) explained that continuing management with either extensive grazing by cattle or horses or moderate-frequency hiking and bicycling use on trails was critical to maintain suitable conditions for OTB in the remaining occupied sites. These studies also defined the habitat features that land managers should focus upon and monitor to increase the amount of suitable habitat. The amount of sunlit, bare soil should be maintained at 50% or more on road and trail habitat sites and at 12% or more in grassland habitat areas. Although the amount of bare soil in grassland sites is more dependent on fluctuations in cover due to weather (which varies between years) rather than management, the effects of livestock grazing, livestock trailing, weed whacking, scraping, and other management treatments are likely to be most important during years with normal and above-normal precipitation. These studies also recommended avoiding traffic by livestock and bicycles when the soils are saturated. In addition, heavy usage of recreational trails is considered detrimental.

Open Grassland Habitat Maintained by Grazing

Coyote brush scrub is expanding into and replacing the grassland areas some of which may be suitable habitat for special-status and sensitive species. This loss of open grassland habitat is evident when comparing aerial photos from 1993 to present day. Natural succession from

grassland to northern coastal scrub to mixed woodland is typical of the central California sites influenced by the coastal maritime climate (Ford and Hayes 2007). Northern coastal scrub is found invading the grasslands of the Glenwood Open Space Preserve, which indicates succession to scrub habitat. Favorable conditions for conversion to scrub would include above-normal precipitation extended into the summer, and absence of livestock grazing during the dry months. In general, livestock grazing limited to the winter and spring seasons avoids the trampling and herbivory impacts of livestock on scrub and oak seedlings and saplings when they are most vulnerable in the summer and fall (McBride 1974), and thus could allow potential colonization by those woody species into adjacent grasslands. Willows and coyote brush generally provide fair quality browse for cattle, and their browsing often creates a hedged browse-line (Sampson and Jespersen 1981). Willows and coyote brush generally provide less valuable browse for horses, and horses are less likely to browse near dense shrubs or willow woodlands due to the perceived threat of predators. Despite this difference in palatability, both horses and cattle hoof action would reduce scrub encroachment. Thus, the expansion of scrub and especially willow woodland into grasslands might be partly associated with the change from cattle to horses around 1982.

Under favorable conditions and within a few decades, even more of the Glenwood Open Space Preserve's grasslands could be encroached upon by woody vegetation unless management action is taken. The best single measure would be to extend the grazing period (best with cattle if available) into early summer on a trial basis. However, this would only affect invading woody plants, not the existing scrub or woodlands. The special-status, sensitive and listed annual herbs of the Glenwood Open Space Preserve could be damaged by summer grazing. This is because, in the summer, cattle and horses begin to graze forbs and cattle begin to graze succulent woody foliage when their preferred forage (grass) has senesced.

Therefore, manual or mechanical scrub control or periodic summer grazing by cattle will be required to prevent further expansion. Clearing of existing scrub and willow woodland should be conducted gradually and experimentally to assure the increase of benefits and reduction of risk to special-status, sensitive and listed plants. The Grazing Lessee might be willing to assist in scrub clearing because it will increase the availability of forage. If so, a plan will be needed that outlines where to clear scrub, where not to clear scrub, how to clear scrub, and how to dispose of it.

Invasive Species Affected by Grazing

Five non-native invasive plants are currently considered to be of primary conservation concern and potentially affected by grazing in the grazed grasslands of the Glenwood Open Space Preserve:

- Stinkwort (*Dittrichia graveolens*)
- Pennyroyal (*Mentha pulegium*)
- Italian thistle (*Carduus pycnocephalus*)
- Bull thistle (*Cirsium vulgare*)
- Milk thistle (*Silybum marianum*)

Because of the substantial limitations of grazing to control these invasive plants, most control will be performed using herbicides.

Some of these plants might be partially controlled (but not eliminated) using grazing management in the grasslands, including the targeting of specific invasive plant stands with short-duration high-

intensity grazing encompassed temporarily by portable electric fencing at the time of greatest vulnerability. As an example, Italian thistle might be controlled by short-duration high-intensity grazing. However, control of Italian thistle is generally regarded as uneconomical and impractical (Bossard, Randall, and Hoshovsky 2000). The high stocking densities necessary to achieve the desired impact on target weeds is normally not feasible on landscapes larger than a few hundred acres. However, the Glenwood Open Space Preserve is small and the use of targeted grazing within small temporary enclosures to control some pest plants is feasible. Livestock grazing might not effectively control bull thistle. The most effective control of bull thistle involves the use of herbicide, mowing, and in coastal areas possibly the biological control insect *Urophora stylatai*. Specific grazing management practices to control invasive plants noted above are described in Table 10.

Table 10. Grazing Management Practices for Invasive Plant Species at the Glenwood Open Space Preserve

Species	Grazing Management Considerations
Stinkwort (<i>Dittrichia graveolens</i>)	(Timing). Stinkwort is poisonous to sheep, and is generally avoided by cattle and horses. There are no known guidelines for using grazing as a control method. The seeds are sticky, and grazing of infested fields when seeds are present (generally autumn and early winter) may facilitate the spread of this species. Aminopyralid/triclopyr blended application when plants are young is recommended (Brownsey et al. 2013).
Pennyroyal (<i>Mentha pulegium</i>)	The plant is poisonous to livestock and grazing is not expected to be an effective control method.
Italian thistle (<i>Carduus pycnocephalus</i>)	(Timing/Intensity). Targeted grazing by goats or sheep has been effective when the infested area is excluded from the time of germination until plants reach a height of four to six inches, and then grazed with a high stocking rate for several weeks. Cattle generally avoid grazing thistles, but will sometimes eat the flowers. (DiTomaso et al. 2013). Aminopyralid (Milestone) can be effective.
Bull thistle (<i>Cirsium vulgare</i>)	(Timing/Intensity). Cattle will not consume bull thistle due to long, stiff spines at the end of the leaves and subtending the flowers. However, bull thistle tends to colonize in disturbed areas and under oaks. Aminopyralid (Milestone) can be effective.
Milk thistle (<i>Silybum marianum</i>)	(Intensity). Accumulated nitrates in milk thistle leaves are toxic to cattle (Fuller and McClintock 1986; Bean 1985). Thorny spines on the leaf margins and flower heads will cause selective avoidance by cattle although goats may consume it. Residual dry matter (RDM) in the late summer and fall is an important inhibiting factor in the germination of milk thistle seed. Thus, the level of grazing in areas supporting this plant should be carefully managed for appropriate levels of RDM (Bartolome et al. 1980). Avoid soil disturbance due to cattle concentration (Bean 1985). Aminopyralid (Milestone) can be effective.

Surface Water Drainage and Water Quality Affected by Grazing

The Glenwood Open Space Preserve is located in the San Lorenzo River watershed. The West Branch of Carbonera Creek and the smaller tributary along Glenwood Drive to the west run from north to south through the Glenwood Open Space Preserve. Carbonera Creek is a seasonal to perennial flowing stream with dense willow and oak-bay riparian stands along most reaches. A perennial stock pond sits in the central portion of the Glenwood Open Space Preserve (on the west side of the Pond Pasture), with a spillway that drains into the east branch of Carbonera

Creek. This spillway has a natural bedrock and soil bottom without armoring. Several ephemeral drainages take surface flows from the ridges and slopes within the Glenwood Open Space Preserve into either branch of Carbonera Creek.

A Sediment total maximum daily load (TMDL) for the San Lorenzo River (including Carbonera Creek) was approved by the U.S. Environmental Protection Agency on February 19, 2004. A Pathogen TMDL was approved for the San Lorenzo River Watershed (including Carbonera Creek) by the Central Coast Regional Water Quality Control Board (RWQCB) on March 21, 2008. A Nitrate TMDL for San Lorenzo River was approved by the US EPA on January 14, 2003 (CCRWQCB 2008). These TMDLs prohibit sediments, pathogens, and nutrients from entering the Creek (McNeil pers. comm. 2009). Carbonera Creek has been identified as supporting recreation and municipal uses, including drinking water, as beneficial uses (SWRCB 1994). This means that Carbonera Creek has been used or has the potential to be used for and must be managed for these purposes. Best Management Practices (BMPs), including exclusion of horses/cattle from the Creek could be used to comply with the TMDLs.

The Sediment TMDL requires that livestock operators, “promote improved livestock management practices to reduce discharge of sediment” and “improve riparian corridor protection, maintain channel integrity, implement alternatives to hard bank protection, and retain woody material” (CCRWQCB 2002). Listed treatment measures that can be used to comply with sediment reduction regulations include: dispersing runoff by directing water to grass filter strips; stabilizing soil by planting vegetation on bare areas; and reducing sedimentation of waterways by installing vegetated filter strips. Other practices to minimize pollution associated with livestock are to maintain service areas (such as corrals and watering troughs) away from drainages, proper maintenance of drainage on roads and trails, and maintaining grassland herbaceous mass above the recommended minimums of RDM.

McNeill (pers. comm. 2009) recommended that the grazing management plan include measures referred to as “Key Elements of an NPS Pollution Control Implementation Program,” which are identified in the Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program (SWRCB 2004). The four key elements are: 1) explicitly state that the plan purpose is to address pollution and maintain water quality, 2) describe how BMPs will be used, how BMPs were selected, and how BMP implementation will be verified, 3) if RWQCB states it is necessary, include a timeline to achieve water quality targets, and 4) include a method to determine whether water quality objectives are being achieved and whether additional BMPs are needed. This grazing strategy employs the appropriate practices to prevent or minimize pollution associated with livestock grazing.

Fire Hazard

Reduction of fire hazards associated with fuel loads in the grasslands at the Glenwood Open Space Preserve is an important goal that can be influenced by grazing. Accumulations of highly flammable herbaceous fuels in annual grasslands are a well-known problem during the dry seasons. In this case, livestock grazing is the preferred alternative, among the common methods of fuel reduction. Mowing is expensive and impractical in uneven terrain. Prescribed fire causes smoke pollution and can escape to cause severe damage to property and human health. It is also impractical to burn large areas every year.

Most grassland managers find the benefit of fire hazard reduction to be one of the primary incentives to employ grazing on their lands. However, it is important to note that grazing of annual grasslands at conventional levels has been shown to reduce the hazard of fuel loads and to alter the behavior of wildfires, but not to significantly reduce the risk of fire ignition and spread

(Stechman 1983). An increase in the intensity of grazing is often required to achieve fire hazard reduction objectives.

The herbaceous fuel loads of the grasslands fluctuate from year to year associated with weather conditions, the risks posed by these fuels can be reduced by grazing or other means. Regular livestock grazing at the Glenwood Open Space Preserve at stocking rates and times prescribed to utilize most of the available forage by the start of summer will help greatly reduce fire hazards. As a further precaution, fuel breaks should be maintained in strategically important grassland areas (such as adjacent to homes) with grazing by placing mineral/molasses licks to attract greater grazing there or other means as specified by the Scotts Valley Fire Protection District. The City and the LTSCC will continue to cooperate with local fire management authorities to develop and refine fire management plans for the Glenwood Open Space Preserve.

3.4.2.2 Grazing Capacity

Grazing capacity is a term equivalent to “carrying capacity,” and is used by rangeland ecologists and managers to estimate the maximum number of livestock and months to be grazed during a given year to avoid damage and to sustain vegetation and related resources.

The estimates of the Glenwood Open Space Preserve’s grazing capacity were based on the mapping of vegetation and soils. The estimates of forage available for livestock utilization were extrapolated from the NRCS soil descriptions (NRCS 2010) based on sampling conducted in 2000; NRCS production estimates from the Soil Survey of Santa Cruz County (NRCS 1980); and from field clippings and visual estimates made in 2008 in ungrazed grasslands at a nearby property with the same soils.

Grazing is managed by dividing the eastern portion of the Glenwood Open Space Preserve into several pastures, as shown in Figure 8. Rotating grazing between these pastures allows the ecologic goals to be met as well as the forage needs of the animals.

The stocking rate recommendations shown below are conservative and must be applied with flexibility due to the variable and unpredictable nature of California’s weather, which affects plant growth patterns dramatically. Thus, it will be necessary to make adjustments to the stocking rates each year to meet the Glenwood Open Space Preserve’s objectives and performance standards based on the experience of the Glenwood Open Space Preserve Manager and the Grazing Lessee and on weather predictions. The following stocking rates should be used as conservative initial guidelines (Tables 11 and 12) to determine the appropriate stocking rate each year and any adjustments. Table 110 shows the expected forage production in the grassland areas of the Glenwood Open Space Preserve.

Table 11. Grazable Acres and Expected Rangeland Forage Production by Weather Year², the Glenwood Open Space Preserve.

Pasture:	Grassland / Wetland Grassland						
	Beetle (D)	Tabor (C)	Pond (B)	Pond Exclosure	Canham (A)	West Preserve	Total
Potentially Grazable Acres	23	51	53	1	60	38	226
Wetter (Favorable) Weather Year (Lbs./acre)	39,000	104,000	109,000	2,100	99,000	78,000	432,000
Normal Weather Year (Lbs./acre)	26,000	69,000	72,000	1,400	66,000	52,000	288,000
Drier (Unfavorable) Weather Year (Lbs./acre)	17,000	46,000	49,000	950	44,000	35,000	192,000

Estimates of future forage production and forage available for grazing during normal, wetter, and drier years at the Glenwood Open Space Preserve's grasslands are shown in Table 12. These estimates represent the expected forage production minus the minimum RDM³ to be left ungrazed, predicted summer decomposition,⁴ potential wildlife utilization, and livestock trampling losses.

The recommended initial stocking rates were based on the amount of forage available for grazing (after deduction of the sum of the recommended RDM, summer decomposition, wildlife utilization, and livestock trampling loss), and calculated from the number of pounds of forage to be consumed by the horses or cattle per month. The number of Animal Units (AUs) to be grazed for a given grazing period can be calculated by dividing the Animal Unit Months (AUMs) by the number of months in the grazing period. That number should be calculated on a per animal basis for each kind and class of livestock, and adjusted with experience to achieve the objectives and performance standards.

The horse stocking rate for twelve months of grazing during normal weather years in the East Preserve would be 10 horses (avg. 1200 lbs.) for the 5 pastures, and 2 horses (avg. 1200 lbs.) in

² "Weather years" are terms used by the NRCS and rangeland managers to describe the variation in the combination of precipitation and temperatures experienced by grassland plants during the growing season that affect germination and the production of biomass. A normal weather year corresponds to the average precipitation and temperatures; unfavorable weather years are significantly drier and colder; favorable weather years are significantly wetter and warmer.

³ RDM refers to the dry mass (and height) of plant matter left on the ground from previous growth before the start of the next winter growing season (September/October). The amount and species of forage that is produced in a growing season is largely dependent on the environment of soil and RDM during the previous late autumn. This affects seed germination and seedling growth, and will be optimized under the indicated range of herbaceous mass and height. The RDM standards are based on Table 11 in Bartolome et al. (2006). We used the RDM standard for dry annual grassland on 10-20% slope with 0-25% woody cover.

⁴ Refer to Frost, Bartolome, and Churches (2005); Decomposition of dry herbaceous biomass during the summer and fall occurs at the rate of about 7% per month. Compounding that decomposition rate plus 1% (total 8%) for the other factors (potential wildlife utilization and livestock trampling losses) for four months (June through September) would result in about 36% additional herbaceous biomass. Therefore, those percentages more of residual biomass should be added to the recommended RDM level at the end of the grazing period.

the West Preserve. The cattle stocking rate for 6 months of grazing during normal weather years would be 32 cattle (avg. 1000 lbs.) for the 5 pastures in the East Preserve, and 6 cattle (avg. 1000 lbs.) in the West Preserve. These are conservative estimates and must be adjusted based on experience. We also recognize that in some unfavorable years a reduced number of animals will be required to achieve conservation goals. However, even these reduced numbers should be sufficient for a viable horse or cattle operation, and flexibility will likely allow the operation to persist until better conditions return. Monitoring results will indicate any needed adjustments.

Table 12. Forage Available by Weather Year, the Glenwood Open Space Preserve

Pasture:	Grassland / Wetland Grassland						
	Beetle (D)	Tabor (C)	Pond (B)	Pond Exclosure	Canham (A)	West Preserve	Total
Weather Year:							
RDM Standard (Lbs./acre)	300	600	600	600	300	600	
Deduction for Autumn RDM, Summer Decomposition, Wildlife Utilization, and Trampling (36% of RDM--Total Lbs.)	108	216	216	216	108	216	
Forage Available (Lbs. / AUMs⁵):							
Wetter (Favorable) Weather Year	36,000 / 36	86,000 / 86	90,000 / 90	1800 / 2	94,000 / 94	65,000 / 65	372,000 / 373
Normal Weather Year	23,000 / 23	51,000 / 51	53,000 / 53	1000 / 1	60,000 / 60	38,000 / 38	227,000 / 226
Drier (Unfavorable) Weather Year	14,000 / 14	28,000 / 28	29,000 / 29	569 / 1	38,000 / 38	21,000 / 21	131,000 / 131

Estimates of the potential maximum stocking rates for horses and cattle to achieve the desired degree of forage utilization from the forage available during wetter, normal, and drier years at the Glenwood Open Space Preserve's grasslands are shown in Table 13.⁶

⁵ An Animal Unit Month (AUM) refers to the standard of 1000 lbs. of forage, which is the expected amount of forage normally consumed by a 1000 lbs. cow, with or without her unweaned calf, in one month; thus the AUM standard for such a cow is 1.0. Horses have a higher rate of forage demand than cattle due to a different digestive system (daily intake as % of body weight--cattle 2.5%, horses 3%). Horses have a higher rate of forage demand than cattle due to a different digestive system (daily intake as % of body weight--cattle 2.5%, horses 3%). Thus the expected standard amount of forage normally consumed by a 1200 lbs. horse in one month is 1440 lbs., and the equivalent AUM = 1.4.

⁶ Stocking rates were calculated in the following fashion: forage production in dry, normal, and wet weather years was determined (see discussion above); amount of RDM to be left standing at the end of the grazing season was subtracted from forage production values to get total available forage; total available forage was converted to AUMs; AUMs were then converted to the number of horses to be grazed for 12 months and cattle to be grazed for 6 months.

Table 13. Initial Stocking Rate Estimates (numbers of 1,200lbs. horses grazing for 12 months and 1,000lbs. cattle grazing for 6 months) by Weather Year, the Glenwood Open Space Preserve

Pasture:	Grassland / Wetland Grassland						
	Beetle (D)	Tabor (C)	Pond (B)	Pond Exclosure	Canham (A)	West Preserve	Total
Weather Year:							
Number of 1200 lb. horses grazing for 12 months:							
Wetter (Favorable) Weather Year	2	5	5	0.1	5	4	21
Normal Weather Year	1	3	3	0.1	3	2	12
Drier (Unfavorable) Weather Year	1	2	2	0	2	1	8
Number of 1000 lb. cattle grazing for 6 months:							
Wetter (Favorable) Weather Year	6	14	15	0.3	16	11	62
Normal Weather Year	4	9	9	0.2	10	6	38
Drier (Unfavorable) Weather Year	2	5	5	0.1	6	3	21

The pasture labeled “Pond Exclosure” in the tables above encompasses the currently occupied habitat area for the Opler’s longhorn moth. This area is small, and contributes only a small amount of forage. Its grazing prescription allows for grazing only when needed, and may be excluded from grazing when not beneficial or for purposes related to pond management. Thus, it adds little to the grazing capacity of the Glenwood Open Space Preserve, and may be entirely ungrazed some years.

3.4.2.3 Grazing and Adaptive Management Prescriptions

Grazing is one of the primary tools available to reduce the competing cover of non-native annual grasses and native shrubs of this habitat (Arnold et al. 2012, Cornelisse et al 2013, Knisley and Arnold 2013). The grazing prescriptions and practices to utilize grazing as a tool to manage OTB and special-status, sensitive and listed plant habitats at the Glenwood Open Space Preserve (Table 14) will include the practical testing of hypotheses to maintain and enhance habitat quality, and then adapting those prescriptions based on the results of monitoring. In addition, means to expose patches of bare soil, such as flaming and scraping, may supplement tests of scraping elsewhere (Knisely and Arnold 2004).

Preliminary Grazing Prescription

Table 14. Preliminary Calendar for Grazing of Pastures (Recommended for Years of Normal Precipitation, adjust as needed), updated July 2017.

Access to Pasture	Beetle D	Tabor C	Pond B	Pond Exclosure E	Canham A	Rationale
Jan	Open? / weed-whacking	Open	Open	Open? / weed-whacking	Excluded	Canham excluded due to risks of damage to wetland plants and soils and gully erosion with associated lowering water table; Pond & Tabor open to allow grazing, especially of uplands; Beetle & Moth open to maintain trails and control growth (ahead of rapid spring growth); exclude Beetle & Moth temporarily if soils saturated or moist enough for ovi-positing; confine cattle in Beetle if excess growth when feasible; terminate Beetle trail weed-whacking 1/15
Feb	Open?	Open	Open	Open?	Excluded	Canham excluded due to risks of damage to wetland plants and soils and gully erosion with associated lowering water table; Pond & Tabor open to allow grazing, especially of uplands; Beetle & Moth open unless insufficient forage or grazing not needed to reduce excess growth; exclude Beetle & Moth temporarily if soils saturated or moist enough for ovi-positing; confine cattle in Beetle if excess growth when feasible
Mar	Open?	Open	Open	Open?	Excluded	Canham excluded due to risks of damage to wetland plants and soils and gully erosion with associated lowering water table; Pond & Tabor open to allow grazing, and to control growth; Beetle open unless insufficient forage or grazing not needed to reduce excess growth, and to allow growth that will lead to more heterogeneity; Moth excluded due to emerging cream cups; exclude Beetle & Moth temporarily only if soils very saturated; confine cattle in Beetle if excess growth when feasible
Apr	Open	Open	Open	Excluded	Excluded?	Canham excluded due to risks of damage to wetland plants and soils and gully erosion with associated lowering water table; Canham open to temporary grazing if needed and to reduce excess growth; Pond & Tabor open to allow grazing, and to control growth, especially fire fuels; Beetle open to control rapid spring growth and maintain trails; Moth excluded due to cream cups; exclude Beetle temporarily only if soils very saturated; confine cattle in Beetle and if excess growth when feasible

Access to Pasture	Beetle D	Tabor C	Pond B	Pond Exclosure E	Canham A	Rationale
May	Open?	Open	Open	Excluded	Open?	Canham open to control growth if dry enough; Pond & Tabor open to allow grazing, and to control growth, especially fire fuels; Beetle open to control rapid spring growth and maintain trails; Beetle terminate grazing when RDM, native grass grazing, and heterogeneity limits reached; Moth excluded
Jun	Excluded?	Open	Open	Excluded	Open?	Canham open to control growth if dry enough; Pond & Tabor open to allow grazing, and to control growth, especially fire fuels; Beetle open unless insufficient forage, or grazing is no longer needed to reduce excess growth; Beetle terminate grazing when RDM, native grass grazing, and heterogeneity limits reached; Moth excluded
Jul	Excluded?	Open	Open	Excluded?	Open	Canham open to control growth and shrub encroachment, and to provide better forage; Pond & Tabor open to allow grazing, and to control growth, especially fire fuels; Beetle and Moth excluded
Aug	Excluded	Open	Open	Excluded?	Open	Canham open to control growth and shrub encroachment, and to provide better forage; Pond & Tabor open to allow grazing, and to control growth, especially fire fuels; Beetle & Moth excluded due to insufficient forage, grazing not needed, and extra risk of impact to soils and native grasses
Sep	Excluded	Open	Open	Excluded?	Open	Same as August
Oct	Excluded / weed-whacking ?	Open	Open	Excluded?	Open	Canham open to allow grazing, control growth and shrub encroachment, and to provide better forage; Pond & Tabor open to allow grazing, and to control growth; Beetle & Moth excluded; Beetle trail weed-whacking begins after germinating rains to prevent establishment and keep trail tread cleared
Nov	Excluded / weed-whacking ?	Open	Open	Open?	Open	Canham open to allow grazing, control growth and shrub encroachment, and to provide better forage until water table rises and wetlands are saturated; Pond & Tabor open to allow grazing; Beetle & Moth excluded due to insufficient forage, grazing not needed, and extra risk of impact to soils and native grasses; Beetle trail weed-whacking to keep trail tread cleared; monitor closely for increased utilization and hoof impacts, and thus erosion risk due to drought

Access to Pasture	Beetle D	Tabor C	Pond B	Pond Exclosure E	Canham A	Rationale
Dec	Excluded / weed-whacking	Open	Open	Open?	Excluded?	Assuming normal rainfall this month, Canham excluded due to risks of damage to wetland plants and soils and gully erosion with associated lowering water table; Pond & Tabor open to allow grazing, especially of uplands; Beetle & Moth grazed if sufficient forage and grazing needed to control growth; Beetle trail weed-whacking to keep trail tread cleared

3.4.3 Invasive Species

Invasive plant species shall continue to be managed by grazing, mechanical, and chemical methods. Non-native annual grasses will continue to be managed primarily by grazing. Large scale mowing is impractical due to the terrain and presence of sensitive species in the Glenwood Open Space Preserve.

To minimize impacts to pollinators, herbicide formulations reported as “non-toxic”, “practically non-toxic” or “relatively non-toxic” to insects, such as bees, on the Extension Toxicology Network (EXTOXNET) or similar university database, may be used, according to the label. Such herbicides may be used as needed for invasive plant species control in areas outside habitat occupied by listed plant species. Such herbicides that are also post-emergent and non-persistent may be used in habitat occupied by listed species provided that the listed species in that habitat are dormant. Target forbs shall include those species listed as “High” or “Moderate” by the California Invasive Plant Council (Cal-IPC 2012).

Recent invasive species control efforts focus on those areas and species with the greatest potential to threaten sensitive habitats (i.e. wetlands, Scotts Valley spineflower populations). Immediately following the monitoring period (typically spring), a landscape contractor will collect data to conduct control methods on a habitat- and species-specific basis. Targeted species included pennyroyal (*Mentha pulegium*), stinkwort (*Dittrichia graveolens*), mayweed (*Anthemis cotula*), acacia species (*Acacia spp.*), bull thistle (*Cirsium vulgare*), Italian thistle (*Carduus pycnocephalus*), teasel (*Dipsacus fullonum*), French broom (*Genista monspessulana*), Scotch broom (*Cytisus scoparius*), jubata grass (*Cortaderia jubata*), johnsongrass (*Sorghum halepense*), velvet grass (*Holcus lanatus*), and eucalyptus (*Eucalyptus sp.*).

Invasive plant species shall continue to be monitored annually.

The following recommendations will guide invasive plant species management:

- All plant species categorized as “High” or “Moderate” on the Cal-IPC list (2006) shall be managed with appropriate controls.
- Non-native grasses shall be managed through grazing; the extensive distribution, site topography, and presence of sensitive species make other methods (e.g. mowing) impracticable. Some perennial grass species, such as velvet grass, jubata grass, Johnsongrass and Harding grass may be managed with herbicides.
- Mature eucalyptus trees shall generally remain in place unless otherwise considered a hazard or significantly impacting habitat; eucalyptus seedlings shall be removed on a regular basis to prevent a decline in available grazing forage and conversion from grassland habitat to eucalyptus grove.
- Mature and seedling acacia trees shall be removed by mechanical methods (i.e. cutting) followed by a topical herbicide; all mature acacia trees have been removed along Carbonera Creek, but young trees will be removed mechanically and/or treated with herbicide as necessary.
- French broom, Scotch broom, and pampas grass were removed in 2009; however should these species emerge in the Glenwood Open Space Preserve again, they shall be managed mechanically (hand pulling) or chemically with seed bearing material moved off site.

- Pennyroyal may be controlled by chemical methods, according to label, or by hand-digging or hand removal of rhizomes in the late spring when the soil moisture is still high, but management during saturated or inundated conditions should be avoided.
- Italian thistle, bull thistle, and teasel that is likely to adversely impact sensitive habitats shall be controlled using chemical methods, or weed-whacked annually in late spring prior to bloom; Italian thistle and bull thistle are known throughout the Glenwood Open Space Preserve and Glenwood Open Space Preserve-wide management of these species is likely impracticable, therefore targeted locations within or near sensitive habitats should be of the highest priority.
- New invasive plants will be managed on a case by case basis, based on their potential impact to listed species and the efficacy of management at eradicating or containing the plant. For example, stinkwort (*Dittrichia graveolens*) is a newly arrived, fast expanding weed that will be aggressively treated with herbicide and hand-pulling. Effectiveness of the effort will be evaluated in the first year to determine if the weed is manageable or if management efforts are ineffective and should be abandoned.

3.4.4 Open Grassland Habitat Maintenance

The area of grassland that provides habitat for sensitive plant and wildlife species within the Glenwood Open Space Preserve has likely decreased as shrubs, such as coyote brush, and willows have become established. The current cattle-grazing regime that focuses on winter and spring effects is unlikely to be effective in restoring open grassland habitat. Therefore, manual or mechanical scrub control or periodic summer grazing by cattle will be required to prevent further expansion. Clearing of existing scrub and willow woodland should be conducted gradually and experimentally to assure the increase of benefits and reduction of risk to special-status, sensitive and listed plants.

Scrub clearing is likely to result in a net benefit to the special-status, sensitive and listed plants at the Glenwood Open Space Preserve since scrub invasion has probably already covered several former grassland sites where special-status, sensitive and listed plants were located before the invasion, but have since disappeared. Thus, scrub invasion might be suppressing the growth of special-status, sensitive and listed plants. Re-conversion from scrub to grassland might expand the current habitat for all of the special-status grassland plants, and should be investigated.

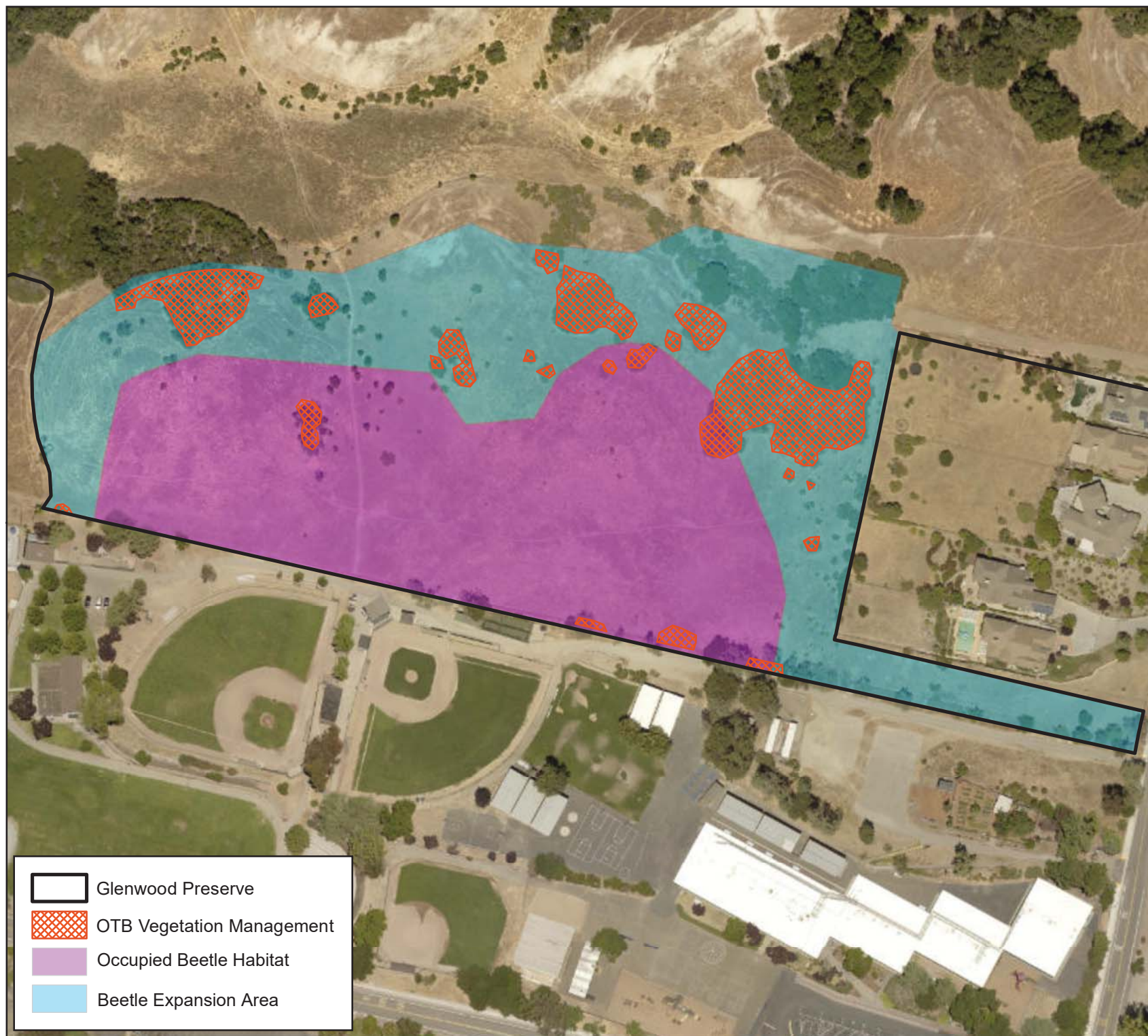
No negative impacts to special-status, sensitive and listed plant species are expected to occur due to scrub removal as long as special-status, sensitive and listed plants have temporary protection from removal and damage as the scrub is cleared, and the resulting debris is hauled off-site or pile-burned on-site. An appropriate path, avoiding the known areas of special-status, sensitive and listed plants, should be established for removal of scrub debris from the site. The special-status, sensitive and listed plants are annuals. In order to prevent damage to these species, manual scrub removal should be conducted after the flowers of the special-status, sensitive and listed plants have gone to seed (fall). During scrub removal, care should be taken minimize removal of soil containing the special-status, sensitive and listed plant seed bank.

Shrub and tree removal will be conducted within the Beetle Pasture Management Zone to mitigate for potential negative impacts from trail construction to areas historically occupied but currently unoccupied by OTB. The proposed removal includes 2,857 square meters of coyote brush and trees and 563 square meters of Monterey cypress (*Hesperocyparis macrocarpa* [*Cupressus macrocarpa*]) (Figure 9).

Glenwood Preserve

Scott's Valley,
California

Figure 9. Proposed
Shrub and Tree
Removal within
Beetle Pasture



-  Glenwood Preserve
-  OTB Vegetation Management
-  Occupied Beetle Habitat
-  Beetle Expansion Area



0 50 100 200
Feet

Map Prepared Date: 7/19/2017
Map Prepared By: [Name]
Base Source: Esri Aerial Imagery
Data Source(s): WRA, Land Trust Santa Cruz
County, Entomological Consulting Services, Ltd.

Scrub removal may be conducted in other portions of the preserve at the discretion of the Preserve Manager and with advice from the Rangeland Ecologist, who should consider ecologic, aesthetic and privacy issues when determining scrub to remove.

3.5 Public Access

Public access into the Glenwood Open Space Preserve is a shared goal between the City and the Land Trust. Public access outside of currently occupied OTB habitat has the potential to provide beneficial effects to OTB. Resulting trails can be considered a recovery action due to the suitable habitat they may create through increased bare ground. Bare ground is essential for both OTB adults and larvae because of their visual hunting and mate finding natural history characteristics and creation of bare ground has been shown to augment OTB colonization within patch habitat (Cornelisse et al. 2013). A moderate to high level of soil compaction, a sign of disturbance, has also been shown to indicate high quality oviposition habitat for some tiger beetle species (Knisley 2011, Cornelisse 2013). Pedestrian traffic of no more than moderate frequency has been shown to be effective in maintaining compacted soils and bare ground for OTB burrows (Arnold et al, 2012). Higher levels of pedestrian or bicycle traffic have also been observed to be detrimental to OTB and its habitat (Arnold et al 2012; Cornelisse and Duane 2013), but the threshold between moderate and high levels has yet to be accurately determined. However, it is also well known that recreational usage in areas that support OTB or its relatives can result in trampling of life stages, disruption of their normal behaviors, impacts to prey items, and damage to their habitats (Cornelisse and Hafernik 2009; Cornelisse and Duane 2013; Knisley and Hill 1992; Pearson and Vogler 2001; and Rivers-Moore and Samways 1996).

The intensity of public use of the Glenwood Open Space Preserve is difficult to forecast, and exclusion of the un-escorted public from occupied OTB habitat is infeasible. Thus, to meet the biological goals and provide public access to the Glenwood Open Space Preserve, a number of management measures will be implemented. Gated access, educational signage, and appropriate trail infrastructure will be designed and installed to avoid and minimize impacts to sensitive habitats. OTB use of trails outside existing occupied habitat would require adaptive management of the intensity of trail use by the public. Monitoring and adaptive management will be performed to verify that special-status, sensitive and listed species are not impacted by recreational usage at the Glenwood Open Space Preserve.

3.5.1 Allowable Public Uses

The location and timing of public access to various portions of the Glenwood Open Space Preserve will be limited based on the sensitive habitats present, the time of year, and the kind and class of grazing animals present. Use of the Glenwood Open Space Preserve by the public will be limited to pedestrians during daylight hours. Use may be restricted to designated trails in certain Management Zones. Use may also be prohibited or restricted seasonally in special-status species habitat as well as during periods of potential conflict with livestock occupying defined pastures as determined by the Glenwood Open Space Preserve Manager.

Because the Glenwood Open Space Preserve contains special-status species and habitats, certain uses will not be allowed. Allowable public uses will include hiking, fishing, and wildlife viewing. Non-allowable uses will include but will not be limited to dumping, littering, camping, campfires, overnight use, consumption of alcohol, collecting live animals or plants, collecting wood, and unauthorized motorized vehicles. Dogs, if allowed in the future, will be prohibited from areas that are grazed to avoid conflict between dogs and livestock. Bicycles, if allowed in the future, will be prohibited from areas occupied by OTB, Opler's longhorn moth, Scotts Valley

spineflower, erosion-prone areas, or certain Management Zones, as well as defined areas of potential conflict with pedestrians.

To reduce impacts to the aquatic environment, signage will be installed to discourage the use of live bait, chemical bait, and lead weights. In addition, facilities to collect waste fishing gear will be provided.

Fire protection will remain the responsibility of the Scotts Valley Fire District. Maintenance of the Scotts Valley Water District facilities, road, and easement shall remain the responsibility of the Scotts Valley Water District. Vehicular access shall remain restricted to the Scotts Valley Fire District, Scotts Valley Water District, emergency services, City, Land Trust, grazing managers, Glenwood Open Space Preserve Managers, and any others permitted by the Glenwood Open Space Preserve Manager.

3.5.1.1 Public Access to Sensitive Habitats

To provide recreational access and protect species habitat in the Glenwood Open Space Preserve, a trail system will be designed to avoid direct and indirect impacts to the species covered in this LTMP and their habitats. Trail construction will be prohibited in the Beetle Pasture Management Zone, which encompasses all occupied habitat of that species. Constructed trails should be located to provide 50-foot buffers to occupied Scotts Valley spineflower habitat. Constructed trails should avoid or minimize impacts to the maximum extent feasible to sensitive habitats including wetlands, riparian areas, streams, and grassland areas dominated by native plants. In some instances, low to moderate intensity hiking may be allowed and encouraged on existing livestock paths to maintain bare ground for OTB and other disturbance dependent species. Access through occupied special-status, sensitive and listed species habitat will be restricted to existing animal paths. Trail building will not occur in these areas. If monitoring indicates that off-trail hiking is becoming a problem for listed species, it will be discouraged through signage at all entry points. If problems persist, the issue will be addressed through increased patrol and visitor engagement, followed by additional measures such as closure of one or more trails. If the issue is not resolved, the property will be closed to public access. This approach will also be taken if public access in other parts of the property jeopardizes successful management of the OTB habitat. For example, if public access makes grazing or similarly effective management of the beetle pasture infeasible, then public access would be removed. New trails and trail heads, especially those in proximity to occupied OTB areas, are likely to attract OTB adults and potentially provide burrow habitat. Monitoring in these areas will be conducted to ensure trails are a benefit to the species.

3.5.1.2 Public Access and Livestock Interactions

The need for grazing management of sensitive habitats necessitates care in the interaction between public use and grazing animals. All entry points to the East Preserve and the West Preserve (if grazing is introduced there), will have signage detailing the potential dangers of grazing animals, and provide precautions for the public when encountering these animals. Dogs will not be allowed in portions of the Glenwood Open Space Preserve where grazing animals are present.

Trail use in areas with active cattle or horse grazing would pose some risk of injury to the public. Compared to horse grazing, cattle grazing on public lands is more commonplace, and the risks with cattle can be managed more efficiently. Only grazing operators with experience managing cattle herds where public access is provided should be selected as lessees. The City of Santa Cruz and the University of California, Santa Cruz presently allow public access to areas where

cattle are present. Thirteen San Francisco Bay area agencies, including the East Bay Regional Park District and Point Reyes National Seashore (National Park Service) host public access on over 130,000 acres of actively grazed lands (Barry and Amme 2009). The pastures occupied by OTB and Opler's longhorn moth are small compared to other currently defined pastures, and thus confining livestock in these pastures may pose higher risk of conflict with the public. Therefore, confined grazing by cattle or other livestock will require periodic closure of these areas to the public.

The risk of injury to Glenwood Open Space Preserve users in pastures grazed by horses is much greater than with cattle. As a result, the public will not be allowed in pastures actively grazed by horses and the authorization of grazing by horses compared to cattle would necessarily result in more limited public access or more expensive infrastructure. The horse grazing operation historically used at the Glenwood Open Space Preserve can be characterized as extensive grazing where the horses had no stables or separated paddocks and grazed on natural grass with little supplemental feed. Under these conditions, grazing horses normally develop a hierarchical social structure and behavior when interacting with people can be aggressive and unpredictable. Given this potential danger and that horses are sensitive to some common human foods, feeding of horses by the public can pose a danger for horses and humans alike. If horses are used for grazing management and extensive public access is desired, additional public access infrastructure will be necessary. However, because use by horses and people will not be allowed concurrently in the same pasture, use of horse grazing at the Glenwood Open Space Preserve would require periodic closure of pastures to the public.

3.5.2 Public Access Infrastructure

Public access infrastructure should be designed to avoid occupied species habitats and minimize impacts to wetlands, waters, native grasslands, rock outcrops, and other special-status or sensitive species.

Public access to the Glenwood Open Space Preserve and between pasture units will be controlled using pedestrian gates. The gates should be lockable to allow the public to be excluded from pastures occupied by livestock if necessary. Perimeter gates and interior pasture gates should be designed with a spring hinge and latch or other design to ensure that livestock cannot escape. Access points may be added next to existing internal gates designed to allow or prevent the movement of grazing animals between pastures. Likewise, gates allowing access to sensitive species habitat (i.e. OTB habitat) will be lockable to control public access to the area during critical life history functions of special-status species.

Information signs should be posted at all entrance points. The signs should include the following information:

- Ownership / partnership and a brief history of the Glenwood Open Space Preserve
- The acreage of the Glenwood Open Space Preserve and general location within Santa Cruz County
- Public safety notice detailing the dangers and liabilities for those entering the Glenwood Open Space Preserve
 - o Special attention regarding grazing animals including safety of both hikers and grazing animals
 - o No dogs or bicycles shall be allowed in the Eastern Preserve because of routine use of these areas by grazing livestock
- The purpose of grazing animals and grazing management

- The sensitive habitats and species supported by the Glenwood Open Space Preserve and steps visitors can take to protect them and contact information to report violations.
- Limits on access (i.e. daily hours, seasonal exclusions) and allowable uses
- Images of habitats / species (photographs / line drawings)

Additionally, interpretive signs could be posted at selected trailside locations within the Glenwood Open Space Preserve that should be worded to avoid identifying specific locations of habitat areas to avoid investigation and potential collection by visitors. All signage should be periodically monitored for maintenance and replacement.

Trail building will take all prudent and available measures to minimize unnecessary vegetation removal, and limit erosion. Typical trail width will be three feet with a full-bench cut and up to a maximum of five feet with a half-bench cut. Trail beds should be comprised of native soil unless gravel or other natural substrate is necessary for erosion control. Wherever possible, trail grades should not exceed 10 percent with 5 percent being most desirable. Switchbacks may need to be installed in areas exceeding 10 percent slope. To route surface water runoff and reduce erosion, grade reversals may be constructed. In areas where side slopes are greater than 10 percent, it may be necessary to either cut in a stable back slope or reinforce the downslope for public safety and erosion control. Prior to construction, a biologist familiar with the habitats and species present in the Glenwood Open Space Preserve will survey the trail alignment in areas mapped as hosting or historically hosting special-status, sensitive and listed special-status organisms.

3.5.3 Public Access Conceptual Design

A conceptual design for initial public access infrastructure (Figure 10) has been prepared to demonstrate avoidance and minimization of impacts to sensitive areas described above. Future trail construction would also utilize similar design to avoid and minimize potential impacts to sensitive areas. The relationship between infrastructure design, recreational access experience, and grazing management is described below.

The trail layout in the initial design provides a continuous route from Vine Hill School and Siltanen Park in the south of the Glenwood Open Space Preserve to Canham Road in the north. To avoid trail construction impacts to wetlands and streams, existing trails are used as dry season crossings in several locations. During wet weather, alternate routes are provided with bridge crossings of wetlands and streams.

Newly constructed and passively formed trails would allow for access from Siltanen Park on the west and Vine Hill School on the east. They would be separated from occupied OTB habitat. On the eastern boundary of the Beetle Pasture, a trail formed through passive use (rather than scraping or other active construction) would be allowed within the historic OTB habitat. A seasonal fence system will be installed without ground penetrating posts to create a visual barrier that will help to divert visitors away from the adjacent occupied OTB habitat. This configuration would allow for through-access to bypass occupied OTB habitat. No trails will pass through occupied OTB habitat, and occupied OTB habitat will be kept closed to the public. Most public access is intended to use the western entrance at Siltanen Park and access the Glenwood Open Space Preserve without passing through the historic OTB habitat. Trails in most the Glenwood Open Space Preserve will be open year-round, although temporary closures may be conducted for wet weather or extreme fire risk. An exception is made for the eastern access trail.

The eastern access trail, which passes through historic OTB habitat, will have gates allowing it to be closed during the active OTB season, wet weather, or intensive grazing. This area will be open for public access during the period of September 1 through December 15. Lockable pedestrian gates would allow controlled access into the Beetle Pasture Management Zone where signage would restrict pedestrians to existing trails during periods of dry weather/soils. The intention for this trail is for use by teachers and students from Vine Hill Elementary School. Teachers would coordinate with the Preserve Manager for access. The new eastern trail and fenced corridor would be constructed in an area that was historically but is currently unoccupied by OTB. This trail would be closed during the period from December 15 through August 31 to allow for high-intensity grazing, wet soil conditions, and adult OTB activity. If the OTB re-occupies the area, management may be adjusted to manage the risk of impacts to the species and enhance the restoration of the population in this area. (Foot traffic may restore the formerly occupied habitat in that area).

The western trail outside the relocated western and northern Beetle Pasture Management Zone fence is in areas with soil, slope, and aspect conditions unlikely to support OTB. OTB have occasionally been observed outside of the area of occupied habitat. A conceptual design for initial public access infrastructure (Figure 11) has been prepared to demonstrate avoidance and minimization of impacts the beetle pasture management zone.

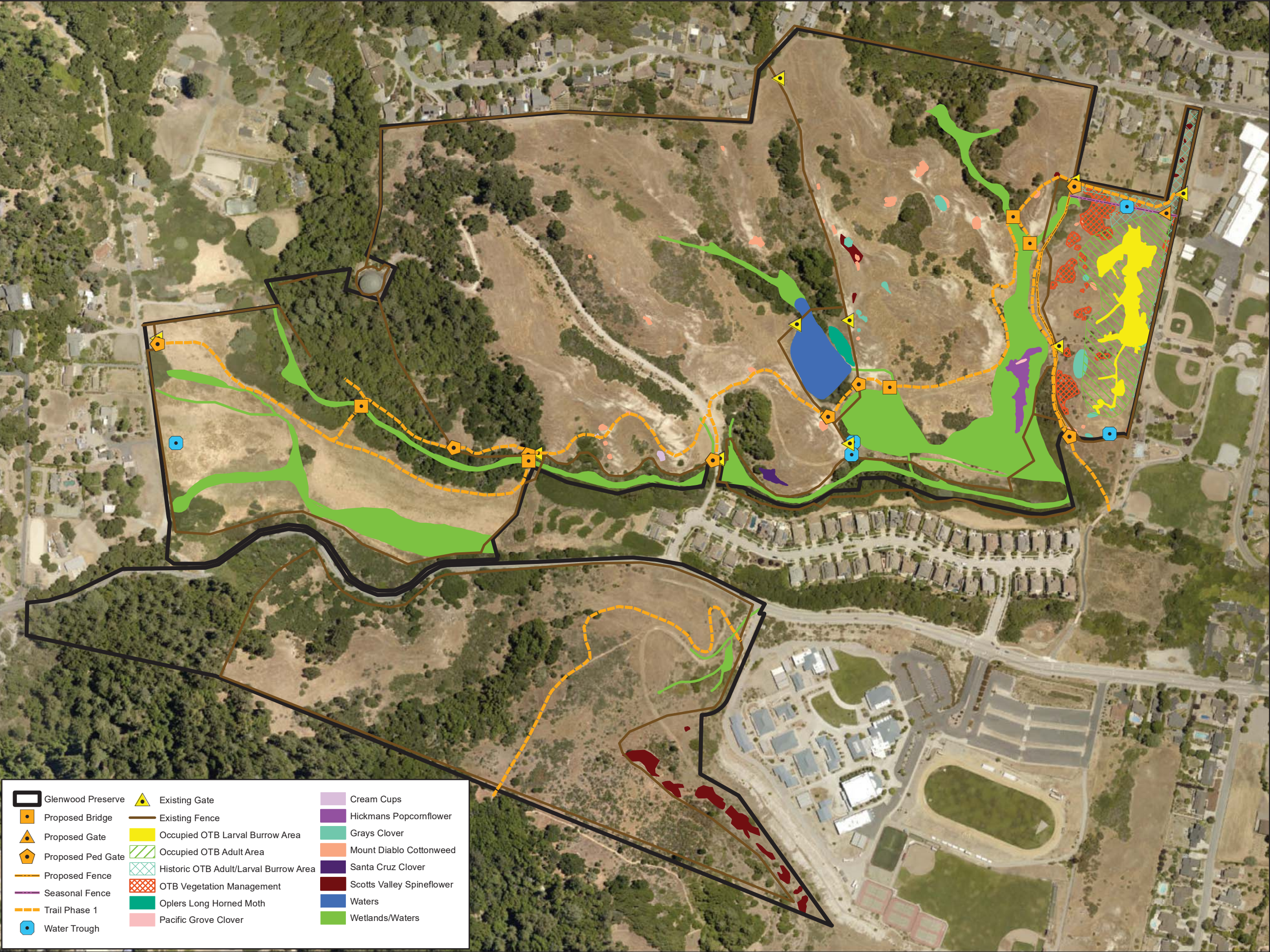
Designated trails in other pastures will similarly be designed for occupied Scott Valley spineflower and Opler's longhorn moth habitat. Trails will be designed to avoid occupied and potential habitat areas of other special-status plant species, except where no reasonable alternative outside of that habitat is available. Such trails will be designed to follow an existing livestock trail and traverse the habitat area only across its narrowest dimension. Monitoring will determine whether these public access plans are successful. If impacts to special-status, sensitive and listed species habitats, soil erosion effectiveness livestock grazing, or other special management concern are found, then plans will be adapted to reduce impacts.

3.6 Public Safety and Security

Public safety within the Glenwood Open Space Preserve will be the responsibility of the Scotts Valley Fire District. The public, the Land Trust staff, its consultants and grazing operators will contact the City of Scotts Valley Police Department and Fire District as appropriate in the event of a potential violation of Glenwood Open Space Preserve rules, criminal activity, or other public safety concern. To maintain public safety, all external access gates shall remain accessible to emergency service vehicles. The endowment for the Glenwood Open Space Preserve will cover the capital cost of maintaining perimeter Glenwood Open Space Preserve fencing in a condition necessary to prevent escape of grazing animals.

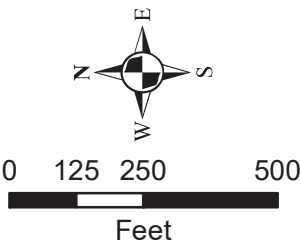
3.6.1 Fire Hazard Management

At the direction of the Scotts Valley Fire Protection District, the City will perform mowing and/or disking of fire fuel breaks within the Glenwood Open Space Preserve. The City will coordinate with Scotts Valley Fire District and the Glenwood Open Space Preserve Manager to avoid impacts to special-status, sensitive and listed species habitat to the maximum extent feasible while meeting fire hazard management objectives. Reduction of fuel loads in the grasslands can be influenced by grazing, however fire hazard reduction is not a goal of grazing and other habitat management activities at the Glenwood Open Space Preserve.



Glenwood Preserve
 Scotts Valley,
 California

Figure 10.
 Conceptual Design
 for Initial Public
 Access Infrastructure

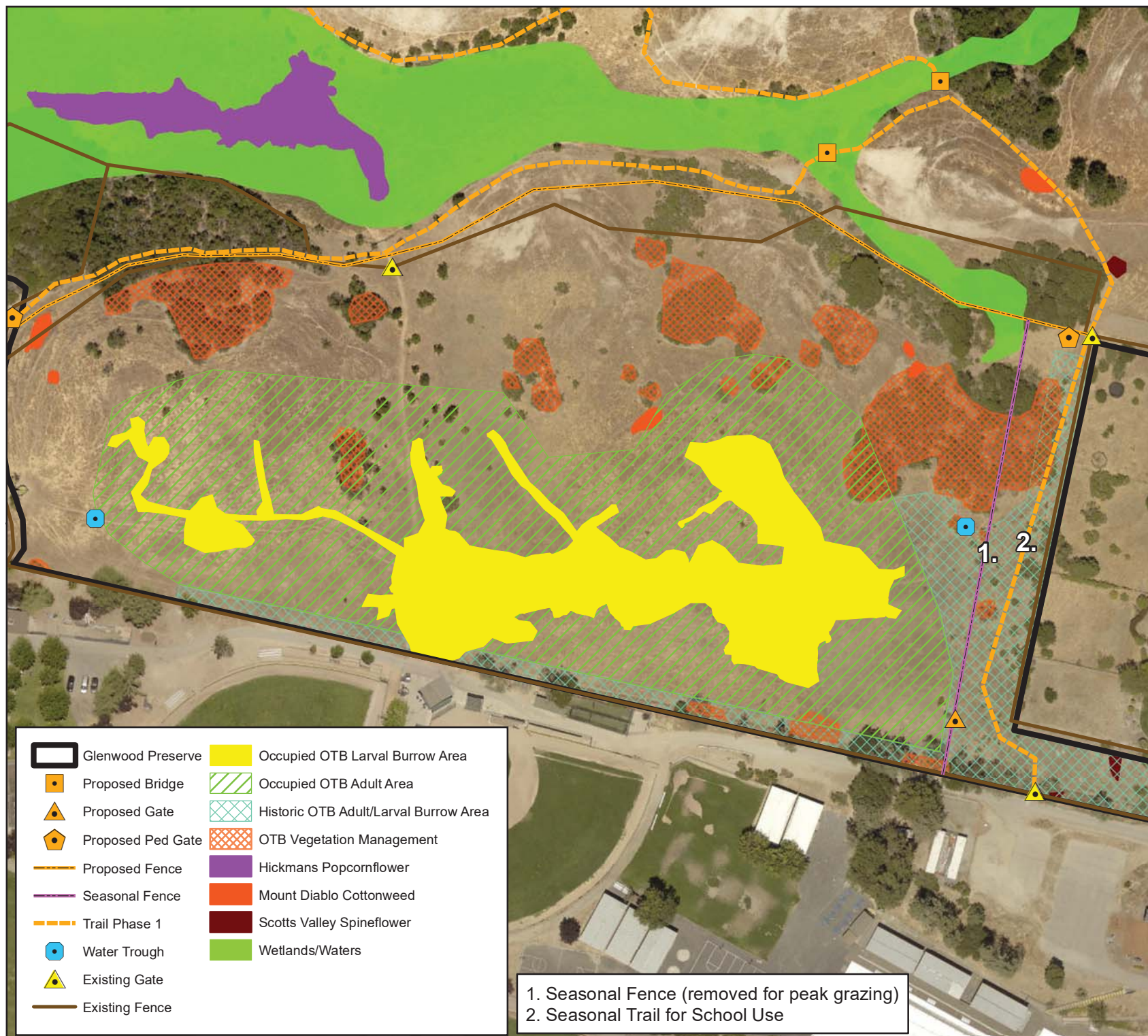


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Glenwood Preserve

Scott's Valley,
California

Figure 11.
Conceptual Design
for Initial Public
Access
Infrastructure for
Beetle Pasture
Management Zone



0 25 50 100
Feet

Map Prepared Date: 11/3/2017
Map Prepared By: J. Espie
Base Source: Esri Streaming Imagery
Data Source(s): WRA

3.7 Long-Term Monitoring and Reporting

Monitoring will collect data and interpret results on grazing management, recreational usage, and potential effects to sensitive species, invasive species control, infrastructure, OTB populations, Scotts Valley spineflower populations, and Scotts Valley polygonum populations (not previously observed within the Glenwood Open Space Preserve). Monitoring reports will include recommendations for future management. Baseline data for the OTB has been collected from 2000 to 2017. Baseline data for Scotts Valley spineflower was collected in 1992, from 2004 through 2010 and in 2015. To assess the continued effectiveness of management activities, existing data collected during the previous baseline period will be supplemented with ongoing data collection. Monitoring of the OTB during at least a three-year additional baseline period will be conducted using relatively intensive quantitative methods. Monitoring for the OTB will be continued indefinitely, and intensive quantitative methods will be sustained, unless it becomes cost prohibitive to do so. After the three-year additional baseline period, and obtaining required permits from the state and federal regulatory agencies, the Land Trust will perform such monitoring in-house to contain costs. Monitoring for special-status plants will be performed every two years as described below in the section Long-Term Monitoring and Reporting. As detailed in the Adaptive Management Strategy section below, following the additional baseline period, quantitative monitoring may be reduced. Qualitative monitoring of special-status, sensitive and listed species, grazing, and invasive plants monitoring will be conducted annually. Monitoring for special-status, sensitive and listed species will be conducted by qualified biologists. The report will be provided to the City, the Land Trust, and the Service (Ventura Office).

3.7.1 Grazing Monitoring

Monitoring related to livestock grazing at the Glenwood Open Space Preserve will be focused on the effectiveness of the grazing management strategy and tactics used during the previous period to achieve their intended purposes, informing the managers whether adjustments to strategy are needed, and cooperating with the Grazing Operators to identify and address issues important to achieve both conservation objectives and a sustainable livestock operation. Quantitative monitoring will be performed by the Rangeland Ecologist at least twice per year, and measure the following items: habitat conditions (mainly in the Beetle Pasture and Pond Exclosure); biomass and height of herbaceous vegetation; native grasses; grazing infrastructure; and locations and movements of the livestock.

Qualitative monitoring will be performed by the Rangeland Ecologist during several additional short visits and through phone conversations with the Grazing Operators and Glenwood Open Space Preserve Managers to evaluate conditions between the quantitative monitoring visits, and discuss issues that arise. The qualitative monitoring will focus on habitat conditions affected by weather and grazing in the Beetle Pasture and Pond Exclosure, and assess conditions for providing guidance during droughts or storms and general supervision of the livestock grazing operation. Detailed monitoring and reporting methods are listed below in Table 15.

Table 15. Monitoring Variables, Methods, and Schedule

VARIABLE	METHODS	SCHEDULE	METRICS
Herbaceous Mass and Residual Dry Matter (RDM)	Clip and weigh samples to “calibrate” observer’s judgment (air-dry spring samples then adjust data for %dry); visually estimate mass (spring) / RDM (fall) in 5-10 representative places per pasture	Late spring and early fall	Record mass/RDM on maps of pastures; compute range and averages
Herbaceous Height	Use a Robel pole to “calibrate” observer’s judgment; visually estimate obstruction height in 5-10 representative places per pasture	Late spring and early fall	Record height on maps of pastures; compute range and averages
Native Bunchgrass Frequency and Percent Flowering	Measure 1x30m belt transects within two different established patches of the native grasses for each pasture of concern	Late spring and mid-summer	Record numbers and average % flowering per transect; notes on herbivory
Livestock Use Records	Interview Grazing Operator	Monthly	Record numbers of each kind and class of livestock present throughout the year
Infrastructure Maintenance Records	Inspect infrastructure as needed; Interview Grazing Operator	Monthly	Record when and what maintenance activities were performed during the year
Qualitative Monitoring	Interview Grazing Operator. Visits to monitoring sites.	Quarterly	Inspect habitat conditions (i.e., erosion, movement of livestock, etc.)

3.7.1.1 Grazing Management Monitoring and Performance Standards

The following table (Table 16) describes grazing management objectives and associated performance standards related to livestock grazing.

Table 16. Grazing Management Objectives and Performance Standards

OBJECTIVE (O)	PERFORMANCE STANDARD (PS)
SPECIAL STATUS SPECIES HABITAT. O.1. Provide short grass and desired percent cover of herbaceous plants and bare ground generally and in the designated special management areas for special-status species habitat, and limit shrub encroachment into such habitat.	PS.1. Herbaceous mass and RDM are no less than the RDM standard and up to 300% of the RDM standard at the end of the growing season and in fall. The herbaceous height maximum roughly translates to 12 inches (measured as obstruction). This height may be up to 18 inches temporarily in the spring due to rapid growth. Ranges of desired percent cover of forbs may be 75% to 95% and bare ground 5% to 25%; no significant increase of shrub cover over time.
EROSION. O.2. Provide adequate ground cover to minimize soil erosion and avoid accelerated erosion and sedimentation of lowlands and streambeds.	PS.2. Herbaceous mass and RDM minima (use RDM standard for both) and percent bare ground (less than 25%) maxima; no visible signs of active erosion attributed to livestock management.

OBJECTIVE (O)	PERFORMANCE STANDARD (PS)
HERBACEOUS DIVERSITY	
O.3.a. HERBACEOUS BIODIVERSITY. Provide the level of RDM associated with increased herbaceous biodiversity and productivity and reduced levels of non-desired species.	PS.3.a. Desired range of RDM as defined in PS.1 and PS.2.
O.3.b. NATIVE GRASSES. Maintain or increase the current frequency of native bunchgrasses; allow bunchgrasses to set seed.	PS.3.b. Bunchgrass frequency (no less than 50% of baseline frequency) and percent setting seed (no less than 20% of plants setting seed) in stands of native grasses of grasslands.
COMPLIANCE AND SUSTAINABILITY O.4. Ensure that the number of livestock and timing of grazing use and maintenance of infrastructure corresponds with the grazing lease, annual operations plans, and agreed-to adjustments.	PS.4. Livestock animal unit months (AUMs) and on/off dates and maintenance activities correspond with annual plans and agreed-to adjustments. Requests for livestock movements have reasonably prompt responses by the Livestock Operator.

Herbaceous Mass / Residual Dry Matter

The mass of herbaceous plants in California annual grassland is called RDM in the fall and residual phytomass (mass) in the spring. RDM is used as a minimum standard (measured in the fall only) for its protection of the soil from erosion and nutrient loss, and conditions to favor desirable species composition and production during the following growing season. The accepted method to measure RDM in California annual grassland is described by Bartolome et al. (2006). The appropriate table of standards for the Glenwood Open Space Preserve is "Dry Annual Grassland." The RDM measurements exclude summer annuals as well as detached woody stems and leaves because these are considered to be non-forage. Summer annuals typically provide little soil protection from rain during fall and winter, and there can be a lot of bare ground between plants. In cases where invasive plant stands are significantly large, a note should be made on the data form, and marked on the field map.

If necessary to "calibrate" the observer's visual measurements, measure and record herbaceous mass using the method described by Bartolome et al. (2006) at several reference sites each day. All herbaceous matter should be clipped as low to the ground as can be done without removing dirt. Non-RDM material should be removed and the remaining herbaceous matter placed in an empty nylon bag. The amount of RDM material that remains on the ground, or that blows away in strong winds during clipping, should be estimated, and an equivalent amount of RDM material should be added to the sample bag before weighing. The scale should be tared to the weight of the bag before weighing (the taring should be periodically rechecked throughout monitoring).

Green Samples

If the herbaceous matter being measured is still live and green (e.g. spring residual mass), then apply the NRCS estimates of percent air-dry matter for the various phenological stages of grasses to convert the green weights to dry weights (NRCS 2006).

Wet Samples

To the extent feasible, sampling should be timed to avoid wet conditions. Wet conditions require additional experienced work to determine the dry weight of the clipped wet samples or to make

adjustments to the dry weights. If there has been recent rain, and the samples are moist beyond just surface wetting, then collect sub-samples for drying in an oven. In such cases, be sure to mark all details of the subsample on the paper sub-sample bag and on the data form while in the field. At the end of the field day, take these sub-samples to a drying oven and dry at very low temperature (115-125°F) for 24 hours or until no more weight can be extracted. Prevent causing a fire in the oven by avoiding the drying of too many sample bags at one time, and keeping the flammable material away from the heating elements. Once dried, record the dry/wet weight ratio on the sample bag and on the data form. Then apply that ratio to the field/wet weight data to get the dry weights. A different method for samples that are wet on the surface only may be used without sub-sample drying when there has been no rain for many days before the fieldwork, and the grassland is generally dry during the day. These circumstances may occur when clipping in the morning when the herbaceous vegetation is still wet on the surface from dew, or on a foggy day. In such cases, reduce the dry weight by an additional 20%. As the herbaceous vegetation dries out during the day, decrease that reduction from 20% to 0% from the dry weights, based on the judgment of relative humidity.

Herbaceous Height

To “calibrate” the observer’s visual measurements, use a Robel pole or tape measure to determine the average and range of herbaceous height as needed--height above the ground surface of all herbaceous material (including standing/bent foliage and non-woody litter), from within a 20-foot radius around the center point. Include any non-woody summer annuals and pest plants. This is “obstruction height”, which refers to the height of the main mass of herbaceous foliage through which the monitor’s sight is generally obstructed (this usually excludes grass inflorescences that extend above the grass blades). This is more relevant to the habitat qualities required by the special-status, sensitive and listed wildlife present than other measures of height. The monitor usually must get down on his/her knees so that the view through the herbaceous matter is parallel to the ground surface.

3.7.1.2 Reporting and Adaptation of Management Actions

Monitoring reports will summarize the results of measurements and observations that were made in the field. The report should be prepared soon after fieldwork, and be made available to the Glenwood Open Space Preserve Manager and the Grazing Operator, so they can do the following:

- Determine whether the amounts of herbaceous mass/RDM present and heights met or did not meet standards, and any reliable interpretations of cause.
- Identify locations that might need more or less grazing pressure in the future - including the remainder of the grazing season; re-evaluate and adjust planned stocking rates, movement, enclosure, exclosure, or rotation plans; re-evaluate and adjust cattle distribution methods; and other operational considerations.
- Communicate more clearly and precisely with each other and the public about resource management; demonstrate that grazing-related conditions were monitored; and prepare education and outreach information using the monitoring records.
- Make any appropriate adjustments to the range of results for each monitoring variable that are recognized as achieving the standards for future monitoring; identify additional variables that should be included in future monitoring; and adjust the grazing management plans and practices.

3.7.2 Invasive Species

3.7.2.1 Monitoring

Reconnaissance surveys will be conducted by the Preserve Manager in early spring when target species are beginning to bolt. If the locations of the populations have changed, a new map will be generated highlighting the densest populations of target species with a focus on encroachment into sensitive habitats (i.e. OTB, wetlands).

3.7.2. Reporting and Adaptive Management

If the locations of invasive species populations have changed from last year's survey results, a new map will be generated highlighting the densest populations of target species with a focus on encroachment into sensitive habitats (i.e. OTB, wetlands). Management actions will be documented in the report.

3.7.3 Infrastructure

3.7.3.1 Monitoring

Fencing, gate, and sign infrastructure will be monitored routinely by the City and the Preserve Manager to ensure proper functioning and recommendations regarding repair or upgrades will be made. Trails should be monitored to assess erosion, fallen logs, over growth, or other hazards. Recommendations for necessary maintenance should take into consideration safety to the public, local maintenance ordinances, sensitive species and habitats, deleterious effects to soil compaction and erosion, etc.

4.7.3.2 Reporting and Adaptive Management

The Preserve Manager will develop a summary report of fencing, gates and other infrastructure, and share it with the City, Grazing Operator, and Rangeland Ecologist to coordinate management and maintenance. An urgent response will be warranted when the condition of infrastructure results in an increased likelihood of cattle escaping from the property or injury to the public.

3.7.4 Recreational Usage

3.7.4.1 Management Objectives

In order to make more informed decisions regarding potential positive or negative impacts of trail use on sensitive species, trail use will be monitored by the City and the Preserve Manager. Cleared vegetation and erosion along trails will be recorded. During the initial three-year additional baseline period trail use monitors will be installed to count the number of users over a given period of time. Visual monitoring of constructed and existing trails in the vicinity of sensitive species habitats will also be conducted to gather qualitative data for use in conjunction with the trail counts to assess potential effects. Conflicts between habitat management and visitor use should be documented.

3.7.4.2 Reporting and Adaptive Management

Quarterly reports of trail condition and annual reports of visitation will be shared between the City and the Land Trust. The City will maintain vegetation along the trails at a cleared width of 4 feet and height of 8 feet. Annual visitation counts will be summarized in the annual report for the

Service. Remedies to conflicts should be proposed, and, in subsequent years, evaluated for success.

3.7.5 *Ohlone Tiger Beetle Monitoring*

Existing baseline data on OTB consist of adult and larval burrow census collected 2003 – 2017. Additionally, vegetation cover and RDM data were collected in OTB habitat during the baseline monitoring period. Both adult and larval counts declined sharply between 2004 and 2005, but have risen since with large fluctuations between some consecutive years. It is postulated that removing grazing in 2004 combined with high rainfall in 2004 and 2005 resulted in a substantial increase in vegetation cover and decline in OTB habitat. The return of horse grazing and reduced rainfall (2007 – 2008) enhanced OTB habitat by reducing vegetation cover and increasing bare ground within which OTB larvae create and maintain their burrows. Each year during the monitoring period, the number and timing of livestock were adjusted to achieve desired management thresholds. The drought of 2012-2015 may be associated with increased abundance during this period. The population of OTB at the Glenwood Preserve is the healthiest of any population of the species, most likely as a result of successful management.

3.7.5.1 Monitoring and Performance Standards

Monitoring for OTB will be performed in a manner consistent with the methods used by Richard Arnold during the years prior to the development of this LTMP. Monitoring will be performed by a qualified biologist, or an individual following the instructions and guidance of a person approved by the Service to monitor OTB.

OTB monitoring will include inspection of trails in the Beetle Pasture and the Beetle Expansion Management Zones. Monitoring will be used to characterize the net benefit and impacts of management, and will be used to guide future management. For example, metrics such as the aerial extent of habitat occupied by burrows and the number of burrows per unit area will continue to be used to evaluate the influence of suitable habitat on the population, and the effect of management on the extent of suitable habitat.

Current OTB monitoring activities include:

- Transect counts (approximately weekly from January through May) of adults which provide estimates of generation population size;
- Larval burrow census by GPS mapping – June or July;
- Routine visual assessments of grazing and habitat conditions in OTB habitat and working with the Rangeland Ecologist, Lawrence Ford, to make adjustments based on vegetation growth, weather conditions, OTB vulnerability, etc.; and
- Grazing and habitat monitoring (RDM, etc.) by Lawrence Ford.

Monitoring at a lower frequency will also be conducted along trails in the East Preserve Management Zone within 1,000 feet of those areas for the presence of OTB adults and larval burrows, and for killed adults and damaged burrows. If OTB are found outside of the Beetle Pasture and Beetle Expansion Management Zones, the Beetle Expansion Management Zone will be extended accordingly. If take is observed in any Management Zone, the Service will be notified and consulted regarding potential changes in management to avoid take in the future.

Roles and responsibilities regarding monitoring include:

- Richard Arnold, in coordination with the Land Trust, will submit a summary report for at least two years following the opening of the site to public access that will incorporate the following:
 - o OTB activity within established trails inside and outside of historic habitat;
 - o any observed take that may have occurred due to recreational use of the site; and,
 - o any pertinent recommendations.
- Land Trust staff, specifically Lynn Overtree, is a qualified biologist with experience monitoring the OTB and will conduct adult surveys under the supervision of Richard Arnold (and his staff), in addition to conducting habitat and burrow surveys independently (and under Richard Arnold's supervision when available) as applicable.
- The Land Trust is currently applying for a Section 10(a)(1)(A) permit (recovery permit) from the Service in order to independently conduct recovery related activities that may result in take of the species at the site.
- A Certified Rangeland Manager will provide rangeland management services.

Potential Additional Monitoring Activities

The Land Trust will work with staff, consultants and other researchers to increase our understanding of the drivers behind OTB population and its response to management.

To the extent feasible this monitoring, in the Beetle Pasture and Beetle Expansion Management Zones, will, at least:

- a) Monitor fixed plots (typically a square meter each) to follow individual OTB burrows (egg & larvae) over time
 - a. Document life span and timing of individual life stages
 - b. Identify and quantify impact/mortality factors
 - c. Measure soil moisture content throughout the year and correlate timing/changes with OTB life history/ecology
 - d. Measure changes/timing of vegetative cover (in subsets of species or groups) and bare ground and correlate with timing/changes in OTB life history/ecology
- b) Formally describe immature life stages of the OTB (egg, larva, pupa)
- c) Measure general vegetative cover/bare ground in OTB pasture and correlate with OTB occupancy/abundance (The amount of sunlit, bare soil should be maintained at 50% or more on trail habitat sites and at 12% or more in grassland habitat areas [Arnold, Bartolome, Ford, and Rao 2012a, 2012b])
- d) Establish long term vegetation monitoring transects across trails to capture vegetation and other ecologic data and corresponding OTB data
- e) Monitor visitor usage and type(s) of recreation activities and where they occur, especially within OTB pasture. Consider automated photography to assess visitor numbers while respecting visitors' privacy by only using distant camera positions.
- f) Conduct additional soil testing to identify other areas of Watsonville Loam and manage those soils for conditions conducive to OTB utilization.

3.7.6 *Scotts Valley Spineflower and Scotts Valley Polygonum*

Existing baseline data on the Scotts Valley spineflower consists of population data collected in 1992, 2004 – 2009, and 2015. Baseline data include population census, vegetation cover, grazing pressure, and qualitative habitat assessment (e.g. erosion, litter). These data have shown that

several Scotts Valley spineflower sites in the East Preserve Management Zone which had small numbers of individuals in 1992 did not support the species in 2004 to 2009. It is not known what grazing or other management was in effect in 1992 and how that may affect changes in numbers of this species. Population counts from 2004 through 2009 and 2015 are relatively stable with counts generally within an order of magnitude.

3.7.6.1 Monitoring and Performance Standards

Baseline and long-term monitoring shall be conducted. The number of flowering plants observed within the managed portion of the Glenwood Open Space Preserve (currently only the Eastern Preserve Management Zone is actively managed by grazing) will be assessed against the range of counts observed during the baseline period. Following the three-year baseline monitoring period, monitoring will be conducted every two years as long as the total annual count within the managed portion of the Glenwood Open Space Preserve remains within the range observed during the complete baseline period. The baseline period will include 1992, 2004-2009, 2015, and the additional baseline period (2018-2020) counts and may be expanded to include subsequent years as long as they are deemed to reflect suitable management conditions. If counts are below the observed baseline range, surveys will be conducted annually until they are again within the baseline range.

In late spring of each monitoring year, the population size of Scotts Valley spineflower will be determined. Each previously known occupied site, as well as previously documented suitable habitat sites, will be surveyed for spineflower plants. At each site, species density data will be collected using a visual count of individuals and/or spatial estimates to determine total population size. The current data form will be used to record plant density information and a GPS will be used to record the positional coordinates of each occupied colony. Each site will be visited twice during the flowering period to achieve an accurate population count. The distribution of the Scotts Valley spineflower will be portrayed on a base map.

Data on pertinent habitat features will be collected as part of the vegetation monitoring. Associate plant species at each occupied and suitable habitat site will be recorded. Any obvious signs of plant damage will also be recorded, including any potential impacts from management and/or unauthorized activities within the Glenwood Open Space Preserve.

Although Scotts Valley polygonum has not been observed in the Glenwood Open Space Preserve, continued searches for this species will be conducted following the same timing and protocol as for Scotts Valley spineflower. Should Scotts Valley polygonum be observed, all avoidance and minimization measures and habitat management strategy included herein for the Scotts Valley spineflower will be applied for Scotts Valley polygonum.

3.7.6.2 Reporting and Adaptive Management

The abundance and distribution of Scotts Valley spineflower and other rare plants will be summarized in a report by the project Botanist, which will be shared by the Preserve Manager with the City and Service. If populations decline below the range observed during the complete baseline period, then the Preserve Manager and Botanist will develop additional management actions. Subsequent reports will evaluate the efficacy of those actions and revise the approach as needed until the population is brought back into the observed range.

3.8 Adaptive Management Strategy

Habitat management shall be guided by the principles of adaptive management. An adaptive management approach will allow Glenwood Open Space Preserve management to evolve as habitat or regulatory conditions change, and as monitoring provides new information. An annual report will recommend appropriate changes in habitat management practices based on the monitoring results, revision of preliminary baselines, and refinement of thresholds.

Adaptive management includes four general principles:

1. Monitoring of species and habitat
2. Continued development of baseline data and management thresholds
3. Coordination and application of management activities to maintain species habitat
4. Reassessment of management thresholds and activities based on the monitoring results and management goals

A considerable amount of information has been gathered regarding the biology, habitat, and management of the species present in the Glenwood Open Space Preserve during the baseline monitoring period (2004 – 2017). However, continued intensive monitoring including species counts will continue for an additional three years following initiation of public access to add to and refine the existing baseline data. At the end of the three-year additional baseline monitoring period, long-term monitoring, except for OTB monitoring, will be conducted that will include qualitative monitoring annually and quantitative monitoring of covered species at two-year intervals. OTB will continue to be quantitatively monitored annually. The flexibility of an adaptive management approach will allow adjustments to be made to preserve and enhance species habitat and meet the requirements of this LTMP.

Evaluation of management activities will involve examining monitoring data relative to thresholds while considering long-term habitat and population data trends, as well as influence of climatic and other natural environmental fluctuations. The analysis of monitoring data and thresholds will identify where management efforts are successful and where additional measures need to be implemented to improve success. If continued monitoring shows that the management efforts are unsuccessful, the Glenwood Open Space Preserve Manager will seek advice from species experts, range managers, and federal and state resource agencies to adopt alternative management methods.

During the long-term monitoring period, quantitative monitoring for special-status, sensitive and listed species will be based on OTB adult and larval burrow counts and Scotts Valley spineflower and Scotts Valley polygonum flowering plant counts. The OTB monitoring will be conducted every year. The plant monitoring will be conducted every second year unless the last years' annual total count falls below the range observed during the baseline period. If at any time a monitoring report demonstrates that an annual species count has declined below the baseline range, monitoring will be conducted annually until counts fall back within the baseline range. The baseline period will include 1992, 2004-2017, and the additional baseline period (2018-2020) counts and may be expanded to include subsequent years as long as they are deemed to reflect suitable management conditions. If a decline in adult plant numbers during the long-term monitoring period indicates a negative effect of public access on a special-status, sensitive or listed species population, then annual intensive monitoring will continue until adaptive management measures are effective in maintaining numbers within the baseline range.

For example, if this LTMP were approved in 2017, additional baseline monitoring would be conducted in 2018, 2019, and 2020. If the species count in 2020 were within the range for the

total baseline period (including all data collected 2018 to 2020 and prior to 2018), then the interval would increase to two years for species other than OTB. Monitoring would next be conducted in 2022. If the species counts in 2022 were within the range of the baseline period, monitoring would continue at the two-year interval. If, however, the species count in 2022 were below the range of the baseline period, then monitoring would return to an annual basis.

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City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: December 6, 2017

TO: Honorable Mayor and City Council

FROM: Kristin Ard, Recreation Division Manager

APPROVED: Jenny D. Haruyama, City Manager

**SUBJECT: UPDATE OF TEMPORARY, TRIAL USE OF SILTANEN BALL
FIELD LIGHTS ON WEEKENDS**

SUMMARY OF ISSUE

The City of Scotts Valley received a request from Rawhide Sports Tournament Ball for weekend use of the lights at the Adult/Girls ball fields at Siltanen Park. The request was for five Saturdays and five Sundays from 6:00 pm – 9:30 pm on the following dates: September 16, 17, 30, October 1, 14, 15, 28, 29 and November 11, 12.

The request was brought forth to City Council for consideration at the September 6, 2017 Council meeting. Council authorized temporary weekend light usage on a trial basis. In addition, given concerns expressed by area residents, Council asked that Rawhide Sports Tournament Ball work with the Vineyards Homeowners Association (HOA), Glenwood HOA, and other interested parties to mitigate impacts such as noise (before and after games), light pollution, and dust from field preparation.

Rawhide Sports Tournament Ball reported to Recreation Division Manager (RDM) Ard that it reached out electronically to the HOA's prior to each weekend tournament and received no response or feedback. Additionally, Rawhide Sports Tournament Ball contacted the RDM after each tournament weekend to address any concerns or issues raised by surrounding neighbors. The RDM received only one concern about the noise level from field prep on Saturday mornings. This issue was quickly resolved by re-scheduling the field prep to a weekday afternoon.

Total General Fund revenue generated from the tournament play was \$6,790. This amount was lower than expected as two weekend tournaments were cancelled due to low enrollment. The BBQ rental was also cancelled. Four of the six tournaments scheduled were played.

FISCAL IMPACT

There is no fiscal impact associated with providing this status update. Total General Fund revenue received as part of the field rental was \$6,790.

STAFF RECOMMENDATION

It is recommended that the City Council accept the report. Should a future request be made from any organization to use the Siltanen ball field lights on weekends, Council will need make a determination whether to uphold the existing policy, which excludes weekend light usage or modify its policy accordingly.

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None.

City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: December 6, 2017

TO: Honorable Mayor and City Council

FROM: Steve Walpole, Chief of Police

APPROVED: Jenny D. Haruyama, City Manager

SUBJECT: **AMEND EXISTING FIREARMS DEALER ORDINANCE
REQUIRING A POLICE DEPARTMENT SAFETY INSPECTION
TO IMPOSE RECOMMENDED SAFETY MEASURES, AND
IMPLEMENT A CONDITIONAL USE PERMIT FOR FIREARMS
DEALERS, FIREARMS REPAIR SERVICES, AND RELATED
USES**

SUMMARY OF ISSUE

On August 19, 2015, the Police Department recommended that the City Council adopt an ordinance that regulated firearms dealers. At the time, Scotts Valley had seen a noticeable increase of gun shops. The proposed ordinance was a way to better regulate the security of these establishments. The ordinance also proposed regulating the location of gun shops (e.g. prohibiting them from being near schools and parks) and high risk alcohol outlets. The proposed ordinance was modeled after Santa Cruz County's ordinance. After receiving public testimony, the City Council directed staff conduct more research and modify the proposed ordinance.

On September 2, 2015, staff returned to Council and introduced two ordinances for Council consideration. The first ordinance (Ordinance No. 190) required additional security measures. After meeting with local gun shop owners and conducting additional research, it was noted that while firearms dealers are regulated by federal and state laws, the regulations stop short of two crucial areas of premises security – (1) burglary alarm systems and (2) video surveillance systems. Additionally, federal and state agencies that monitor and audit firearms dealerships often do not have the time to sufficiently monitor whether requirements are being met. As a result, staff drafted an ordinance that focused on requiring firearms dealers to obey existing state and federal regulations and adhere to additional security measures, including burglar alarms and video surveillance. The adopted ordinance did not restrict locations.

The second ordinance (Ordinance No. 189) imposed a temporary moratorium on the establishment of commercial operations engaged in the sale of firearms, ammunition, and/or explosive devices within the City of Scott Valley. A moratorium was recommended to allow the City time to complete an adequate study into appropriate land use regulations for firearms dealers. The ordinance was approved, and later extended on two occasions and finally sunset on September 1, 2017. These extensions were necessitated by changes in key personnel. Since the sunset of the temporary moratorium, the following research was completed:

- Collected data from cities on how they regulated firearms sales.
- Conducted field visits of existing gun shops and discussed with the owner/operators of their existing land uses in the City and understand their land use needs. Each gun shop was situated in a commercial retail area and owners advised they would continue to seek out this area for their shops.
- Our current firearms dealer ordinance was created and approved by City Council. This ordinance enhances the safety and security of gun shops by requiring them to have alarms and video surveillance systems (both of which are not required by State or Federal regulations).
- Contacted over 20 city and county agencies to determine how they regulate gun shops, or whether they regulate them at all. There is a wide mix of regulation methods. Monterey County agencies predominately do not regulate locally, but instead rely on state and federal regulations. Santa Cruz and Santa Clara County agencies predominately have ordinances that further regulate firearms dealers. These ordinances vary in the amount and type of regulation.
- Completed research of other firearms ordinances.
- Noted the recent Ninth U.S. Circuit Court of Appeals ruling regarding zoning and gun shops in Alameda County (*Teixeira v. County of Alameda*). The Court of Appeals ruled in May 2016 that the zoning ordinance may not have been justified; however, in December 2016, the Ninth Circuit elected to rehear the case en banc and thus the May 2016 ruling was not considered precedent. The case was argued on March 22, 2017. On October 10, 2017, the full court held that the distance restrictions in that case were permissible. The Plaintiffs can appeal that case to the US Supreme Court. Such a request for review must be filed within 90 days of the entry of judgment.

On October 4, 2017, staff went back to Council and recommended that the City Council provide policy direction regarding proposed options. Council directed staff to implement two options:

Option #1: Implement a Conditional Use Permit Process for Firearm Sales

Option #2: Amend Existing Firearms Dealer Ordinance to Require a Police Department Safety Inspection to Impose Recommended Safety Measures as Necessary

Staff has prepared the necessary ordinances to implement these changes.

CONDITIONAL USE PERMIT

Requiring firearms dealers to obtain a conditional use permit would allow staff to place certain conditions on applicable businesses in order to make the firearms dealer more compatible with the surrounding uses. Under the City's Municipal code, the conditions could be revocable or valid for certain duration. Use permits also have a noticing requirement, which would serve as a mechanism to advise the public about any future gun shops.

The proposed ordinance (Ordinance No. 16-139; formerly No. 189.3 in the Planning Commission staff report), designating firearms dealers as a conditional use in the C-S and C-SC zoning districts was considered by the Planning Commission on November 9, 2017, because it is an amendment to the City's Zoning Ordinance. The proposed ordinance also included firearms repair service and related uses as conditional uses in those zoning districts. At the meeting, two local non-retail firearms-related business owners expressed concerns about the inclusion of firearms repair and related uses in the ordinance.

"*Related uses*" is text used in other places in the City's Municipal Code to give decision-makers more purview to ensure land use compatibility when considering discretionary permit applications, such as use permits. In this case, the business owners were concerned that the ordinance will regulate their non-retail firearms repair service shop and firearms-training business, more than what was originally intended. The Planning Commission heard the concerns referred the matter to the City Council for consideration. Therefore, the Planning Commission recommended approval of Zoning Ordinance Amendment AZO17-002, as written, per Resolution, and Ordinance No. 16-139, which implements a conditional use permit for firearms retail, plus firearms repair services, and related uses.

As a result, staff is seeking policy direction from the City Council whether the text "...*firearms repair service and related uses*" should be included in Ordinance No. 16-139.

- If the text remains, more uses would be regulated so that the City would have more discretion to ensure land use compatibility with sensitive receptor uses, such as schools, residential care facilities, etc.
- If the text is removed, less uses would be regulated and less discretion would be provided in the use permit process; however, City discretion could be incorporated under Police Department licensing requirements.

MODIFICATION TO FIREARMS DEALER ORDINANCE

The City Council directed staff to amend the existing firearm dealer ordinance to require safety inspections by the Police Chief and the imposition of additional safety measures as deemed necessary by the Police Chief. Additionally, the existing ordinance will be amended to require firearms dealers to secure any firearms, when the business is not

open, by a gun safe which meets the standards of 11 California Code of Regulations Section 4100; or by steel rods or cables which meet specifications set forth in the ordinance. Because this ordinance is not part of the City's zoning code, it did not go to the Planning Commission for consideration.

FISCAL IMPACT

There are no direct costs associated with this ordinance or required by the City. Any administrative or operational expenses related to licensing would be recovered through applicable fees.

STAFF RECOMMENDATION

It is recommended that the City Council conduct a public hearing, hear public testimony, and introduce Ordinance No. 16-139 and Ordinance No. 190.1, both attached to this staff report, and waive the reading thereof.

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ORDINANCE NO. 16.139

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SCOTTS VALLEY AMENDING SECTION 17.04.090, "F" TERMS, CHAPTER 17.04, DEFINITIONS; SECTION 17.20.030, CONDITIONAL USES, CHAPTER 17.20, C-S SERVICE COMMERCIAL ZONING DISTRICT REGULATIONS; AND SECTION 17.22.030, CONDITIONAL USES, CHAPTER 17.22, C-SC SHOPPING CENTER COMMERCIAL ZONING DISTRICT REGULATIONS, TITLE 17, ZONING, OF THE SCOTTS VALLEY MUNICIPAL CODE

The City Council of the City of Scotts Valley does hereby ordain as follows:

Section 1. Findings and Purpose. The City Council finds and declares as follows:

- A. Pursuant to its police powers, and as authorized by the Scotts Valley Municipal Code, the City may enact laws or regulations pertaining to the regulation of the sale, distribution, and repair of firearms within its jurisdiction.
- B. The City has previously adopted ordinances governing firearms use within the City.
- C. On October 4, 2017, the City Council has directed staff to prepare an amendment to the City Municipal Code regarding firearms retail and related uses.
- D. The City desires to amend Chapters 17.20 and 17.22 to make new firearms retail, firearms repair service, and related uses as conditional uses, which require use permit approval by the Planning Commission so that they may be located properly with respect to the objectives of the zoning ordinance and their effects on surrounding properties, and to amend Chapters 17.04, Definitions.
- E. The Planning Commission held a duly noticed public hearing on November 9, 2017, at which time it considered all evidence presented, both written and oral and at the end of the hearing voted to recommend that the City Council adopt this Ordinance.
- F. The City Council held a duly noticed public hearing on this Ordinance on December 6, 2017, at which time it considered all evidence presented, both written and oral.

Section 2. Section 17.04.090, "F" Terms, of Chapter 17.04, Definitions, of Title 17, Zoning, of the Scotts Valley Municipal Code is hereby amended to add the following definitions:

"Firearms" means a device as defined by California Penal Code Section 16520.

"Firearms Retail" means a use providing retail sale of firearms."

Section 3. Section 17.20.030, Conditional uses, of Chapter 17.20, C-S Service Commercial Zoning District Regulations, of Title 17, Zoning, of the Scotts Valley Municipal Code is hereby amended to read as follows:

“17.20.030 Conditional uses.

K. Firearms Retail, firearms repair service, and/or related uses.”

Section 4. Section 17.22.030, Conditional uses, of Chapter 17.22, C-SC Shopping Center Commercial Zoning District Regulations, of Title 17, Zoning, of the Scotts Valley Municipal Code is hereby amended to read as follows:

“17.22.030 Conditional uses.

U. Firearms Retail, firearms repair service, and/or related uses.”

Section 5. This ordinance is subject to the California Environmental Quality Act (CEQA), and the project is exempt from CEQA, pursuant to CEQA Guidelines Section 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment) and 15060(c)(3) (the activity is not a project as defined in Section 15378 of the CEQA Guidelines because it has no potential for resulting in physical change to the environment, directly or indirectly. Alternatively, this ordinance is not a project in CEQA Guideline Section 15061(b)(3) which is the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment and CEQA does not apply where it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment. Therefore, this ordinance has no impact on the physical environment as it will not result in any changes.

Section 6. If any section, subsection, subdivision, sentence, clause, phrase or portion of this Ordinance, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

Section 7. To the extent the provisions of the Scotts Valley Municipal Code as amended by this Ordinance are substantially the same as the provisions of that Code as they read immediately prior to the adoption of this Ordinance, then those provisions shall be construed as continuations of the earlier provisions and not as new enactments.

Section 8. The City Clerk shall certify as to the adoption of this Ordinance and shall cause a summary thereof to be published within fifteen (15) days of adoption and shall post a certified copy of this Ordinance, including the vote for and against same, in the Office of the City Clerk, in accordance with Government Code Section 36933.

This Ordinance No. 16-139 was introduced on the 6th day of December, 2017, and passed and adopted by the City Council of the City of Scotts Valley on the 20th day of December, 2017, by the following votes:

AYES:

NOES:

ABSENT:

ABSTAIN:

APPROVED: _____
Randy Johnson, Mayor

ATTEST:

Tracy A. Ferrara, City Clerk

APPROVED AS TO FORM:

Kirsten Powell, City Attorney

ORDINANCE NO. 190.1

**AN ORDINANCE OF THE CITY OF SCOTTS VALLEY AMENDING CHAPTER 5.38
TO TITLE 5 OF THE SCOTTS VALLEY MUNICIPAL CODE REQUIRING SAFETY
INSPECTIONS OF FIREARMS DEALERS BY THE CHIEF OF POLICE**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SCOTTS VALLEY AS
FOLLOWS:**

SECTION 1. Section 5.38.080 of Chapter 5.38 of Title 5 of the Scotts Valley Municipal Code is hereby amended to read as follows:

“5.38.080 Requirements

(A) The permitted business location shall be secured by a third party monitored alarm system. The alarm system shall be of sufficient quality to thwart the bypassing of the alarm (E.G., wireless, hardened security of the wire system, etc.).

(B) The permitted business location shall be monitored by a video surveillance system.

(C) Any person licensed under this chapter shall obey all applicable City, State and Federal laws; and in addition, comply with the following requirements:

(1) The business shall be carried on only in the building designated in the City license;

(2) The City license or a copy thereof, certified by the issuing authority, shall be displayed on the premises where it can easily be seen.

(D) Any time a permitted business is not open for business, every firearm shall be stored in one of the following ways:

(1) In a locked safe or vault in the licensee’s business premises that meets the standards of 11 California Code of Regulations Section 4100; or

(2) Secured with a hardened steel rod or cable of at least one-fourth inch in diameter through the trigger guard of the firearm. The steel rod or cable shall be secured with a hardened steel lock that has a shackle. The lock and shackle shall be protected or shielded from the use of a bolt cutter and the rod or cable shall be anchored in a manner that prevents the removal of the firearm from the premises. No more than five firearms may be affixed to any one rod or cable at any time.

(E) Prior to issuance of a firearms dealer license, the Chief of Police shall inspect the proposed business location and determine if additional safety measures are necessary to protect the public health, safety and welfare, including, but not limited to, any

structural changes to the building in which the firearms are sold or stored that are necessary to secure such firearms from burglary or theft.”

SECTION 2. SEVERABILITY. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction such portion shall be deemed a separate, distinct and independent provision of such Ordinance and shall not affect the validity of the remaining portions thereof.

SECTION 3. REPEALS CONFLICTING ORDINANCES. All other ordinances of the City of Scotts Valley or provisions of the Scotts Valley Municipal Code which are in conflict with this Ordinance are hereby repealed to the extent of such conflict.

SECTION 4. CEQA. The City Council finds and determines that the enactment of this Ordinance is statutorily exempt from environmental review pursuant to the State CEQA Guideline Section 15061(b)(3) because the activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

SECTION 5. EFFECTIVE DATE. This Ordinance shall take effect thirty (30) days after the date of its adoption. Prior to the expiration of fifteen (15) days from the date of adoption, this Ordinance shall be published in at least three (3) public places.

This Ordinance was introduced on the 6th day of December, 2017, and passed and adopted by the City Council of the City of Scotts Valley on the 20th day of December, 2017, by the following votes:

AYES:

NOES:

ABSENT:

ABSTAIN:

APPROVED: _____
Randy Johnson, Mayor

ATTEST:

Tracy A. Ferrara, City Clerk

APPROVED AS TO FORM:

Kirsten Powell, City Attorney

PUBLIC HEARING:

1. **Project Name:** Amendments to the City's Firearm Regulations

Address: City-wide

Applicant: City of Scotts Valley

Planning Permit Application No.: AZO17-002

Project Description: Consideration of recommendation of approval to the City Council of Amendments to the Zoning Ordinance (Section 17.04.090, Definitions, "F" terms; Section 17.20.030, Conditional uses in C-S Service Commercial Zoning District Regulations; and, Section 17.22.030, Conditional uses in C-SC shopping Center Commercial Zoning District Regulations, Title 17, Zoning, of the Scotts Valley Municipal Code) to require a use permit for new firearm retail, firearm repair service, and related uses.

Staff: Steve Walpole, Police Chief, 831-440-5649, swalpole@scottsvalley.org

M/S: Donovan/Herrera

To approve the amendments to the City's Firearm regulations with some further redefining and more specific language of other uses via Resolution No. 1722 Carried: 4/0/1 (AYES: Arcangeli, Donovan, Herrera, Timm; NOES: None; ABSENT: Muth)

2. Due to a lack of a quorum, this item will be rescheduled and re-noticed to a future date uncertain.

~~**Project Name:** Bay Mountain Mixed-use~~

~~**Address / APN:** 4803 Scotts Valley Drive / 022-082-76~~

~~**Applicant / Property Owner:** Robert Kim~~

~~**Planning Permit Application Nos.:** U17-002, DR17-003, DR17-004,~~

~~**Project Description:** Consideration of a Use Permit, Design Review, Sign Design Review, and reduced (shared) parking to allow a mixed-use development on a 0.41-acre site in the C-S Service Commercial Zone. The project proposes a new three-story building with approximately 1,800 square feet of ground floor retail space; 2,530 square feet of second floor office space; and six apartment units on the third floor. Site improvements and amenities include: 19 parking stalls, landscaping, enclosed trash, recycling area, bicycle parking, and a public art feature.~~

~~**Staff:** Scott Harriman, Contract Planner, skharriman@sbcglobal.net~~

**City of Scotts Valley
PLANNING COMMISSION
STAFF REPORT**

Date: November 9, 2017

Applicant: City of Scotts Valley

Location: City-wide

General Plan: Commercial consisting of two land use designations:
Service Commercial and Shopping Center Commercial

Zoning: C-S and C-SC

Environmental Status: Exempt from the California Environmental Quality Act (CEQA) per CEQA Guidelines Sections 15060(c)(2), (no foreseeable change in the physical environment), 15060(c)(3) (activity is not a CEQA project), and 15061(b)(3) (no potential for a significant effect on the environment).

Request: Consideration of recommendation of approval to the City Council of Amendments to the Zoning Ordinance (Section 17.04.090, "F" terms, of Chapter 17.04, Definitions; Section 17.20.030, Conditional uses, Chapter 17.20, C-S Service Commercial Zoning District Regulations; and, Section 17.22.030, Conditional uses, Chapter 17.22, C-SC Service Commercial Zoning District Regulations, of Title 17, Zoning of the Scotts Valley Municipal Code) to require a use permit for firearms retail, firearms repair service, and related uses.

Staff Contact: Steve Walpole, Police Chief, (831) 440-5651, swalpole@scottsville.org

STAFF RECOMMENDATION

It is recommended the Planning Commission conduct a public hearing, hear public testimony, and recommend to the City Council of the City of Scotts Valley approval of Zoning Ordinance Amendment AZO17-002, per the Resolution, and Ordinance No. 16-189.3, attached to this staff report.

DISCUSSION

On October 4, 2017, at a regularly scheduled City Council meeting, staff requested that the City Council provide policy direction regarding firearms dealer permits and the regulation of firearms retailers. A copy of the October 4th City Council Meeting Minutes

and Staff Report are attached to this report. At the meeting, the City Council directed staff to amend the existing Firearms Dealer Ordinance (Chapter 5.38, Firearms Dealers, Scotts Valley Municipal Code) to require a safety inspection by the Chief of Police or his designee, with recommended additional security measures, if needed, which will be presented at a future City Council meeting.

The City Council also directed staff to implement a conditional use permit for firearms retail uses. Due to their unique characteristics, conditional uses require special consideration so that they may be located properly with respect to the objectives of the zoning ordinance and their effects on surrounding properties. To achieve these purposes, the Planning Commission is empowered to grant and to deny applications for use permits and to impose such reasonable conditions in connection with a use permit, as it deems necessary to secure the purposes of the Scotts Valley Municipal Code.

In addition, use permits also have a noticing requirement, which would serve as a mechanism to advise the public about any future proposed firearms retail, repair service, and related businesses. The proposed ordinance establishes a definition for Firearm Retail and includes a definition of Firearms. Requiring firearms dealers to obtain a use permit would allow the Planning Commission to place certain conditions on applicable businesses in order to make the use compatible with the surrounding area.

ENVIRONMENTAL REVIEW

The proposed ordinance subject to the California Environmental Quality Act (CEQA). The project is exempt from CEQA, pursuant to CEQA Guidelines Sections: 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment), and 15060(c)(3) (the activity is not a project as defined in Section 15378 of the CEQA Guidelines because it has no potential for resulting in physical change to the environment, directly or indirectly). Alternatively, this ordinance is not a project under CEQA Guideline Section 15061(b)(3), which is the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. CEQA does not apply where it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment. Therefore, this ordinance has no impact on the physical environment as it will not result in any changes.

PUBLIC NOTICE

On October 27, 2017, public hearing notices were posted at City Hall, the Scotts Valley Branch Library, and the Scotts Valley Senior Center, consistent with State law.

ATTACHMENTS

PAGE

1. Resolution No. ____ (Action Item for AZO17-002)	3
Exhibit A - Ordinance No. 16-189.3	5
2. City Council Meeting Minutes, dated Oct. 4, 2017	8
3. City Council Staff Report, dated Oct. 4, 2017	11

RESOLUTION NO. ____

**A RESOLUTION OF THE PLANNING COMMISSION OF THE
CITY OF SCOTTS VALLEY RECOMMENDING APPROVAL TO
THE CITY COUNCIL OF THE CITY OF SCOTTS VALLEY OF
ZONING ORDINANCE AMENDMENT NO. AZO17-002 TO
REQUIRE USE PERMITS FOR NEW FIREARMS RETAIL,
FIREARMS REPAIR SERVICE, AND RELATED USES**

WHEREAS, the City of Scotts Valley initiated amendments to the Scotts Valley Municipal Code by application No. AZO17-002 to amend Section 17.04.090, "F" terms, of Chapter 17.04, Definitions; Section 17.20.030, Conditional uses, Chapter 17.20, C-S Service Commercial Zoning District Regulations; Section 17.22.030, Conditional uses, Chapter 17.22, C-SC Shopping Center Commercial Zoning District Regulations, Title 17, Zoning, to require use permit approval of new firearms retail, firearms repair service, and related uses, pursuant to the authority provided in the Scotts Valley Municipal Code and direction provided by the City Council;

WHEREAS, on November 9, 2017, the Planning Commission held a duly noticed public hearing and recommended approval of the proposed Zoning Ordinance Amendment AZO17-002, which amends Section 17.04.090, "F" terms, Chapter 17.04, Definitions; Section 17.20.030, Conditional uses, Chapter 17.20, C-S Service Commercial Zoning District Regulations; 17.22.030, Conditional uses, Chapter 17.22, C-SC Shopping Center Commercial Zoning District Regulations, Title 17, Zoning; and,

WHEREAS, the subject Zoning Ordinance Amendment to the Scotts Valley Municipal Code is subject to the California Environmental Quality Act (CEQA); and,

WHEREAS, the subject Zoning Ordinance Amendment is exempt from CEQA pursuant to CEQA Guidelines section 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment) and 15060(c)(3) (the activity is not a project as defined in Section 15378 of the CEQA Guidelines because it has no potential for resulting in physical change to the environment, directly or indirectly). Alternatively, this ordinance is not a project under CEQA Guideline Section 15061(b)(3) which is the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment and CEQA does not apply where it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment.

The City's zoning currently allows retail uses in these zoning districts. This amendment would merely make firearm retail, related uses, and firearm service shops conditional uses. Therefore, this ordinance has no impact on the physical environment as it will not result in any changes to the environment.

NOW THEREFORE, be it resolved by the Planning Commission as follows:

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SECTION 1: The Planning Commission of the City of Scotts Valley hereby recommends approval of the Zoning Ordinance Amendment AZO17-002, pursuant to the following findings:

- A. ***The proposed amendments to the City's Zoning Ordinance will not have a significant negative impact on the environment as it is an exempt project pursuant to the California Environmental Quality Act (CEQA) and the CEQA Guidelines.*** The proposed amendments meet the requirement of this finding in that, as an exempt project, it is determined that the proposed changes to the City's Municipal Code will not have a significant impact on the environment.
- B. ***The proposed amendment is consistent with the City's General Plan.*** The proposed amendments meet the requirement of this finding in that the Zoning Ordinance Amendment will provide reasonable review of new firearms retail, firearms repair service, and related uses, to ensure compatibility with existing surrounding businesses and uses, consistent with the objectives in the C-S and C-SC Zoning District Regulations.

SECTION 2: The Planning Commission of the City of Scotts Valley hereby recommends approval of Ordinance No. 16-189.3 to the City Council as further described in Exhibit A, attached hereto and incorporated herein by this reference.

SECTION 3: After careful consideration of the Zoning Ordinance Amendment and related materials, facts, exhibits, staff report, testimony and other evidence submitted in this matter, and incorporated herein by this reference, the Planning Commission of the City of Scotts Valley does hereby recommend to the City Council approval of Zoning Ordinance Amendment No. AZO17-002 to require use permit approval of new retail firearms, firearms repair service, and related uses, as described in Ordinance No. 16-189.3, as provided in Exhibit A which is attached hereto and incorporated herein by this reference.

THE ABOVE AND FOREGOING RESOLUTION was duly adopted and passed by the Planning Commission of the City of Scotts Valley at a regularly scheduled meeting held on the 9th day of November, 2017, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Approved: _____

Derek Timm,
Planning Commission Chair

Attest: _____

Taylor Bateman,
Acting Community Development Director

EXHIBIT A - ORDINANCE NO. 16.189-3

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF
SCOTTS VALLEY AMENDING SECTION 17.04.090, "F" TERMS,
CHAPTER 17.04, DEFINITIONS; SECTION 17.20.030, CONDITIONAL
USES, CHAPTER 17.20, C-S SERVICE COMMERCIAL ZONING
DISTRICT REGULATIONS; AND SECTION 17.22.030, CONDITIONAL
USES, CHAPTER 17.22, C-SC SHOPPING CENTER COMMERCIAL
ZONING DISTRICT REGULATIONS, TITLE 17, ZONING,
OF THE SCOTTS VALLEY MUNICIPAL CODE**

The City Council of the City of Scotts Valley does hereby ordain as follows:

Section 1. Findings and Purpose. The City Council finds and declares as follows:

- A. Pursuant to its police powers, and as authorized by the Scotts Valley Municipal Code, the City may enact laws or regulations pertaining to the regulation of the sale, distribution, and repair of firearms within its jurisdiction.
- B. The City has previously adopted ordinances governing firearms use within the City.
- C. On October 4, 2017, the City Council has directed staff to prepare an amendment to the City Municipal Code regarding firearms retail and related uses.
- D. The City desires to amend Chapters 17.20 and 17.22 to make new firearms retail, firearms repair service, and related uses as conditional uses, which require use permit approval by the Planning Commission so that they may be located properly with respect to the objectives of the zoning ordinance and their effects on surrounding properties, and to amend Chapters 17.04, Definitions.
- E. The Planning Commission held a duly noticed public hearing on November 9, 2017, at which time it considered all evidence presented, both written and oral and at the end of the hearing voted to recommend that the City Council adopt this Ordinance.
- F. The City Council held a duly noticed public hearing on this Ordinance on December 6, 2017, at which time it considered all evidence presented, both written and oral.

Section 2. Section 17.04.090, "F" Terms, of Chapter 17.04, Definitions, of Title 17, Zoning, of the Scotts Valley Municipal Code is hereby amended to add the following definitions:

"Firearms" means a device as defined by California Penal Code Section 16520.
"Firearms Retail" means a use providing retail sale of firearms."

Section 3. Section 17.20.030, Conditional uses, of Chapter 17.20, C-S Service Commercial Zoning District Regulations, of Title 17, Zoning, of the Scotts Valley Municipal Code is hereby amended to read as follows:

"17.20.030 Conditional uses.

K. Firearms Retail, firearms repair service, and/or related uses."

Section 4. Section 17.22.030, Conditional uses, of Chapter 17.22, C-SC Shopping Center Commercial Zoning District Regulations, of Title 17, Zoning, of the Scotts Valley Municipal Code is hereby amended to read as follows:

"17.22.030 Conditional uses.

U. Firearms Retail, firearms repair service, and/or related uses."

Section 5. This ordinance is subject to the California Environmental Quality Act (CEQA), and the project is exempt from CEQA, pursuant to CEQA Guidelines Section 15060(c)(2) (the activity will not result in a direct or reasonably foreseeable indirect physical change in the environment) and 15060(c)(3) (the activity is not a project as defined in Section 15378 of the CEQA Guidelines because it has no potential for resulting in physical change to the environment, directly or indirectly. Alternatively, this ordinance is not a project in CEQA Guideline Section 15061(b)(3) which is the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment and CEQA does not apply where it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment. Therefore, this ordinance has no impact on the physical environment as it will not result in any changes.

Section 6. If any section, subsection, subdivision, sentence, clause, phrase or portion of this Ordinance, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance. The City Council hereby declares that it would have adopted this Ordinance and each section, subsection, subdivision, sentence, clause, phrase, or portion thereof, irrespective of the fact that any one or more sections, subsections, subdivisions, sentences, clauses, phrases, or portions thereof be declared invalid or unconstitutional.

Section 7. To the extent the provisions of the Scotts Valley Municipal Code as amended by this Ordinance are substantially the same as the provisions of that Code as they read immediately prior to the adoption of this Ordinance, then those provisions shall be construed as continuations of the earlier provisions and not as new enactments.

Section 8. The City Clerk shall certify as to the adoption of this Ordinance and shall cause a summary thereof to be published within fifteen (15) days of adoption and shall post a certified copy of this Ordinance, including the vote for and against same, in the Office of the City Clerk, in accordance with Government Code Section 36933.

This Ordinance No. 16-189.3 was introduced on the 6th day of December, 2017, and passed and adopted by the City Council of the City of Scotts Valley on the 21st day of December, 2017, by the following votes:

AYES:

NOES:

ABSENT:

ABSTAIN:

APPROVED: _____

Randy Johnson, Mayor

ATTEST:

Tracy A. Ferrara, City Clerk

APPROVED AS TO FORM:

Kirsten Powell, City Attorney

Wendy Brannan, Scotts Valley resident, expressed concerns about the design of the park.

Ellen Buckingham, ADA Accessibility Committee, stated that she would like this park to include accessibility for disabled children.

CM Aguilar stated that she would like to see an additional three parking spaces where the six trees are located.

Brent Reed, Lennar Homes, stated that they would work with the City's Traffic Engineer and have the radius checked to see if the additional recommended parking would fit.

Nick Thelen, Scotts Valley Parks & Recreation Commissioner, stated that the Parks & Recreation Commission will take the input from the Council and public into consideration when finalizing the plans for the park.

M/S: Aguilar/Lind

To approve the design of the park with the following modifications from Council: (1) Switch the locations of the basketball court and tot lot; (2) Review the need for a barrier between the play area and the parking spaces; (3) Add two to three parking spaces where the six trees are located, subject to approval by the City Traffic Engineer; (4) Change the color of the poured in place surface material being used on the playground (other than black); (5) Work with Parks & Recreation Commission to explore opportunities to provide ADA accessible playground equipment.

Carried 5/0 (AYES: Aguilar, Dilles, Johnson, Lind, Reed)

2. Policy direction regarding firearms dealer requirements

PC Walpole presented the written staff report and responded to questions from Council. He stated that given that the City has exhausted the number of extensions allowed for a temporary moratorium and that the moratorium has sunset, policy direction is being requested from the Council based on the following options:

Option #1: Maintain Existing Ordinance (Ordinance No. 190), Enforcing Additional Firearm Dealer Security Measures

In addition to state and federal laws that regulate firearm dealers, the City's current ordinance requires existing and future firearm dealers to install burglar alarm and video surveillance systems to deter gun shop thefts. The ordinance does not address locations of gun shop given that zoning-based ordinances for gun shops are still under litigation.

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Option #2: Amend Existing Ordinance (Ordinance No. 190) Requiring a Police Department Safety Inspection to Impose Recommended Safety Measures as Necessary

To allow for more individualized security measures for new firearms dealer shops, the existing ordinance can be amended to include a safety inspection by the Chief of Police or his designee, with recommended additional security measures, if needed. This option allows for a site inspection to ensure adequate security measures.

Option #3: Implement a Conditional Use Permit

Requiring firearms dealers to obtain a use permit would allow staff to place certain conditions on applicable businesses. Under the City's municipal code, the conditions could be revocable or valid for a certain duration. Use permits also have a noticing requirement, which would serve as a mechanism to advise the public about any future gun shops. Additionally, due to their unique characteristics, conditional uses require special consideration so that they may be located properly with respect to the objectives of the zoning ordinance and their effects on surrounding properties. To achieve these purposes, the planning commission is empowered to grant and to deny applications for use permits and to impose such reasonable conditions in connection with a use permit as it deems necessary to secure the purposes of the Scotts Valley Municipal Code (SVMC). Implementation of this option would require an amendment to the Zoning Ordinance and approval by the Planning Commission and City Council.

Julia Blanton, SV resident, encouraged Council to enact strict firearms regulations.

Ellen Buckingham, SV resident, encouraged Council to enact strict firearms regulations.

Laura Rockow, SV resident, encouraged Council to enact strict firearms regulations.

Karen Daniels, SV resident, stated that she would like to be involved in this process going forward.

Chris Culligan, spoke in opposition to additional firearms regulations.

Martin Spierings, SV resident, encouraged Council to enact strict firearms regulations.

Jolie Hanna, SV resident, encouraged Council to enact strict firearms regulations.

Robert DeForge, SV resident, spoke in opposition to additional firearms regulations and stated that his business had to move out of Scotts Valley as a result of the moratorium.

John Donaher, SV resident, encouraged Council to enact strict firearms regulations.

Denise Rudd, SV resident, Co-Owner of Call to Arms Gun Works (a gunsmith), and Director of Santa Cruz Women on Target Program (firearms safety and marksmanship), spoke in opposition to additional firearms regulations.

Bob Hedgepath, local resident, spoke in opposition to additional firearms regulations.

Joy Hems, SV resident, encouraged Council to enact strict firearms regulations.

John Kreitz, SV resident, spoke in opposition to additional firearms regulations.

Brandon Schell, SV business owner for medical and firearms instruction, spoke in opposition to additional firearms regulations.

Nathan Taylor, SV resident, spoke in opposition to additional firearms regulations.

Sarah Mozell, local resident, encouraged Council to enact strict firearms regulations.

Carrie P, SV resident, encouraged Council to enact strict firearms regulations.

Deborah Baker, Santa Cruz County resident, spoke in opposition to additional firearms regulations.

VM Reed recommended including an additional requirement under Option 1 that all firearms be locked up.

M/S: Reed/Lind

To implement Options 1, 2, and 3, with an additional requirement under Option 1 that firearms be locked up.

Carried 5/0 (AYES: Aguilar, Dilles, Johnson, Lind, Reed)

3. Future Council agenda items

CM Dilles requested a future agenda item to have a special Council Workshop on our strategic plan and fiscal sustainability plan.

City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: October 4, 2017

TO: Honorable Mayor and City Council

FROM: Steve Walpole, Chief of Police

APPROVED: Jenny D. Haruyama, City Manager

SUBJECT: **POLICY DIRECTION REGARDING FIREARMS DEALER
REQUIREMENTS**

SUMMARY OF ISSUE

On August 19, 2015, the Police Department recommended that the City Council adopt an ordinance that regulated firearms dealers. At the time, Scotts Valley had seen a noticeable increase of gun shops. The proposed ordinance was a way to better regulate the security of these establishments. The ordinance also proposed regulating the location of gun shops (e.g. prohibiting them from being near schools and parks) and high risk alcohol outlets. The proposed ordinance was modeled after Santa Cruz County's ordinance. After receiving public testimony, the City Council directed staff conduct more research and modify the proposed ordinance.

On September 2, 2015, staff returned to Council and introduced two ordinances for Council consideration. The first ordinance (Ordinance No. 190) required additional security measures. After meeting with local gun shop owners and conducting additional research, it was noted that while firearms dealers are regulated by federal and state laws, the regulations stop short of two crucial areas of premises security – (1) burglary alarm systems and (2) video surveillance systems. Additionally, federal and state agencies that monitor and audit firearms dealerships often do not have the time to sufficiently monitor whether requirements are being met. As a result, staff drafted an ordinance that focused on requiring firearms dealers to obey existing state and federal regulations and adhere to additional security measures, including burglar alarms and video surveillance. The adopted ordinance did not restrict locations.

The second ordinance (Ordinance No. 189) imposed a temporary moratorium on the establishment of commercial operations engaged in the sale of firearms, ammunition, and/or explosive devices within the City of Scott Valley. A moratorium was recommended to allow the City time to complete an adequate study into appropriate land use regulations for firearms dealers. The ordinance was approved, and later extended on two occasions and finally sunset on September 1, 2017. These extensions were necessitated by changes in key personnel. Since the sunset of the temporary moratorium, the following research was completed:

AGENDA ITEM 2

DATE: 10-4-2017

- Collected data from cities on how they regulated firearms sales.
- Conducted field visits of existing gun shops and discussed with the owner/operators of their existing land uses in the City and understand their land use needs. Each gun shop was situated in a commercial retail area and owners advised they would continue to seek out this area for their shops.
- Our current firearms dealer ordinance was created and approved by City Council. This ordinance enhances the safety and security of gun shops by requiring them to have alarms and video surveillance systems (both of which are not required by State or Federal regulations).
- Contacted over 20 city and county agencies to determine how they regulate gun shops, or whether they regulate them at all. There is a wide mix of regulation methods. Monterey County agencies predominately do not regulate locally, but instead rely on state and federal regulations. Santa Cruz and Santa Clara County agencies predominately have ordinances that further regulate firearms dealers. These ordinances vary in the amount and type of regulation.
- Completed research of other firearms ordinances.
- Noted the recent Ninth U.S. Circuit Court of Appeals ruling regarding zoning and gun shops in Alameda County (Teixeira v. County of Alameda). The Court of Appeals ruled in May 2016 that the zoning ordinance may not have been justified; however, in December 2016, the Ninth Circuit elected to rehear the case en banc and thus the May 2016 ruling is not considered precedent. The case was argued on March 22, 2017, but no holding has been decided yet.

Request for Policy Direction

Given that the City has exhausted the number of extensions allowed for a temporary moratorium and that the moratorium has sunset, staff has identified three policy options for Council consideration.

Option #1: Maintain Existing Ordinance (Ordinance No. 190), Enforcing Additional Firearm Dealer Security Measures

In addition to state and federal laws that regulate firearm dealers, the City's current ordinance requires existing and future firearm dealers to install burglar alarm and video surveillance systems to deter gun shop thefts. The ordinance does not address locations of gun shop given that zoning-based ordinances for gun shops are still under litigation.

Option #2: Amend Existing Ordinance (Ordinance No. 190) Requiring a Police Department Safety Inspection to Impose Recommended Safety Measures as Necessary

To allow for more individualized security measures for new firearms dealer shops, the existing ordinance can be amended to include a safety inspection by the Chief of Police or his designee, with recommended additional security measures, if needed. This option allows for a site inspection to ensure adequate security measures.

002
1022

Option #3: Implement a Conditional Use Permit

Requiring firearms dealers to obtain a use permit would allow staff to place certain conditions on applicable businesses. Under the City's municipal code, the conditions could be revocable or valid for a certain duration. Use permits also have a noticing requirement, which would serve as a mechanism to advise the public about any future gun shops. Additionally, due to their unique characteristics, conditional uses require special consideration so that they may be located properly with respect to the objectives of the zoning ordinance and their effects on surrounding properties. To achieve these purposes, the planning commission is empowered to grant and to deny applications for use permits and to impose such reasonable conditions in connection with a use permit as it deems necessary to secure the purposes of the Scotts Valley Municipal Code (SVMC). Implementation of this option would require an amendment to the Zoning Ordinance and approval by the Planning Commission and City Council.

FISCAL IMPACT

There are no direct costs associated with this ordinance or required by the City. Any administrative or operational expenses related to licensing would be recovered through applicable fees.

STAFF RECOMMENDATION

It is recommended that the City Council provide policy direction regarding the three options.

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Santa Cruz County Firearms Dealer Regulation

City/County	Ordinance	License	Alarms	Video	Add. Security	Add. LE Background	Employee Background	Insurance	Security for Open Business
Santa Cruz City	Yes	*Yes	Yes	No	Yes	Yes	Yes	Yes	No
Santa Cruz Co.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Capitola	Yes	Yes	Yes	No	Yes	Yes	Yes	No	No
Scotts Valley	Yes	Yes	Yes	Yes	No	No	No	No	No

City/County	LE Inspection	Locations	Ammo
Santa Cruz City	Yes	Yes – Comply with zoning codes; 600'	No
Santa Cruz Co.	Yes	Yes – Comply with zoning codes; 600' +	Yes
Capitola	Yes	Yes – Commercial zone only	No
Scotts Valley	No	No	No

* Letter of Authorization

? No ordinance on-line, and no response back from agency.

Santa Clara County Firearms Dealer Regulation

City/County	Ordinance	License	Alarms	Video	Add Security	Add LE Background	Employee Background	Insurance	Security for Open Business
San Jose	Yes	Yes	Yes	No	Yes	Yes	No	No	No
Los Gatos	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Campbell	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Santa Clara Co.	Yes	Yes	No	No	No	No	No	No	No
Sunnyvale	Yes *	--	--	--	--	--	--	--	--
Mountain View	No	--	--	--	--	--	--	--	--

City/County	LE Inspection	Locations	Ammo
San Jose	Yes	Yes - Comply with zoning codes	No
Los Gatos	Yes	Yes - Comply with zoning codes	No
Campbell	Yes	Yes - Non residential	Yes
Santa Clara Co.	No	Yes - Comply with zoning codes	No
Sunnyvale	Yes	No	Yes
Mountain View	No	No	No

*Sunnyvale has an ordinance regarding ammunition, but no ordinance or other procedures to regulate firearms dealers.

Monterey County Firearms Dealer Regulation

City/County	Ordinance	License	Alarms	Video	Add Security	Add LE Background	Employee Background	Insurance	Security for Open Business
Monterey Co.	No	--	--	--	--	--	--	--	--
Salinas	Yes	*Yes	No	No	No	Yes	Yes	Yes	No
Seaside	Yes	*Yes	**Yes	**Yes	**Yes	No	No	No	**Yes
Marina	No	--	--	--	--	--	--	--	--
Soledad	No	--	--	--	--	--	--	--	--
King City	No	--	--	--	--	--	--	--	--
Carmel	No	--	--	--	--	--	--	--	--
Gonzales	No	--	--	--	--	--	--	--	--
Sand City	No	--	--	--	--	--	--	--	--
Del Rey Oaks	No	--	--	--	--	--	--	--	--

City/County	LE Inspection	Locations	Ammo
Monterey Co.	--	--	--
Salinas	Yes	Yes - Zoning; 1000' +	No
Seaside	Yes	No	No
Marina	--	--	--
Soledad	--	--	--
King City	--	--	--
Carmel	--	--	--
Gonzales	--	--	--
Sand City	--	--	--
Del Rey Oaks	--	--	--

* Permit

**Chief of police can require any structural conditions to building that will ensure safety of firearms form burglary or theft.

Teixeira v. County of Alameda

In order to qualify for a permit to operate a gun store, the Alameda County ordinance requires that "the subject premises is not within 500 feet of any of the following: residentially zoned district; elementary, middle or high school; preschool or day care center; other firearms sales business; or liquor stores or establishments in which liquor is served."

The three-judge Ninth Circuit panel had opined that the district court should have required the county to justify the ordinance by showing evidence that the presence of gun stores in neighborhoods leads to increased crimes and/or negatively impacts aesthetics.

Teixeira v. County of Alameda, 13-17132

Three-Judge Panel Opinion: 822 F.3d 1047 (9th Cir. 2016)

Order Taking Case En Banc: 2016 WL 7494873 (9th Cir. Dec. 27, 2016)

Date of Order Taking Case En Banc: December 27, 2016

Status: Argued and submitted on March 22, 2017, at 1:30 p.m., in San Francisco, California

Members of En Banc Court: Chief Judge Thomas, Judges Reinhardt, McKeown, Gould, Paez, Berzon, Tallman, Bybee, Bea, Watford, and Owens

Subject Matter: Appeal from the district court's dismissal for failure to state a claim of an action brought by individuals wishing to operate a gun shop in Alameda County, California, challenging a County ordinance that does not permit prospective gun shops to be located within 500 feet of a residentially-zoned district.

Holding: Not yet decided

ORDINANCE NO. 190

**AN ORDINANCE OF THE CITY OF SCOTTS VALLEY ADDING CHAPTER 5.38 TO
TITLE 5 OF THE SCOTTS VALLEY MUNICIPAL CODE REQUIRING FIREARMS
DEALERS TO MEET CERTAIN REQUIREMENTS AND TO OBTAIN A
FIREARMS DEALER LICENSE**

**BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF SCOTTS VALLEY AS
FOLLOWS:**

SECTION 1. Title 5 of the Scotts Valley Municipal Code is hereby amended by adding
a new Chapter 5.38 entitled "Firearms Dealers" to read as follows:

"Chapter 5.38

Firearms Dealers

- 5.38.010 Purpose.
- 5.38.020 Definitions.
- 5.38.030 City license.
- 5.38.040 Application for City license.
- 5.38.050 Approval by Licensing Officer.
- 5.38.060 Denial of application.
- 5.38.070 Appeal from denial.
- 5.38.080 Requirements.
- 5.38.090 Suspension and revocation.
- 5.38.100 Notification of suspension or revocation.
- 5.38.110 Hearing on revocation or suspension.
- 5.38.120 Violations.
- 5.38.130 Penalties.

5.38.010 Purpose.

This chapter is enacted pursuant to State law, as set forth in Article 1, Chapter 2, Division 6, Title 4, Part 6 of the California Penal Code beginning with Section 26700 et seq.

5.38.020 Definitions.

As used in this chapter, the following words and phrases shall have the meanings respectively ascribed to them by this section:

- (A) "Firearm" means a device as defined by California Penal Code Section 16520.
- (B) "City license" means a license issued by the local licensing authority pursuant to this chapter authorizing a person to engage in the sale, lease, transfer, delivery, advertisement or offer for sale, lease, or transfer of firearms.

(D) "Local Licensing Authority" or "Licensing Officer" means the City Manager of the City of Scotts Valley, or his or her designee.

5.38.030 City license.

On and after the effective date of this ordinance, no person required to obtain a Federal Firearms License and a State Department of Justice License to sell firearms shall establish a business that engages in the sale, lease, transfer, delivery, advertisement or offer for sale, lease, or transfer any firearm without first also obtaining and keeping a one-time City license issued pursuant to this chapter by the Local Licensing Authority. Existing firearms dealers at the effective date of this ordinance have 12 months to comply with the conditions and obtain a city license.

5.38.040 Application for City license.

(A) Each person applying for a City license under this chapter shall submit an application to the Local Licensing Authority.

(B) In order to obtain a City license, the applicant must first provide the following to the Licensing Officer:

- (1) A valid Federal firearms license;
- (2) A valid seller's permit issued by the State Board of Equalization;
- (3) A valid certificate of eligibility issued by the Department of Justice;
- (4) Payment of a nonrefundable administrative fee, in an amount to be established by resolution of the City Council.

(C) Where the applicant is a corporation, each of the requirements contained in this chapter must be completed and/or adhered to by a legally recognized corporate officer of said corporation. Where the applicant is a partnership, each of the requirements contained in this chapter must be completed and/or adhered to by a legally recognized general partner of said partnership. Both the individual and the corporation or partnership shall be liable for any violation of the provisions of this chapter.

(D) Each application shall specify only one location at which the sale or transfer of firearms shall take place. If any firearms dealer licensed under either Federal, State or local law changes his or her place of business, an application for the new location shall be submitted, accompanied by a nonrefundable fee (in the form of a check or cash) as set forth in the schedule of fees. That application shall be considered an initial application and not an application for renewal.

5.38.050 Approval by Licensing Officer.

The Licensing Officer shall have the authority to approve or disapprove the issuance of the City license. For the purpose of considering requests for a City license, the Licensing Officer shall apply the minimum standards set forth in this chapter. Factors to be considered by the Licensing Officer in approval or denial of the application for a City license include, but are not limited to:

- (A) Evidence of the applicant's compliance with all applicable City, State and Federal laws;
- (B) Whether applicant has violated any provisions of this chapter;
- (C) Whether the applicant has made any false statements as to any material fact in applying for the City license;
- (D) Whether the applicant has done or caused or permitted to be done any act which if done by an authorized firearms dealer would be grounds for suspension or revocation of the City license;

5.38.060 Denial of application.

If the applicant does not meet all of the written standards, hereinabove set forth, the Licensing Officer shall not issue a City license to such applicant.

It shall be the duty of the Licensing Officer to notify an applicant that his or her application has been denied by serving such person, either personally or by first class United States mail, with a letter setting forth the reason(s) for such denial. The notice, if served by mail, shall be deemed to have been served on the date of its deposit in the United States mail, postage prepaid, to the applicant's address of record. The notice shall also inform the applicant of his or her right to a hearing before the City Council at which time the applicant may appear, with a representative if so desired, and be heard on the matter. The applicant shall also be given notice that any request for a hearing before the City Council must be made in writing to the City Clerk within 10 calendar days after the date on which such notice is served on the applicant.

5.38.070 Appeal from denial.

An applicant whose application has been denied by the Licensing Officer shall have the right to appeal such decision to the City Council. The City Council shall hold a hearing thereon pursuant to the procedures set forth in Section 5.38.110.

5.38.080 Requirements.

(A) The permitted business location shall be secured by a third party monitored alarm system. The alarm system shall be of sufficient quality to thwart the bypassing of the alarm (E.G., wireless, hardened security of the wire system, etc.).

(B) The permitted business location shall be monitored by a video surveillance system.

(C) Any person licensed under this chapter shall obey all applicable City, State and Federal laws; and in addition, comply with the following requirements:

(1) The business shall be carried on only in the building designated in the City license;

(2) The City license or a copy thereof, certified by the issuing authority, shall be displayed on the premises where it can easily be seen.

5.38.090 Suspension and revocation.

Every City license issued under this chapter shall be subject to summary suspension and revocation by the Licensing Officer if he or she determines that:

(A) The City license holder has failed to meet any of the requirements specified under this chapter;

(B) The City license holder and/or any employee(s) has violated any of the conditions or provisions of this chapter;

(C) The City license holder and/or any employee(s) has violated any provision of Federal or State firearms sales laws;

(D) The City license holder's Federal firearms sales license has been revoked; or

(E) The City license holder has committed any act which could have resulted in the denial of issuance of a firearms license.

5.38.100 Notification of suspension or revocation.

It shall be the duty of the Licensing Officer or his or her designee to notify any City license holder charged with any violation or misconduct, as described above, by serving such person, either personally or by first class United States mail, with a letter setting forth the particular written standard or condition which has been violated. The letter shall inform such City license holder of the right to a hearing before the City Council, at which time the City license holder may appear with a representative if so desired and be heard in defense of the charges. The City license holder shall also be given notice that any request for a hearing before the City Council must be made in writing to the City Clerk

within 10 calendar days after the date on which notice is served on the City license holder. The suspension or revocation shall be effective on the date the notice is served on the City license holder. Such notice, if served by United States mail, shall be deemed to have been served on the date of its deposit in the United States mail, postage prepaid, to the City license holder's address of record.

5.38.110 Hearing on revocation or suspension.

(A) Any applicant or licensee who is aggrieved by any action taken in regard to a City license may request an appeal hearing before the City Council. Request for such hearing shall be in writing and filed with the City Clerk, and a copy filed with the Licensing Officer on or before 10 calendar days after the action appealed from was taken, and shall state the grounds upon which the aggrieved party claims there was improper denial, suspension or revocation of his or her license.

(B) Upon receipt of such request for hearing, the City Council shall set the matter for hearing not later than 20 calendar days thereafter unless the Council is not in session in which case the Council shall set the matter for hearing at the next available regular meeting date. The Council may also determine whether to stay the denial, suspension or revocation pending decision on the appeal. Written notice of the time and place of hearing on the matter shall be given by the City Clerk to the aggrieved party and to the Licensing Officer, and upon receipt of the notice of hearing the Licensing Officer shall forward to the City Council and provide to the appellant a report on this action with respect to the matter, attaching all relevant notices and any other materials relied upon by the Licensing Officer in making the decision.

(C) Upon hearing of the matter, the City Council may take such action or make such orders as the Council deems just and proper in the disposition of the matter.

5.38.120 Violations.

It shall be unlawful and a violation of this chapter for any person, corporation, partnership or other entity to operate a firearms business within the City of Scotts Valley without a valid City license issued pursuant to this chapter.

5.38.130 Penalties.

Any person or entity, whether as principal, agent, employee, or otherwise, violating or causing or permitting the violation of any of the provisions of this chapter, shall be guilty of an infraction for the first offense, or of a misdemeanor for any subsequent offense(s) occurring within the one year after the first offense. Upon conviction, the person convicted shall be punished in accordance with Chapter 4.04 of the Scotts Valley Municipal Code.

SECTION 2. SEVERABILITY. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction such portion shall be deemed a separate, distinct and independent provision of such Ordinance and shall not affect the validity of the remaining portions thereof.

SECTION 3. REPEALS CONFLICTING ORDINANCES. All other ordinances of the City of Scotts Valley or provisions of the Scotts Valley Municipal Code which are in conflict with this Ordinance are hereby repealed to the extent of such conflict.

SECTION 4. CEQA. The City Council finds and determines that the enactment of this Ordinance is statutorily exempt from environmental review pursuant to the State CEQA Guideline Section 15061(b)(3) because the activity is covered by the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

SECTION 5. EFFECTIVE DATE. This Ordinance shall take effect thirty (30) days after the date of its adoption. Prior to the expiration of fifteen (15) days from the date of adoption, this Ordinance shall be published in at least three (3) public places.

This Ordinance was introduced on the 2nd day of September, 2015, and passed and adopted by the City Council of the City of Scotts Valley on the 16th day of September, 2015, by the following votes:

AYES: AGUILAR, JOHNSON, LIND
NOES: NONE
ABSENT: BUSTICHI, REED
ABSTAIN: NONE

APPROVED: _____
Donna Lind, Vice Mayor

ATTEST:

Tracy A. Ferrara, City Clerk

APPROVED AS TO FORM:

Kirsten Powell, City Attorney

013
23
033

City of Scotts Valley CITY COUNCIL STAFF REPORT

DATE: December 6, 2017

TO: Honorable Mayor and City Council

FROM: Jessica Kahn, Civil Engineer

APPROVED: Jenny D. Haruyama, City Manager

SUBJECT: ADOPT REVISED STANDARD DETAILS AND SPECIFICATIONS

SUMMARY OF ISSUE

The Department of Public Works Standard Details and Specifications encompass design and construction standards for streets, sanitary sewers, storm drains and other miscellaneous items. The City of Scotts Valley Standard Details were adopted by the City Council by Resolution No. 1183 on May 17, 1989. Revisions to the Sewer and Street Standards were adopted by City Council Resolution No. 1183.1 on July 25, 1990. Revisions to the Storm Drainage Standards were adopted by City Council Resolution No. 1183.2 on February 15, 2015. These revisions were minor in nature. A comprehensive update of the Standards has not been performed since 1990.

Included in the standards are such items as sidewalks, curbs and gutters, driveway cuts, sanitary sewer and storm drain manholes, sewer laterals and cleanouts, drainage inlets, and pipe trenching and backfill. These standards are to be followed for all City projects and for developers, utilities and businesses who construct public works or works within the City rights-of-way or connections to the public sanitary sewer or storm sewer system. These Standards help ensure that citywide infrastructure is safe, durable and easy to maintain. It is important to modify these standards from time to time to reflect changes in construction methods and materials, meet current regulations, and to insure that infrastructure investments are made with the goal of providing a long lifespan.

Staff has completed comprehensive update in compliance with applicable laws and codes, survey of neighboring municipalities, input from applicable City departments and review by Bowman & Williams Civil Engineers.

Revisions of the Standard Details and Specifications showing strike outs and additions and the complete set of revised Standard Details are attached for the City Council's reference.

The most significant changes are as follows:

- Clarification of improvement plan provisions to reflect current policies
- Standardizes improvement plan submittal process
- Requires as-built plan submittals
- Includes option to require traffic control plan when deemed appropriate

Revisions to meet current design standards for roads, storm drains, sewers and related appurtenances include:

- Standard specifications for sanitary sewer design and construction
 - Discontinue use of clay pipes
 - Require a tracer wire for sewer pipes
 - Backflow prevention standards
- Standard specifications incorporating current stormwater regulations for construction and development

Table 1. Changes to Standard Detail Drawings

Figure Number	Added	Deleted
STREET DESIGN		
ST-01	Standard Street Improvement Cross Sections	
ST-04	Curb, Gutter, Sidewalk, and A.C. Dike	Curb and Dike Details
ST-06	Driveway Approach	Driveway Curb Depression
ST-07	Driveway Profile	Driveway Centerline Profiles
ST-11a/b		Masonry Retaining Wall Masonry Retaining Wall Schedule
ST-11	Street Sign Placement	
ST-12	Solid Waste Enclosure	
ST-13		Curbside Mailbox Facility
STORM DRAINAGE		
SD – 04/09	Cross Trench Backfill	Standard Trench Backfill
SD -05	Longitudinal Trench Backfill	
SD -06	Storm Drain Manhole	
SD -07	Bioretention Facility	
SD -7.1		Winged Curb Inlet - Type B
SD -8		Frame and Grate
SD -10		Storm Drain Outfall with Flap Gate
SD -11		Storm Drain Outfall without Flap
SD -12		Standard Trunk Manhole
SANITARY SEWER		
SS -02	Cross Trench Backfill Section	Standard Trench Backfill Section
SS-03		Longitudinal Trench Backfill

FISCAL IMPACT

There is no direct fiscal impact to revising/updating these standards.

STAFF RECOMMENDATION

Staff recommends that Council adopt Resolution No. 1183.3 revising the City of Scotts Valley Standard Details and Specifications.

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RESOLUTION NO. 1183.3

**RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SCOTTS VALLEY
ADOPTING REVISED STANDARD DETAILS AND SPECIFICATIONS**

WHEREAS, the City Council of the City of Scotts Valley adopted the “City of Scotts Valley Standard Details” (the “Standards”) on May 17, 1989 by Resolution No. 1183; and

WHEREAS, the City Council of the City of Scotts Valley adopted minor revisions to the Standards on July 25, 1990 by Resolution No. 1183.1 and February 15, 2015 by Resolution No. 1183.2; and

WHEREAS, materials and methods for construction have improved significantly; and

WHEREAS, the Public Works Department regulates the design and implementation of public infrastructure projects and related facilities; and

WHEREAS, to facilitate these projects the Public Works Department has developed revised Standards to provide a consistent approach for designing public improvements and related facilities; and

WHEREAS, adopting these Standards will provide design professionals guidance for design and implementation of public infrastructure projects and related facilities, and will provide the Public Works Department a uniform method for reviewing and approving these projects.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED that the City Council of the City of Scotts Valley hereby adopts the revised Standard Details and Specifications in substantially similar form as attached hereto and incorporated herein as Exhibit A.

The above and foregoing resolution was duly and regularly adopted by the City Council of the City of Scotts Valley at a regular meeting held on the 6th day of December, 2017 by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

Approved: _____
Randy Johnson, Mayor

Attest: _____
Tracy A. Ferrara, City Clerk



STANDARD DETAILS

Date Adopted: May 17, 1989

Resolution # 1183

Revised: July 25, 1990

Proposed Revision: December 6, 2017

[Revised title page and Table of Contents]

SECTION I

GENERAL REQUIREMENTS

I-1. PURPOSE

The purpose of these Design Standards is to provide certain minimum standards for the design, construction, repair and alteration for streets, storm drains, sanitary sewers, and all appurtenances thereto within the City of Scotts Valley. Any items which are not included in these Standards shall be designed in accordance with the State Highway Design Manual, State Traffic Manual, Subdivision Ordinance or Zoning Ordinance as hereinafter defined, the General Plan, Master Plans, and any applicable Specific Plan of the City of Scotts Valley, generally accepted engineering practice, or as directed by the City Engineer.

I-2. IMPROVEMENT PLAN PREPARATION

General formatting, copying, and submittal processes shall include:

A. Plans shall be drawn on vellum or high-quality bond plan sheets or plan and profile sheets, 36 inches horizontal by 24 inches vertical.

B. Each sheet shall include:

1. The project title appearing in the title block along with the street address for private development projects.
2. Sealed and signed by a Professional Civil Engineer or Surveyor, as appropriate for the project, licensed in the State of California.
3. Scale, north arrow, datum, legend, date, and general notes.
4. Description, location and elevation of all bench mark data available on the project site or adjacent to site.
5. Improvements to be constructed shall be shown with solid lines.
6. Future improvements shall be shown and labeled with dotted lines.
7. Existing improvements shall be shown with screened lines.

C. Engineering design drawings shall be submitted in accordance with this standard system:

1. Cover Sheet including the following:
 - a) An overall drawing of the proposed construction area including street names and lot numbers.
 - b) Vicinity map showing the proximity of the project to major roadways or cities. Project shall be outlined on map.
 - c) Name of Developer.

- d) Name of Engineer.
- e) General notes.
- f) Benchmark and Basis of Bearings.
- g) Signature blocks of all involved agencies.
- h) Index of plan sheets.

- 2. Detail Sheet showing all design details and specifications for construction.
- 3. Separate Sheet for storm drainage, water, sewer, grading, demolition, horizontal control, utility, and street design. Scale shall be 1" = 20' for design sheets.

D. Storm Drainage/Sanitary Sewer/Water Quality Treatment/Detention Plan and Profile

- 1. Label all cleanouts, manholes, and catch basins in sequential number indicating size, location, and type on the Plans. In profiles, label rim and invert elevations as well as catch basin or manhole size and type.
- 2. Include flow direction arrows on all storm drain pipes.
- 3. Label pipe size, length, material and slope in plan or profile.
- 4. Include horizontal and vertical datum and benchmark information on each plan and/or profile sheet.
- 5. Show spot elevations of pavement in parking lots, and runoff flow direction arrows.
- 6. Show all stub-out locations for future connections.
- 7. Show location of outfalls and include section details for outfalls in grading or street improvement plans.
- 8. Show and label the following for all stormwater facilities:
 - a) At least two cross-sections through detention pond. One cross-section shall show the control structure.
 - b) Location and detail of emergency overflows and spillways
 - c) Invert elevations of all pipes, inlets, tanks, vaults and spot elevations of the pond bottom. Call out pond volume and dimensions, and design surface elevation.
 - d) Plan and section views and details of all rock protection and energy dissipaters.
 - e) Section and plan view on restrictor/control structure; detailed, including size and elevation of orifices.
 - f) Show length, width, and bottom width dimensions for all bio-filtration and water quality swales and stormwater conveyance swales. Include sectional view, showing side slopes and design depth of flow.
 - g) Include seeding material information for erosion control.

E. Engineering design calculations shall be submitted for review where applicable:

1. Water and sewer pipe sizing.
2. Hydrologic and hydraulic analysis and report.
3. Geotechnical and Geologic report.
4. Design of roadway section.
5. Traffic Impact Study.
6. Structural, foundation, and stability calculations for retaining walls, bridges, embankments, etc.

F. Erosion control plans for construction shall be submitted for review:

1. Temporary erosion and sedimentation control plan, showing the control measures intended to minimize the effects of erosion due to construction operations shall be submitted with the plans.
2. Traffic control plan.
3. Timing schedules and sequence of development clearing, including stripping, rough grading, construction, final grading, and vegetative stabilization.

G. Before final acceptance, the Applicant shall provide the City with certified as-builts vellum stamped by a registered civil engineer licensed in the State of California within 30 days of the final inspection.

All final as-built drawings shall also be submitted as Autocad release 2016 LT or later version. The submittal shall be electronic or on a CD.

The as-built drawings shall include final plat information including right of ways and easements. The as-built drawings shall certify that the facility has been constructed as shown on the as-built plans and meets approved plans and specifications. They shall include but not be limited to the information as outlined in the individual Sections of these Standards.

H. All work shall be performed in accordance with the current edition of Standard Specifications and Plans prepared by the State of California Department of Transportation and the American Public Works and the City of Scotts Valley Standard Details.

PART 1. GENERAL

Section A: Improvement Plan Preparation

- ~~1. Improvement plans shall be prepared by a Registered Civil Engineer (State of California), and shall be drawn on good grade mylar. The following are some of the items which must be included on the plans:~~

- a. Project vicinity map on the title sheet
- b. Location of existing utilities
- c. Stationing along road and/or sewer and storm line where applicable
- d. Location of sewer, storm drain and other proposed utilities with respect to road or utility easement center lines
- e. Bench mark datum must be City datum unless prior approval has been secured from the Public Works Director/City Engineer.

2. Improvement plans shall be arranged in the following order:

- a. Title sheet
- b. Plan sheets scale: 1" = 20'
- Profile scale: 1" = 4' vertical; 1" = 20' horizontal
- c. Typical details
- d. Miscellaneous details

I-3. IMPROVEMENT PLAN PROCESSING

- A. Initial submittal of 2 sets of improvement plans for checking shall be made to the Public Works Director/City Engineer. Upon completion of the checking process, and any necessary correction of the tracings. The original plan submittal shall be accompanied by an engineer's estimate to be used to establish bond requirements. After the Public Works Director/City Engineer has approved the plans, the original plans will be returned to the engineer who prepared the plans.
- B. Prior to issuing occupancy, the application shall have the Professional Engineer of record submit a letter stating that the improvements have been constructed per plan. As-built plan(s) shall be submitted along with the letter for any changes made during construction.

I-4. EROSION CONTROL

- A. Between October 15 and April 15, exposed soil shall be protected from erosion at all times. During construction such protection may consist of mulching and/or planting of native vegetation of adequate density. Before completion of any project, the exposed soil on disturbed slopes shall be permanently protected from erosion.

Section B: Improvement Plan Processing

- 1. Initial submittal of 2 sets of improvement plans for checking shall be made to the Public Works Director/City Engineer. Upon completion of the checking process,

and any necessary correction of the tracings, the original plans, along with 1 set of reproducible prints and one set of blueprints, shall be submitted for approval signature. The original plan submittal shall be accompanied by an engineer's estimate to be used to establish bond requirements. After the Public Works Director/City Engineer has approved the plans, the original plans will be returned to the engineer who prepared the plans.

GENERAL NOTES FOR STREET IMPROVEMENT PLANS

1. All work shall be done in accordance with the City of Scotts Valley's Standard Details, Caltrans Standard Specifications, Standard Specifications for Public Works construction, current edition with supplements (APWA).
2. All existing pavement to be removed shall be removed to clean, straight lines.
3. Existing pavement shall be coated with asphaltic emulsion at all locations where new pavement joins existing pavement.
4. All existing P.C.C. shall be saw cut prior to removal.
5. The contractor shall maintain dust control at all times by watering or other methods as approved by the Public Works Director/City Engineer.
6. The contractor is responsible for the protection and adjustment of all gas valves, water valve boxes and covers, drains, clean-outs, etc.
7. An approved soil sterilizer shall be used on all natural-ground subgrades when placing A.C. pavement directly on subgrade.
8. No work shall be undertaken without obtaining an encroachment permit from the City of Scotts Valley Public Works Department.
9. Paving contractor shall reset manhole rings 1/8-inch below grade after placement of A.C. pavement.
10. Contractor shall satisfy himself that quantities shown are correct before bidding on any item.
11. All A.C. pavement over 3-inches thick shall be placed in two lifts. Asphalt shall be Type A 1/2" maximum, medium gradation. A prime coat shall be applied prior to paving.
12. All areas which are to receive A.C. overlay shall be edge-ground for a smooth conform prior to the placement of the overlay.
13. All temporary patches shall be of the "hot mix" variety. "Cold mix" shall not be allowed under any circumstances.

14. All trees within pavement area shall be removed, including root system. Backfill of the hole after removal shall be accomplished in accordance with the City of Scotts Valley provisions for trench compaction. A soils report shall be required with respect to compaction of these holes.

15. ~~Field notes located at _____ page
_____.~~

~~16.~~15. Contractor shall furnish the City Engineer with accurate “as-built” drawings. Bonds will not be released by the City until after satisfactory submittal of “as-built” drawings has been made.

~~17. Sidewalk shall be constructed in conformance with Standard Drawing No. ST-13 for mailbox location requirements.~~

~~18.~~16. No item shall exceed 6 inches height above the top of curb within 18 inches from the face of curb.

~~19. The utility engineer signature block located on the improvement plan title sheet shall be signed by the respective representatives of Pacific Telephone and Telegraph Company, Pacific Gas and Electric Company and Scotts Valley County Water District prior to submittal to the City for review.~~

~~20.~~17. Demolished A.C. pavement shall not be used in fill material unless ground to a maximum size of 3/4" diameter and shall be mixed with other fill material to the satisfaction of the engineer.

~~21.~~18. Whenever lane closures or any form of traffic diversions are in place, a 6-foot wide lane for pedestrian and bicycle traffic must be provided. During times of heavy pedestrian traffic (i.e. school children, etc.) the use of a flag person for public safety is necessary. A traffic control plan shall be submitted for review if required by the Public Works Director/City Engineer.

~~22.~~19. All types of work activity shall be diligently and continuously pursued to final condition. Work suspension while there are rough or open trenches, unfinished tie-in paving, temporary guardrails, and other intermediate conditions shall not be allowed for any reason.

~~23.~~20. Work hours shall be limited to 8:00 AM to 5:00 PM, Monday through Friday, 9:00 AM to 5:00 PM Saturday. Saturday work shall require approval by the Public Works Director/City Engineer. No work shall be permitted on Sunday.

ADDITIONAL NOTES FOR SEWER CONSTRUCTION PLANS

1. All pipe shall be PVC SDR-35 ~~vitrified clay~~ or approved equal as approved by the City Engineer.
2. Laterals are to be constructed with top of pipe three feet below top of curb grade unless otherwise noted.
- ~~2.3. The minimum pipe size for sanitary sewer is 6" in diameter.~~
- ~~3.4. Wyees must be constructed with 1 pipe length of station shown on the plans and all laterals laid 90 degrees to main except in cul-de-sacs where laterals shall be laid either at 90 degrees or 45 degrees to the main line.~~
- ~~4.5. The "as-built" drawings shall include the location of all laterals as constructed.~~
- ~~5.6. Contractor shall secure approval from the City Inspector before backfilling over pipe.~~
7. Trench compaction shall be in accordance with City of Scotts Valley provisions for trench compaction. The contractor shall employ a certified soils firm to take soils tests at locations directed by the City. Soils tests shall be submitted to the City.
8. Each new sanitary sewer lateral not immediately connected to a dwelling unit shall be marked with a 2"x4"x5' redwood stake marker, to 12" above finish grade, at the end of each new lateral stub-out. An "S" shall be painted on the marker and the end of each lateral shall be properly capped. All laterals installed in new development shall also be marked by stamping an "S" on the curb face at sewer lateral location.
- ~~6. An "S" shall be stamped on the curb fact at sewer lateral location.~~
- ~~7. Vitrified clay pipe must be speed sealed.~~
9. All sewer pipe shall be air pressure tested at 5 pounds pressure for 15 minutes, mandrelled, televised and one ~~standard VHS~~ electronic format copy delivered to the City of Scotts Valley. ~~A computer generated report and floppy disk must be delivered to the City compatible with RJN LineFix software.~~

10. For proposed construction to existing sanitary sewer laterals, the applicant shall inspect and record existing laterals and submit a video recording to the Public Works Department for review and approval.
11. Insulated copper wire (No. 10) shall be placed along the top of all gravity and force mains. The wire shall run between manholes, cleanouts, or other appropriate facilities, brought to the surface and bolted or otherwise securely affixed to the manhole or cleanout cover or other appropriate metal structure.
12. Backflow prevention devices shall be installed on all lateral where finished floor elevation is less than one foot above the rim elevation of the nearest upstream manhole or cleanout. The valves shall be located in such a way as to prevent any damage to adjacent property as a result of sewage released from the device (Figure SS-05).
- 8.13. Sanitary manhole covers shall have enclosed pickholes. Sanitary sewer manholes, subject to surface or Stormwater, shall have water-tight lids.

ADDITIONAL GENERAL NOTES FOR UTILITY PLANS

1. The top of water mains in public rights-of-way shall be constructed at a minimum depth of 36 inches below finish street surface.
2. A copper wire, #10 AWG, is to be laid on top of the public water mains when constructed of plastic pipe. Wire is to be connected to the gate valves and wrapped around the main at 10 feet + intervals to source.
3. All water mains shall be as approved by the Scotts Valley Water District.
4. A valve box and cover shall be installed at each gate valve. Valve boxes and accessories shall be installed as approved by the Scotts Valley Water District.
5. Pressure testing and chlorination shall be performed in accordance with Scotts Valley Water District specifications and standards.
6. Gas lines to be constructed by Pacific Gas and Electric Company.
7. Fire hydrant assemblies shall be installed per Scotts Valley Water District standards and specifications
8. All water meters shall be set ~~back of sidewalk~~behind the curb, or in areas protected from vehicular or pedestrian traffic, as approved by the Public Works Director/City Engineer.
9. It shall be the responsibility of the contractor to locate and identify all underground lines and substructures of every nature and protect them from damage.
10. A “W” shall be stamped on the curb face at water lateral location where water meter boxes are not installed immediately behind the curb.
11. All hot-taps shall be performed by contractor after a minimum 48-hour notice to Scotts Valley Water District, and under the direction of the Scotts Valley Water District.

PART 2. STREET DESIGN

Section A: Street Widths

1. ~~Minimum right-of-way shall be 50 feet in residential areas and 70 feet in commercial areas. Recommended standard and minimum rights-of-way and elements of geometric cross section shall be as shown in Figures ST-01.~~
2. Existing city streets within the improvement shall be improved to the geometric, right-of-way and structural standards of this design criteria. In the event an existing city street is on the boundary of a proposed improvement, the half of the road adjacent to the improvement shall be improved to the standards of this design criteria.
3. A 6-foot wide P.U.E. shall be dedicated on both sides of the right-of-way in all instances.

Section B: Street Alignment and Grades

1. General requirements shall be no less than the minimum set forth in Figure ST-2.
2. Vertical curves are required for all grade breaks of 1 percent or more.
3. The gradient of the street entering an intersection shall not be more than 3 percent within a distance of 20 feet from the curb lines of the intersected street.
4. Streets shall be super elevated only if required by the Public Works Director/City Engineer.
5. Minimum curb return radii shall be 32 feet, measured at face of curb, for industrial, collector and four-lane street; and 24 feet for residential streets.
6. Minimum cul-de-sac radii shall be 32 feet measured at face of curb.
7. Temporary paved turnarounds of 32-foot minimum radius and a standard barricade shall be provided at ends of dead-end streets longer than 150 feet.
8. Dead-end streets shall not exceed 500 feet in length unless an emergency exit road, acceptable to the Fire Marshal and the Public Works Director/City Engineer.

9. Streets and highways shall intersect one another at angles as near to a right angle as is practical, and no intersections shall be at angles of less than 30 degrees from the perpendicular.
10. Streets intersecting at an angle other than 90 degrees may require the use of setback lines, special rounding of corners, or other device to assure desirable results as to traffic movement, visibility and safety, as required by the Public Works Director/City Engineer.
11. If the center lines of two streets intercepting the same street from opposite directions are offset from each other, said offset shall be a minimum distance of 250 feet measured along the center line of the street intercepted.
12. No item shall exceed 6 inches height above the top of curb within 18 inches from the face of curb.
13. Driveway grades shall not exceed 3 percent behind the standard driveway ramp and within public right-of-way.
14. Minimum grade for drainage on all streets shall be 0.6 percent.

Section C: Structural Section

1. The total structural section shall be designed by R-value (Test Method California 301).
2. Traffic index values for new roads shall be based on the type of road and number of lots served in ultimate developments. These values are given in Figure ST-3.
3. Traffic index value for existing city roads to be improved shall be determined by the Public Works Director/City Engineer.
4. Figure ST-3 gives the minimum structural section requirements.
5. Except for minor private roads and driveways, Mminimum required surface course shall be 32 inches Type B asphalt concrete, ½ inch maximum, medium aggregate gradation. A prime coat shall be applied before paving.

6. Except for minor private roads and driveways, Minimum required base course shall be Class 2 aggregate base, 96 inches thick, for all non-engineered road sections.

7. With the approval of the Public Works Director/City Engineer, the minimum structural section for minor private roads and driveways shall be 2" asphalt concrete Type B on 6" of Class 2 aggregate base.

5.8. The number and location of soils tests shall be subject to the approval of the Public Works Director/City Engineer, the minimum being one test for each 1500 linear feet of proposed streets. The R-value used for design purpose shall be the lowest test results, unless sufficient tests and soils investigations are made to determine the limit of the various soil types tested.

6.9. In addition to R-value tests to determine the structural section, further soils tests may be required by the Public Works Director/City Engineer to determine erosion control, stability or subdrainage requirements.

7.10. All soils tests shall be performed by a registered civil engineer experienced and knowledgeable in the application of the principles of soil mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection and testing of the construction thereof.

11. Relative compaction shall conform to the latest Caltrans specification. As a minimum standard the top 6 in" of subgrade and the aggregate base material shall be compacted to a minimum 95% relative compaction.

8. ~~The Class 2 aggregate base shall have a relative compaction of 95% at optimum moisture content for its total depth prior to placement of oil coat and/or asphalt concrete. The subgrade shall have a minimum relative compaction of 95% for a depth of 2 feet and 90% for any depth below 2 feet up to 5 feet total depth.~~

9.12. All base courses, vertical surfaces of existing pavements, curbs, gutters, and construction joints in the surfacing against which additional material is to be placed, and pavement to be surfaced shall be prime coated with MC 70 or coated with paint binder SS1, 50% cut with water, at a rate of 0.25 gallons per square yard, all in accordance with the latest edition of Caltrans Standard Specifications.

10.13. All work within the public right-of-way shall have tests performed at applicant's sole expense to determine relative compaction. Relative compaction shall be a minimum of 95% and test results submitted to the Public Works Department prior

to acceptance. Testing shall be performed by a firm regularly engaged in the inspection and testing of compaction and as approved by the City Engineer.

Section D: Grading

1. ~~Excavation and embankment slopes shall not be steeper than 2 feet horizontal to 1 foot vertical, unless soils tests have been obtained to justify steeper slopes or adequate slope protection measures are provided. All fill areas shall be compacted to 95% relative compaction for the top 5 feet inside the roadway limits. All other fill areas shall be compacted to 95% relative compaction. All fill areas shall be stripped of vegetation prior to filling.~~ City of Scotts Valley grading requirements as set forth in Chapter 15.06 of the City Municipal Code shall regulate all excavation, grading and filling of land within the City.

Section E: Planting

1. All cut or fill slopes shall be seeded and/or planted.

Section F: Curb and Gutter

1. Concrete curbs and gutters shall be required for all subdivisions with lots of less than 1 acre. ~~Curb ramps shall meet current ADA requirements and wheelchair ramps~~ shall be provided on Type A curb (vertical face) at all returns. Asphalt curbs shall be required on any project which does not require concrete curbs.

PART 3. STORM DRAINAGE

SECTION A: ITEMS REQUIRED TO BE SUBMITTED WITH IMPROVEMENT PLANS

It is the general purpose of these standards that waters generated by storms, springs or other sources be contained and treated on the area to be developed or carried through a system of waterways and conduits designed in such a manner that adjacent improvements, existing or planned, will be free from flood hazard and will not receive a greater volume and intensity of storm water runoff than pre existing conditions. Flood hazard is defined as potential damage by water having sufficient depth or velocity to damage improvements or to deposit or scour soil.

The diversion of natural drainage will be allowed only within the limits of a proposed improvement. All natural drainage must leave the improved area at its original horizontal and vertical alignment unless a special agreement, approved by the City Engineer, has been executed with adjoining property owners.

All proposed storm drainage facilities shall include provisions for future upstream development and no development shall discharge at a rate which exceeds the capacity of any portion of the existing downstream system. Calculations for storm drainage design within a development as well as calculations for runoff generated by upstream areas within the contributing watershed shall be submitted to the City Engineer for approval. These calculations are to be based upon the ultimate watershed development and shall include:

1. Topographic maps showing the boundaries of the drainage area used for design.
2. Map of the proposed development indicating:
 - All applicable existing and proposed improvements.
 - Runoff coefficients for all areas where runoff was calculated.
 - Time of concentration and intensity of rainfall at each hydraulic structure. The magnitude and direction (indicated by arrows) of flow in each pipe and flow to each structure contributed by its tributary area. All flow rates shall be in cubic feet per second (cfs).
 - Elevation of pipe inverts at structures and the top of structure elevation at each structure.
 - Slopes of all stormwater conveyance structures and conduits

3. Tabulation sheet which includes all of the above information and summarizes the design in a clear, concise, professional format.

3. ~~Design computations for:~~
 - a. ~~Hydrology (design flows)~~
 - b. ~~Hydraulic (channel, structure and pipe sizings)~~
 - c. ~~Hydraulic gradients (for proposed structures or systems)~~

SECTION B: DESIGN REFERENCES

1. The design of storm drainage facilities shall conform to standard accepted engineering practice listed below:
 - a. ASCE Manual of Engineering Practice No. 37 Design and Construction of Sanitary and Storm Sewers.
 - b. "Urban Runoff Quality Management;" WEF and ASCE (ASCE Manual and Report on Engineering Practice No. 87), 1998
 - c. "Design and Construction of Urban Stormwater Management Systems;" Water Environmental Federation and ASCE (ASCE Manual and Report on Engineering Practice No. 77), 1992
 - d. Central Coast Regional Water Quality Control Board Post Construction Stormwater Management Requirements for Development Projects in the Central Coast adopted by Resolution R3-2013-0032.
 - e. "Stormwater Best Management Practice Handbook," 2 Vols.: Construction, New Development & Redevelopment; California Stormwater Quality Association.
2. Requirements set forth in this design criteria shall prevail over those set forth in the above of any other publications.

SECTION C: HYDROLOGY - MINIMUM DESIGN REQUIREMENTS

1. Minimum return periods. (Design storm)
 - a. Single family dwelling (off stream) 10 year
 - b. Multi-family and commercial (off stream) 25 year
 - a. ~~Off stream facilities and structures 10 year~~
 - b.c. In-stream facilities and structures 100 year

2. Storm water run-off shall be calculated by the Rational Method ($Q=C*I*A*Ca.$).
Other methods may be used with the approval from the Public Works Director/City Engineer.
3. Run-off coefficients to be used are given in Table 3-1 and shall be based on the probable future land use. Future land use shall be determined by the Planning Director.

Table 3-1

<u>Type of Area</u>	<u>Run-Off Coefficients</u>
Rural, park, forested, agricultural.....	.20 - .30
Low residential (single family dwellings).....	.40 - .50
High residential (multi-family dwellings).....	.55
Business and commercial.....	.80
Industrial.....	.70
Impervious.....	.90

4. Rainfall intensity shall be determined by using the rainfall intensity duration curve given in Figure SD-015.
 5. Minimum time of concentration used for intensity calculations shall be 10 minutes to the first inlet or culvert entrance.
 - ~~6. All new development and redevelopment projects shall meet Post Construction Run-off Requirements in compliance with the latest edition of the "City of Scotts Valley Stormwater Technical Guide."~~
 - ~~7. Implementation of Post-Construction Strategies. Every person undertaking any new development of significant redevelopment, as defined herein, that may discharge pollutants to waters of the United States or cause or contribute to pollution, shall implement low impact development (LID) strategies and/or structural treatment control BMP's as specified in the stormwater development standards or other applicable standards adopted by the City. Every such person shall also implement any additional stormwater control strategies specified in the "City of Scotts Valley's Stormwater Technical Guide."~~
- ~~Any person subject to this subsection shall be solely responsible for any costs and expenses necessary to develop and implement the LID and/or structural treatment control BMP's and shall be solely responsible for the ongoing maintenance of such features. All stormwater treatment practices shall have an enforceable operation and maintenance agreement to ensure the system functions as designed. This agreement will include any and all maintenance easements~~

~~required to access and inspect the stormwater treatment practices, and to perform routine maintenance as necessary to ensure proper functioning of the stormwater treatment practice. All applicable building permits shall have, as a requirement of the permit, an enforceable operation and maintenance agreement. In addition, a legally binding covenant specifying the parties responsible for the proper maintenance for all stormwater treatment practices shall be secured prior to issuance of occupancy.~~

~~———— The City Engineer may only exempt requirements for LID strategies or other development standards in accordance with a waiver program incorporated into in the stormwater development standards, and only in circumstances where, in the opinion of the City Engineer, it is not feasible to implement; or where implementation of such requirements would provide no benefit to water quality.~~

SECTION D: HYDRAULIC REQUIREMENTS

1. Generally, Mannings Equation shall be used to determine flows in pipes or channels. Values for Mannings Roughness Coefficient (n) shall be as shown in Table 3-2.

Table 3-2

<u>Type of Conduit or Channel</u>	<u>Roughness Coefficients</u>
Plastic (PVC, ABS & HDPE).....	.010
Concrete gutters.....	.015
Corrugated metal pipe.....	.024
Reinforced concrete pipe 12" to 21".....	.015
Reinforced concrete pipe 24" to 33".....	.013
Asbestos cement pipe.....	.011
Lined channels	
Concrete.....	.014
Air blown mortar.....	.016
Bituminous.....	.018
Sacked concrete.....	.025

2. Available head, governed by the permissible limits of upstream ponding, may be used at the culvert entrance. Entrance slope protection shall be provided to prevent scour when utilizing available head.
3. The design of drainage pipe systems shall allow for a minimum freeboard of 1.00 feet between the top of inlet grade or manhole cover and the design water surface elevation.

4. Minimum velocity at design flow shall be 2 Fps.
5. Gutter flow shall not exceed 4 ½ inches in depth.

SECTION E. STORM DRAINAGE FACILITIES

1. General

- a. Concrete valley gutters will not be permitted across collector streets.

2. Pipe Systems

- a. ~~Minimum pipe size - 15 inches~~ Minimum pipe diameter shall be 18 inches inside the City right-of-way. Smaller pipe may be used with the approval from the Public Works Director/City Engineer
- b. Maximum spacing of access openings - 500 feet
- c. Access openings shall be provided at all horizontal angle points and changes in grade.

3. Curves will be allowed in pipe systems only when pipe diameter is 36 inches or larger.

4. Culverts

- a. Minimum pipe size - ~~36~~18 inches for road culverts
- b. Minimum pipe size - ~~18~~15 inches for driveway culverts

5. Energy dissipaters and/or adequate slope protection shall be required for outlets which discharge at velocities greater than 10 feet per second, or when required by the City Public Works Department.

~~6. Ditches shall be lined if velocities exceed those given in Table 3-3.~~

~~Table 3-3~~

<u>Type of Material in Excavation Section</u>	<u>Roughness Coefficients</u>
Fine sand (noncolloidal).....	2.5
Sandy loam (noncolloidal).....	2.5

Silt loam (noncolloidal).....	3.0
Fine loam.....	3.5
Volcanic ash.....	4.0
Fine gravel.....	5.0
Stiff clay (colloidal).....	6.0
Graded material (noncolloidal)	
Loam to gravel.....	6.5
Silt to gravel.....	7.0
Gravel.....	7.5
Coarse gravel.....	8.0
Gravel to cobbles (under 6 inches).....	9.0
Gravel and cobbles (over 8 inches).....	10.0

SECTION F: RIGHT-OF-WAY AND EASEMENT DEDICATIONS

1. The minimum width of right-of-way or easement to be dedicated for watercourses shall be:
 - a. Conduits up to 24 inches diameter 10 feet
 - b. Conduits over 24 inches diameter O.D. + 8 feet
 - c. Earth channels Top width + 18 feet
 - d. Lined channels Top width + 12 feet

III-1. STORMWATER QUALITY

A. The City has a Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit with the California Regional Water Quality Control Board. As part of that permit, the City must ensure that all new development must incorporate stormwater quality measures both during construction and post-construction. All erosion control and stormwater quality measures must be designed in accordance with the most recent NPDES permit.

B. Erosion Control/SWPPP

1. An Erosion Control Plan shall be included with the improvement plans. All projects shall include erosion control measures during construction. Typical erosion control measures shall include but not be limited to:

a) Stabilized construction site access

- b) Perimeter protection, such as with fiber rolls or straw wattles
- c) Protection of drain inlets
- d) Protection of slopes

2. A Stormwater Pollution & Prevention Plan (SWPPP) shall be prepared for all projects that meet a minimum threshold in project size. The main elements of a SWPPP shall include the above measures found within the Erosion Control Plan, including the following:

- a) Concrete washout areas
- b) Material storage areas
- c) Waste disposal areas

The SWPPP shall also include the following information:

- a) WDID Number associated with the Notice of Intent filed with the
- b) State Water Resources Control Board
- c) Site and Vicinity Map
- d) Site Description and Construction Activities
- e) Construction Site Pollutants and Control Practices
- f) Erosion and Sediment Control Practices
- g) Construction Monitoring Program and Reporting

The SWPPP shall be kept onsite and made available for review at all times.

III-2. POST-DEVELOPMENT STORMWATER QUALITY

- A. All new development and redevelopment projects shall be designed to treat post-development stormwater to the maximum extent practicable, in accordance with the City's most recent NPDES permit and the latest edition of the "City of Scotts Valley Stormwater Technical Guide."
- B. All stormwater treatment practices shall have an enforceable operation and maintenance agreement to ensure the system functions as designed. This agreement will include any and all maintenance easements required to access and inspect the stormwater treatment practices, and to perform routine maintenance as necessary to ensure proper functioning of the stormwater treatment practice. All

applicable building permits shall have, as a requirement of the permit, an enforceable operation and maintenance agreement. In addition, a legally binding covenant specifying the parties responsible for the proper maintenance of all stormwater treatment practices shall be secured prior to issuance of occupancy.

SECTION IV

SANITARY SEWER

IV-1. LINE SIZE AND SERVICE POLICY

- A. The line size and service policy requires that the minimum size of any new public sewer shall be 6 inches in diameter.
- B. All side sewers (laterals) 8 inches and larger shall be connected by or at a manhole.
- C. The minimum lateral size is 4 inches where grade requirements can be met and the lateral's intended use is to serve single family residences. Six inch or larger laterals shall be installed where intended use is industrial, commercial or greater than single family residential flows. Joint use of laterals will not be permitted except in multi-family residential uses or commercial developments if approved by the City Engineer.
- D. Laterals connecting houses having a finished floor elevation 12 inches or less above the highest elevation of the nearest upstream structure shall require installation of an approved backflow prevention device next to and immediately upstream of the cleanout.

IV-2. SEPARATION OF SEWER AND WATER LINES

- A. Sanitary sewer design shall comply with the standards for the separation of water mains and sanitary sewers as stipulated by the California Department of Public Health and outlined in Section 64572, Title 22, of the California Administrative Code and in accordance with Scotts Valley Water District specifications and standards.. Where the horizontal separation between sewer and water lines is less than 10 feet or where a sewer crosses over the top of a water line, special requirements shall apply for the type of pipe used and the location of joints.

IV-3. RIGHT OF WAY POLICY

- A. The right of way policy requires that all public sewers be in easements or rights of

way granted or dedicated for sewers and/or public use. In the case of public right-of-way for streets, further dedication is not necessary.

B. Easements for sanitary sewers shall meet both of the following width criteria:

1. Minimum width of any easement shall be 10 feet.
2. All easements shall have a minimum width in feet equal to the required trench width according to the standard detail for trench backfill plus 2 additional feet of width for every foot of depth of the pipe as measured from the bottom of the pipe to finished grade. All sewer pipes shall be centered within their easements.
3. Public sewer lines shall not be located between residential lots, unless otherwise approved by the City Engineer.

IV-4. PIPE COVER AND CLEARANCES

- A. Minimum pipe cover and clearance shall be maintained in the design of sanitary sewers. If certain conditions exist which make it impractical to meet the minimum cover and clearance requirements, the conditions and locations shall be specifically noted above the sewer profile on the plans. Each location not meeting the minimum cover and clearance requirements will require special approval. Any planned condition being specially approved with less than minimum cover will require special pipe, bedding and/or backfill as directed by the City Engineer. Other utilities shall not, under any circumstances, be installed directly over and parallel to any sanitary sewer line installation.
- B. Main and trunk sewers shall have a minimum depth of 6 feet as measured from the top of the pipe to the finished grade.
- C. Laterals shall have a minimum cover of 5 feet from the top of the pipe to the top of curb at the face of curb.
- D. Pipe shall be laid with a minimum of 12 inches vertical clearance from water lines and 6 inches clearance from all other improvements and utilities, unless otherwise approved by the City Engineer.

IV-5. LATERAL SEWERS

- A. Laterals are segment of pipe, appurtenances and fixtures that connect the building sewer to the sewer main. The entire lateral, from the building connection to and including the wye connection or other-tie-in to the sewer main, shall fall within the owner's responsibility for installation, maintenance and repair. In all cases, City maintained sewer lines will lie in a street right-of-way or dedicated public easement. In all new subdivision work, the house lateral line including cleanout from the sewer main to the property line shall be installed at the time the sewer main is constructed. Whenever a sanitary sewer is installed which will serve existing houses or other buildings, a lateral line shall be constructed for each existing individual house or building. Each lateral line shall be referenced to the improvement plan stationing. Each individual single-family residential building shall be serviced by a separate lateral to the sewer main.

IV-6. APPURTENANCES

- A. Manholes - Normal maximum spacing for manholes shall be 350 feet. Where the location of two manholes is determined by intersecting lines, the distances between intervening manholes shall be approximately equal. Sewers on curved alignment with a radius of less than 400 feet shall have manholes spaced at a maximum of 300 feet on the BC or EC of the curve or adjusted to fit the individual case.
- B. Manholes shall be used at the termination of all sewer mains including cul-de-sacs and those lines which may be extended in the future. Laterals may be connected to this manhole for services to adjacent properties within the cul-de-sac.
- C. Paved vehicular access shall be provided to all sewer manholes.

IV-7. UNUSUAL DESIGN

- A. Special design of sewer lift stations, force mains or other unusual features or structures require individual study and approval by the City Engineer.

**STANDARD DETAILS
AND
SPECIFICATIONS**



**DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION
DECEMBER 2017**

**CITY OF SCOTTS VALLEY
DEPARTMENT OF PUBLIC WORKS
STANDARD DETAILS AND SPECIFICATIONS
FOR PUBLIC WORKS CONSTRUCTION
AND COMMUNITY DEVELOPMENT**

**Adopted May 17, 1989 by Resolution No. 1183,
Revised December 6, 2017 by Resolution No. 1183.3
of the City Council of the City of Scotts Valley**

**Randy Johnson, Mayor
Jim Reed, Vice Mayor
Stephany Aguilar, Council Member
Jack Dilles, Council Member
Donna Lind, Council Member
Scott Hamby, Director of Public Works
Jessica Kahn, Civil Engineer
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CITY OF SCOTTS VALLEY STANDARD DETAILS AND SPECIFICATIONS

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STANDARD DETAILS AND SPECIFICATIONS CITY OF SCOTTS VALLEY

SECTION I

GENERAL REQUIREMENTS

I-1. PURPOSE

The purpose of these Standard Details and Specifications (Standards) is to provide certain minimum standards for the design, construction, repair and alteration for streets, storm drains, sanitary sewers, and all appurtenances thereto within the City of Scotts Valley. Any items which are not included in these Standards shall be designed in accordance with the State Highway Design Manual, State Traffic Manual, Subdivision Ordinance or Zoning Ordinance, the General Plan, Master Plans, and any applicable Specific Plan of the City of Scotts Valley, generally accepted engineering practice, or as directed by the Public Works Director/City Engineer.

I-2. IMPROVEMENT PLAN PREPARATION

General formatting, copying, and submittal processes shall include:

- A. Plans shall be drawn on vellum or high-quality bond plan sheets or plan and profile sheets, 36 inches horizontal by 24 inches vertical.
- B. Each sheet shall include:
 - 1. The project title appearing in the title block along with the street address for private development projects.
 - 2. Sealed and signed by a Professional Civil Engineer or Surveyor, as appropriate for the project, licensed in the State of California.
 - 3. Scale, north arrow, datum, legend, date, and general notes.
 - 4. Description, location and elevation of all bench mark data available on the project site or adjacent to site.
 - 5. Improvements to be constructed shall be shown with solid lines.
 - 6. Future improvements shall be shown and labeled with dotted lines.
 - 7. Existing improvements shall be shown with screened lines.
- C. Engineering design drawings shall be submitted in accordance with this standard system:
 - 1. Cover Sheet including the following:
 - a) An overall drawing of the proposed construction area including street names and lot numbers.
 - b) Vicinity map showing the proximity of the project to major roadways or

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- cities. Project shall be outlined on map.
 - c) Name of Developer.
 - d) Name of Engineer.
 - e) General notes.
 - f) Benchmark and Basis of Bearings.
 - g) Signature blocks of all involved agencies.
 - h) Index of plan sheets.
- 2. Detail Sheet showing all design details and specifications for construction.
 - 3. Separate Sheet for storm drainage, water, sewer, grading, demolition, horizontal control, utility, and street design. Scale shall be 1" = 20' for design sheets.
- D. Storm Drainage/Sanitary Sewer/Water Quality Treatment/Detention Plan and Profile
- 1. Label all cleanouts, manholes, and catch basins in sequential number indicating size, location, and type on the Plans. In profiles, label rim and invert elevations as well as catch basin or manhole size and type.
 - 2. Include flow direction arrows on all storm drain pipes.
 - 3. Label pipe size, length, material and slope in plan or profile.
 - 4. Include horizontal and vertical datum and benchmark information on each plan and/or profile sheet.
 - 5. Show spot elevations of pavement in parking lots, and runoff flow direction arrows.
 - 6. Show all stub-out locations for future connections.
 - 7. Show location of outfalls and include section details for outfalls in grading or street improvement plans.
 - 8. Show and label the following for all stormwater facilities:
 - a) At least two cross-sections through detention pond. One cross-section shall show the control structure.
 - b) Location and detail of emergency overflows and spillways
 - c) Invert elevations of all pipes, inlets, tanks, vaults and spot elevations of the pond bottom. Call out pond volume and dimensions, and design surface elevation.
 - d) Plan and section views and details of all rock protection and energy dissipaters.
 - e) Section and plan view on restrictor/control structure; detailed, including size and elevation of orifices.
 - f) Show length, width, and bottom width dimensions for all bio-filtration and water quality swales and stormwater conveyance swales. Include sectional view, showing side slopes and design depth of flow.
 - g) Include seeding material information for erosion control.

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- E. Engineering design calculations shall be submitted for review where applicable:
1. Water and sewer pipe sizing.
 2. Hydrologic and hydraulic analysis and report.
 3. Geotechnical and Geologic report.
 4. Design of roadway section.
 5. Traffic Impact Study.
 6. Structural, foundation, and stability calculations for retaining walls, bridges, embankments, etc.
- F. Erosion control plans for construction shall be submitted for review:
1. Temporary erosion and sedimentation control plan, showing the control measures intended to minimize the effects of erosion due to construction operations shall be submitted with the plans.
 2. Traffic control plan.
 3. Timing schedules and sequence of development clearing, including stripping, rough grading, construction, final grading, and vegetative stabilization.
- G. Before final acceptance, the Applicant shall provide the City with certified as-builts vellum stamped by a registered civil engineer licensed in the State of California within 30 days of the final inspection.
- All final as-built drawings shall also be submitted as Autocad release 2016 LT or later version. The submittal shall be electronic or on a CD.
- The as-built drawings shall include final plat information including right of ways and easements. The as-built drawings shall certify that the facility has been constructed as shown on the as-built plans and meets approved plans and specifications. They shall include but not be limited to the information as outlined in the individual Sections of these Standards.
- H. All work shall be performed in accordance with the current edition of Standard Specifications and Plans prepared by the State of California Department of Transportation and the American Public Works and the City of Scotts Valley Standard Details.

I-3. IMPROVEMENT PLAN PROCESSING

- A. Initial submittal of 2 sets of improvement plans for checking shall be made to the Public Works Director/City Engineer. The applicant shall submit with the improvement plans a

CITY OF SCOTTS VALLEY
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signed copy of the conditions of approval for the project from the Planning Department and the approved tentative map or other exhibits relevant to the development approval. All reports and letters of compliance from third parties required by the conditions of approval shall also be submitted with the improvement plans.

- B. Upon completion of the checking process, the original drawings shall be submitted for approval signatures. The original plan submittal shall be accompanied by an engineer's estimate to be used to establish bond requirements. After the Public Works Director/City Engineer has approved the plans, the original plans will be returned to the engineer who prepared the plans.
- C. Prior to issuing occupancy, the applicant shall have the Professional Engineer of record submit a letter stating that the improvements have been constructed per plan. As-built plan(s) shall be submitted along with the letter for any changes made during construction.

I-4. EROSION CONTROL

- A. Between October 15 and April 15, exposed soil shall be protected from erosion at all times. During construction such protection may consist of mulching and/or planting of native vegetation of adequate density. Before completion of any project, the exposed soil on disturbed slopes shall be permanently protected from erosion.

I-5. GENERAL NOTES

GENERAL NOTES FOR STREET IMPROVEMENT PLANS

1. All work shall be done in accordance with the City of Scotts Valley's Standard Details, Caltrans Standard Specifications, and Standard Specifications for Public Works construction, current edition with supplements (APWA).
2. All existing pavement to be removed shall be removed to clean, straight lines.
3. Existing pavement shall be coated with asphaltic emulsion at all locations where new pavement joins existing pavement.
4. All existing P.C.C. shall be saw cut prior to removal.
5. The contractor shall maintain dust control at all times by watering or other methods approved by the Public Works Director/City Engineer.
6. The contractor is responsible for the protection and adjustment of all gas valves, water valve boxes and covers, drains, clean-outs, etc.
7. An approved soil sterilizer shall be used on all natural-ground subgrades when placing A.C. pavement directly on subgrade.
8. No work shall be undertaken without obtaining an encroachment permit from the City of Scotts Valley Public Works Department.
9. Paving contractor shall reset manhole rings 1/8-inch below grade after placement of A.C. pavement.
10. Contractor shall satisfy himself that quantities shown are correct before bidding on any item.
11. All A.C. pavement over 3-inches thick shall be placed in two lifts. Asphalt shall be Type A ½" maximum, medium gradation. A prime coat shall be applied prior to paving.
12. All areas which are to receive A.C. overlay shall be edge-ground for a smooth conform prior to the placement of the overlay.
13. All temporary patches shall be of the "hot mix" variety. "Cold mix" shall not be allowed under any circumstances.

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14. All trees within pavement area shall be removed, including root system. Backfill of the hole after removal shall be accomplished in accordance with the City of Scotts Valley provisions for trench compaction. A soils report shall be required with respect to compaction of these holes.
15. Contractor shall furnish the Public Works Director/City Engineer with accurate "as-built" drawings. Bonds will not be released by the City until after satisfactory submittal of "as-built" drawings has been made.
16. No item shall exceed 6 inches height above the top of curb within 18 inches from the face of curb.
17. Demolished A.C. pavement shall not be used in fill material unless ground to a maximum size of 3/4" diameter and shall be mixed with other fill material to the satisfaction of the engineer.
18. Whenever lane closures or any form of traffic diversions are in place, a 6-foot wide lane for pedestrian and bicycle traffic must be provided. During times of heavy pedestrian traffic (i.e. school children, etc.) the use of a flag person for public safety is necessary. A traffic control plan shall be submitted for review if required by the Public Works Director/City Engineer.
19. All types of work activity shall be diligently and continuously pursued to final condition. Work suspension while there are rough or open trenches, unfinished tie-in paving, temporary guardrails, and other intermediate conditions shall not be allowed for any reason.
20. Work hours shall be limited to 8:00 AM to 5:00 PM, Monday through Friday, 9:00 AM to 5:00 PM Saturday. Saturday work shall require approval by the Public Works Director/City Engineer. No work shall be permitted on Sunday.

ADDITIONAL NOTES FOR SEWER CONSTRUCTION PLANS

1. All pipe shall be PVC SDR-35 or approved equal as approved by the Public Works Director/City Engineer.
2. Laterals are to be constructed with top of pipe three feet below top of curb grade unless otherwise noted.
3. The minimum pipe size for sanitary sewer is 6" in diameter.
4. Wyes must be constructed with 1 pipe length of station shown on the plans and all laterals laid 90 degrees to main except in cul-de-sacs where laterals shall be laid either at 90 degrees or 45 degrees to the main line.
5. The "as-built" drawings shall include the location of all laterals as constructed.
6. Contractor shall secure approval from the City Inspector before backfilling over pipe.
7. Trench compaction shall be in accordance with City of Scott's Valley provisions for trench compaction. The contractor shall employ a certified soils firm to take soils tests at locations directed by the City. Soils tests shall be submitted to the City.
8. Each new sanitary sewer lateral not immediately connected to a dwelling unit shall be marked with a 2"x4"x5' redwood stake marker, to 12" above finish grade, at the end of each new lateral stub-out. An "S" shall be painted on the marker and the end of each lateral shall be properly capped. All laterals installed in new development shall also be marked by stamping an "S" on the curb face at sewer lateral location.
9. All sewer pipe shall be air pressure tested at 5 pounds pressure for 15 minutes, mandrelled, televised and one electronic format copy delivered to the City of Scott's Valley.
10. For proposed construction to existing sanitary sewer laterals, the applicant shall inspect and record existing laterals and submit a video recording to the Public Works Department for review and approval.
11. Insulated copper wire (No. 10) shall be placed along the top of all gravity and force mains. The wire shall run between manholes, cleanouts, or other appropriate facilities, brought to the surface and bolted or otherwise securely affixed to the manhole or cleanout cover or other appropriate metal structure.

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12. Backflow prevention devices shall be installed on all lateral where finished floor elevation is less than one foot above the rim elevation of the nearest upstream manhole or cleanout. The valves shall be located in such a way as to prevent any damage to adjacent property as a result of sewage released from the device (Figure SS-05).
13. Sanitary manhole covers shall have enclosed pickholes. Sanitary sewer manholes, subject to surface or Stormwater, shall have water-tight lids.

ADDITIONAL GENERAL NOTES FOR UTILITY PLANS

1. The top of water mains in public rights-of-way shall be constructed at a minimum depth of 36 inches below finish street surface.
2. A copper wire, #10 AWG, is to be laid on top of the public water mains when constructed of plastic pipe. Wire is to be connected to the gate valves and wrapped around the main at 10 feet + intervals to source.
3. All water mains shall be as approved by the Scotts Valley Water District.
4. A valve box and cover shall be installed at each gate valve. Valve boxes and accessories shall be installed as approved by the Scotts Valley Water District.
5. Pressure testing and chlorination shall be performed in accordance with Scotts Valley Water District specifications and standards.
6. Gas lines to be constructed by Pacific Gas and Electric Company.
7. Fire hydrant assemblies shall be installed per Scotts Valley Water District standards and specifications
8. All water meters shall be set behind the curb, or in areas protected from vehicular or pedestrian traffic, as approved by the Public Works Director/City Engineer.
9. It shall be the responsibility of the contractor to locate and identify all underground lines and substructures of every nature and protect them from damage.
10. A "W" shall be stamped on the curb face at water lateral location where water meter boxes are not installed immediately behind the curb.
11. All hot-taps shall be performed by contractor after a minimum 48-hour notice to Scotts Valley Water District, and under the direction of the Scotts Valley Water District.

SECTION II
STREET DESIGN

II-1. STREET WIDTHS

- A. Recommended standard and minimum rights-of-way and elements of geometric cross section shall be as shown in Figures ST-01.
- B. Existing city streets within the improvement shall be improved to the geometric, right-of-way and structural standards of these design criteria. In the event an existing city street is on the boundary of a proposed improvement, the half of the road adjacent to the improvement shall be improved to the standards of these design criteria.
- C. A 6-foot wide P.U.E. shall be dedicated on both sides of the right-of-way in all instances.

II-2. STREET ALIGNMENT AND GRADES

- A. General requirements shall be no less than the minimum set forth in Figure ST-2.
- B. Vertical curves are required for all grade breaks of 1 percent or more.
- C. The gradient of the street entering an intersection shall not be more than 3 percent within a distance of 20 feet from the curb lines of the intersected street.
- D. Streets shall be super elevated only if required by the Public Works Director/City Engineer.
- E. Minimum curb return radii shall be 32 feet, measured at face of curb, for industrial, collector and four-lane street; and 24 feet for residential streets.
- F. Minimum cul-de-sac radii shall be 32 feet measured at face of curb.
- G. Temporary paved turnarounds of 32-foot minimum radius and a standard barricade shall be provided at ends of dead-end streets longer than 150 feet.
- H. Dead-end streets shall not exceed 500 feet in length unless an emergency exit road, acceptable to the Fire Marshal and the Public Works Director/City Engineer.
- I. Streets and highways shall intersect one another at angles as near to a right angle as is practical and no intersections shall be at angles of less than 30 degrees from the perpendicular.

CITY OF SCOTTS VALLEY
STANDARD SPECIFICATIONS AND DETAILS

- J. Streets intersecting at an angle other than 90 degrees may require the use of setback lines, special rounding of corners, or other device to assure desirable results as to traffic movement, visibility and safety, as required by the Public Works Director/City Engineer.
- K. If the center lines of two streets intercepting the same street from opposite directions are offset from each other, said offset shall be a minimum distance of 250 feet measured along the center line of the street intercepted.
- L. No item shall exceed 6 inches height above the top of curb within 18 inches from the face of curb.
- M. Driveway grades shall not exceed 3 percent behind the standard driveway ramp and within public right-of-way.
- N. Minimum grade for drainage on all streets shall be 0.6 percent.

II-3. STRUCTURAL SECTION

- A. The total structural section shall be designed by R-value (Test Method California 301).
- B. Traffic index values for new roads shall be based on the type of road and number of lots served in ultimate developments. These values are given in Figure ST-3.
- C. Traffic index value for existing city roads to be improved shall be determined by the Public Works Director/City Engineer.
- D. Figure ST-3 gives the minimum structural section requirements.
- E. Except for minor private roads and driveways, the minimum required surface course shall be 3 inches Type B asphalt concrete, ½ inch maximum, medium aggregate gradation. A prime coat shall be applied before paving.
- F. Except for minor private roads and driveways, minimum required base course shall be Class 2 aggregate base, 9 inches thick, for all non- engineered road sections.
- G. With the approval of the Public Works Director/City Engineer, the minimum structural section for minor private roads and driveways shall be 2" asphalt concrete Type B on 6" of Class 2 aggregate base.
- H. The number and location of soils tests shall be subject to the approval of the Public Works Director/City Engineer, the minimum being one test for each 1500 linear feet of proposed streets. The R-value used for design purpose shall be the lowest test results,

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unless sufficient tests and soils investigations are made to determine the limit of the various soil types tested.

- I. In addition to R-value tests to determine the structural section, further soils tests may be required by the Public Works Director/City Engineer to determine erosion control, stability or subdrainage requirements.
- J. All soils tests shall be performed by a registered civil engineer experienced and knowledgeable in the application of the principles of soil mechanics in the investigation, evaluation and design of civil works involving the use of earth materials and the inspection and testing of the construction thereof.
- K. Relative compaction shall conform to the latest Caltrans specification. As a minimum standard the top 6 in" of subgrade and the aggregate base material shall be compacted to a minimum 95% relative compaction.
- L. All base courses, vertical surfaces of existing pavements, curbs, gutters, and construction joints in the surfacing against which additional material is to be placed, and pavement to be surfaced shall be prime coated with MC 70 or coated with paint binder SS1, 50% cut with water, at a rate of 0.25 gallons per square yard, all in accordance with the latest edition of Caltrans Standard Specifications.
- M. All work within the public right-of-way shall have tests performed at applicant's sole expense to determine relative compaction. Relative compaction shall be a minimum of 95% and test results submitted to the Public Works Department prior to acceptance. Testing shall be performed by a firm regularly engaged in the inspection and testing of compaction and as approved by the Public Works Director/City Engineer.

II-4. GRADING

- A. City of Scotts Valley grading requirements as set forth in Chapter 15.06 of the City Municipal Code shall regulate all excavation, grading and filling of land within the City.

II-5. PLANTING

- A. All cut or fill slopes shall be seeded and/or planted.

II-6. CURB AND GUTTER

- A. Concrete curbs and gutters shall be required for all subdivisions with lots of less than 1 acre. Curb ramps shall meet current ADA requirements and shall be provided on Type A

CITY OF SCOTTS VALLEY
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curb (vertical face) at all returns. Asphalt curbs shall be required on any project which does not require concrete curbs.

SECTION III
STORM DRAINAGE

III-1. ITEMS REQUIRED TO BE SUBMITTED WITH IMPROVEMENT PLANS

It is the general purpose of these standards that waters generated by storms, springs or other sources be contained and treated on the area to be developed or carried through a system of waterways and conduits designed in such a manner that adjacent improvements, existing or planned, will be free from flood hazard and will not receive a greater volume and intensity of stormwater runoff than pre existing conditions. Flood hazard is defined as potential damage by water having sufficient depth or velocity to damage improvements or to deposit or scour soil.

The diversion of natural drainage will be allowed only within the limits of a proposed improvement. All natural drainage must leave the improved area at its original horizontal and vertical alignment unless a special agreement, approved by the Public Works Director/City Engineer, has been executed with adjoining property owners.

All proposed storm drainage facilities shall include provisions for future upstream development and no development shall discharge at a rate which exceeds the capacity of any portion of the existing downstream system. Calculations for storm drainage design within a development as well as calculations for runoff generated by upstream areas within the contributing watershed shall be submitted to the Public Works Director/City Engineer for approval. These calculations are to be based upon the ultimate watershed development and shall include:

- A. Topographic maps showing the boundaries of the drainage area used for design.
- B. Map of the proposed development indicating:
 - 1. All applicable existing and proposed improvements.
 - 2. Runoff coefficients for all areas where runoff was calculated.
 - 3. Time of concentration and intensity of rainfall at each hydraulic structure. The magnitude and direction (indicated by arrows) of flow in each pipe and flow to each structure contributed by its tributary area. All flow rates shall be in cubic feet per second (cfs).
 - 4. Elevation of pipe inverts at structures and the top of structure elevation at each structure.
 - 5. Slopes of all stormwater conveyance structures and conduits
- C. Tabulation sheet which includes all of the above information and summarizes the design in a clear, concise, professional format.

III-2. DESIGN REFERENCES

CITY OF SCOTTS VALLEY
STANDARD SPECIFICATIONS AND DETAILS

- A. The design of storm drainage facilities shall conform to standard accepted engineering practice. Common reference texts are:
1. ASCE Manual of Engineering Practice No. 37 Design and Construction of Sanitary and Storm Sewers.
 2. "Urban Runoff Quality Management;" WEF and ASCE (ASCE Manual and Report on Engineering Practice No. 87), 1998
 3. "Design and Construction of Urban Stormwater Management Systems;" Water Environmental Federation and ASCE (ASCE Manual and Report on Engineering Practice No. 77), 1992
 4. Central Coast Regional Water Quality Control Board Post Construction Stormwater Management Requirements for Development Projects in the Central Coast adopted by Resolution R3-2013-0032.
 5. "Stormwater Best Management Practice Handbook," 2 Vols.: Construction, New Development & Redevelopment; California Stormwater Quality Association.
- B. Requirements set forth in this design criteria shall prevail over those set forth in the above of any other publications.

III-3. HYDROLOGY REQUIREMENTS

- A. Minimum return periods (Design storm)
1. Single family dwelling (off stream) 10 year
 2. Multi-family and commercial (off stream) 25 year
 3. In-stream facilities and structures 100 year
- B. Stormwater run-off shall be calculated by the Rational Method ($Q=C*I*A*Ca$). Other methods may be used with the approval from the Public Works Director/City Engineer.
- C. Run-off coefficients to be used are given in Table 3-1 and shall be based on the probable future land use. Future land use shall be determined by the Planning Director.

Table 3-1

Type of Area	Run-Off Coefficients
Rural, park, forested, agricultural	0.20-0.30
Low residential (single family dwellings)	0.40-0.50
High residential (multi-family dwellings)	0.55
Business and commercial	0.80
Industrial	0.70
Impervious	0.90

- D. Rainfall intensity shall be determined by using the rainfall intensity duration curve given in Figure SD-01.
- E. Minimum time of concentration used for intensity calculations shall be 10 minutes to the first inlet or culvert entrance.

III-4. HYDRAULIC REQUIREMENTS

- A. Generally, Mannings Equation shall be used to determine flows in pipes or channels. Values for Mannings Roughness Coefficient (n) shall be as shown in Table 3-2.

Table 3-2

Type of Conduit or Channel	Roughness Coefficient
Plastic (PVC, ABS & HDPE)	0.010
Concrete gutters	0.015
Corrugated metal pipe	0.024
Reinforced concrete pipe 12" to 21"	0.015
Reinforced concrete pipe 24" to 33"	0.013
Asbestos cement pipe	0.011
Lined channels	---
Concrete	0.014
Air blown mortar	0.016
Bituminous	0.018
Sacked concrete	0.025

- B. Available head, governed by the permissible limits of upstream ponding, may be used at the culvert entrance. Entrance slope protection shall be provided to prevent scour when utilizing available head.
- C. The design of drainage pipe systems shall allow for a minimum freeboard of 1.00 feet between the top of inlet grade or manhole cover and the design water surface elevation.
- D. Minimum velocity at design flow shall be 2 Fps.
- E. Gutter flow shall not exceed 4 ½ inches in depth.

III-5. STORM DRAINAGE FACILITIES

- A. General
 - 1. Concrete valley gutters will not be permitted across collector streets.

CITY OF SCOTTS VALLEY
STANDARD SPECIFICATIONS AND DETAILS

B. Pipe Systems

1. Minimum pipe diameter shall be 18 inches inside the City right-of-way. Smaller pipe may be used with the approval from the Public Works Director/City Engineer
2. Maximum spacing of access openings - 500 feet
3. Access openings shall be provided at all horizontal angle points and changes in grade.

C. Curves will be allowed in pipe systems only when pipe diameter is 36 inches or larger.

D. Culverts

1. Minimum pipe size - 36 inches for road culverts
2. Minimum pipe size - 18 inches for driveway culverts

E. Energy dissipaters and/or adequate slope protection shall be required for. Energy dissipation devices shall be designed by the project Civil Engineer to withstand flow rates and velocities of the design storm events.

III-6. RIGHT-OF-WAY AND EASEMENT DEDICATIONS

A. The minimum width of right-of-way or easement to be dedicated for watercourses shall be:

- | | |
|--------------------------------------|---------------------|
| 1. Conduits up to 24 inches diameter | 10 feet |
| 2. Conduits over 24 inches diameter | O.D. + 8 feet |
| 3. Earth channels | Top width + 18 feet |
| 4. Lined channels | Top width + 12 feet |

III-7. STORMWATER QUALITY

A. The City has a Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit with the California Regional Water Quality Control Board. As part of that permit, the City must ensure that all new development must incorporate stormwater quality measures both during construction and post-construction. All erosion control and stormwater quality measures must be designed in accordance with the most recent NPDES permit.

B. Erosion Control/SWPPP

CITY OF SCOTTS VALLEY
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1. An Erosion Control Plan shall be included with the improvement plans. All projects shall include erosion control measures during construction. Typical erosion control measures shall include but not be limited to:
 - a) Stabilized construction site access
 - b) Perimeter protection, such as with fiber rolls or straw wattles
 - c) Protection of drain inlets
 - d) Protection of slopes
2. A Stormwater Pollution & Prevention Plan (SWPPP) shall be prepared for all projects that meet a minimum threshold in project size. The main elements of a SWPPP shall include the above measures found within the Erosion Control Plan, including the following:
 - a) Concrete washout areas
 - b) Material storage areas
 - c) Waste disposal areas

The SWPPP shall also include the following information:

- a) WDID Number associated with the Notice of Intent filed with the
- b) State Water Resources Control Board
- c) Site and Vicinity Map
- d) Site Description and Construction Activities
- e) Construction Site Pollutants and Control Practices
- f) Erosion and Sediment Control Practices
- g) Construction Monitoring Program and Reporting

The SWPPP shall be kept onsite and made available for review at all times.

III-8. POST-DEVELOPMENT STORMWATER QUALITY

- A. All new development and redevelopment projects shall be designed to treat post-development stormwater to the maximum extent practicable, in accordance with the City's most recent NPDES permit and the latest edition of the "City of Scotts Valley Stormwater Technical Guide."
- B. All stormwater treatment practices shall have an enforceable operation and maintenance agreement to ensure the system functions as designed. This agreement will include any and all maintenance easements required to access and inspect the stormwater treatment practices, and to perform routine maintenance as necessary to ensure proper functioning of the stormwater treatment practice. All applicable building permits shall have, as a

CITY OF SCOTTS VALLEY
STANDARD SPECIFICATIONS AND DETAILS

requirement of the permit, an enforceable operation and maintenance agreement. In addition, a legally binding covenant specifying the parties responsible for the proper maintenance of all stormwater treatment practices shall be secured prior to issuance of occupancy.

SECTION IV
SANITARY SEWER

IV-1. LINE SIZE AND SERVICE POLICY

- A. The line size and service policy requires that the minimum size of any new public sewer shall be 6 inches in diameter.
- B. All side sewers (laterals) 8 inches and larger shall be connected by or at a manhole.
- C. The minimum lateral size is 4 inches where grade requirements can be met and the lateral's intended use is to serve single family residences. Six inch or larger laterals shall be installed where intended use is industrial, commercial or greater than single family residential flows. Joint use of laterals will not be permitted except in multi-family residential uses or commercial developments if approved by the Public Works Director/City Engineer.
- D. Laterals connecting houses having a finished floor elevation 12 inches or less above the highest elevation of the nearest upstream structure shall require installation of an approved backflow prevention device next to and immediately upstream of the cleanout.

IV-2. SEPARATION OF SEWER AND WATER LINES

- A. Sanitary sewer design shall comply with the standards for the separation of water mains and sanitary sewers as stipulated by the California Department of Public Health and outlined in Section 64572, Title 22, of the California Administrative Code and in accordance with Scotts Valley Water District specifications and standards. Where the horizontal separation between sewer and water lines is less than 10 feet or where a sewer crosses over the top of a water line, special requirements shall apply for the type of pipe used and the location of joints.

IV-3. RIGHT OF WAY POLICY

- A. The right of way policy requires that all public sewers be in easements or rights of way granted or dedicated for sewers and/or public use. In the case of public right-of-way for streets, further dedication is not necessary.
- B. Easements for sanitary sewers shall meet both of the following width criteria:
 - 1. Minimum width of any easement shall be 10 feet.
 - 2. All easements shall have a minimum width in feet equal to the required trench width according to the standard detail for trench backfill plus 2 additional feet of width for every foot of depth of the pipe as measured from the bottom of the pipe to finished grade. All sewer pipes shall be centered within their easements.
 - 3. Public sewer lines shall not be located between residential lots, unless otherwise approved by the Public Works Director/City Engineer.

IV-4. PIPE COVER AND CLEARANCES

- A. Minimum pipe cover and clearance shall be maintained in the design of sanitary sewers. If certain conditions exist which make it impractical to meet the minimum cover and clearance requirements, the conditions and locations shall be specifically noted above the sewer profile on the plans. Each location not meeting the minimum cover and clearance requirements will require special approval. Any planned condition being specially approved with less than minimum cover will require special pipe, bedding and/or backfill as directed by the Public Works Director/City Engineer. Other utilities shall not, under any circumstances, be installed directly over and parallel to any sanitary sewer line installation.
- B. Main and trunk sewers shall have a minimum depth of 6 feet as measured from the top of the pipe to the finished grade.
- C. Laterals shall have a minimum cover of 5 feet from the top of the pipe to the top of curb at the face of curb.
- D. Pipe shall be laid with a minimum of 12 inches vertical clearance from water lines and 6 inches clearance from all other improvements and utilities, unless otherwise approved by the Public Works Director/City Engineer.

IV-5. LATERAL SEWERS

- A. Laterals are segment of pipe, appurtenances and fixtures that connect the building sewer to the sewer main. The entire lateral, from the building connection to and including the wye connection or other-tie-in to the sewer main, shall fall within the owner's responsibility for installation, maintenance and repair. In all cases, City maintained sewer lines will lie in a street right-of-way or dedicated public easement. In all new subdivision work, the house lateral line including cleanout from the sewer main to the property line shall be installed at the time the sewer main is constructed. Whenever a sanitary sewer is installed which will serve existing houses or other buildings, a lateral line shall be constructed for each existing individual house or building. Each lateral line shall be referenced to the improvement plan stationing. Each individual single-family residential building shall be serviced by a separate lateral to the sewer main.

IV-6. APPURTENANCES

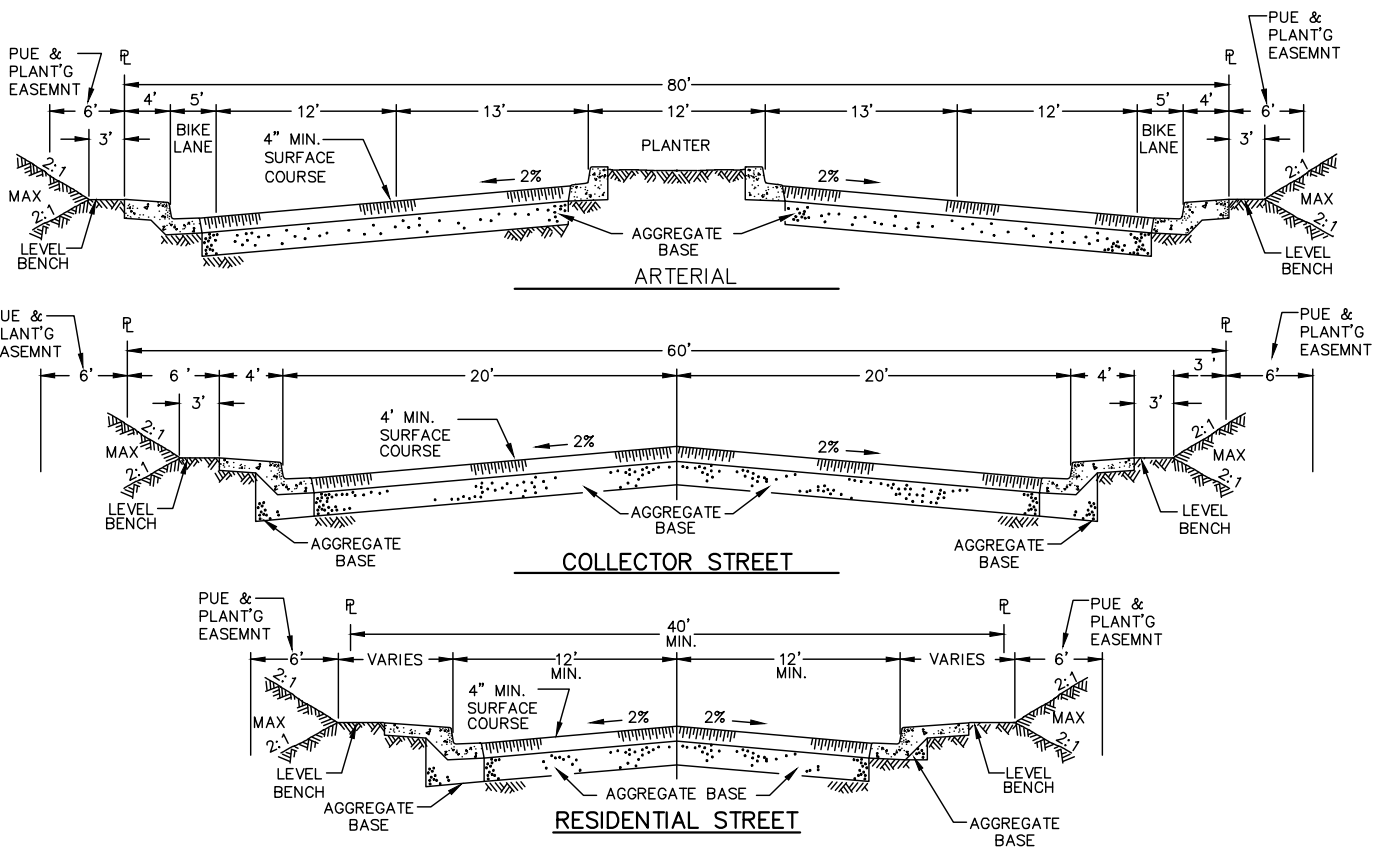
- A. Manholes - Normal maximum spacing for manholes shall be 350 feet. Where the location of two manholes is determined by intersecting lines, the distances between intervening manholes shall be approximately equal. Sewers on curved alignment with a radius of less than 400 feet shall have manholes spaced at a maximum of 300 feet on the BC or EC of the curve or adjusted to fit the individual case.
- B. Manholes shall be used at the termination of all sewer mains including cul-de-sacs and

those lines which may be extended in the future. Laterals may be connected to this manhole for services to adjacent properties within the cul-de-sac.

- C. Permanent means for safe and convenient access shall be provided to all sewer manholes.

IV-7. UNUSUAL DESIGN

Special design of sewer lift stations, force mains or other unusual features or structures require individual study and approval by the Public Works Director/City Engineer.



1. PUBLIC AND PRIVATE RESIDENTIAL STREETS MAY CONSIST OF TWO 12' LANES. AN ADDITIONAL 6' IS REQUIRED TO ALLOW PARKING ON ONE SIDE, 12' TO ALLOW FOR PARKING ON BOTH SIDES.
2. SIDEWALK SHALL BE A MINIMUM OF 4' WIDE IF REQUIRED ON A RESIDENTIAL STREET.



CITY OF SCOTTS VALLEY STANDARD DETAIL

STANDARD STREET IMPROVEMENT CROSS SECTIONS

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
ST-01
058
SCALE: NONE

DATE:
12/06/17

GENERAL STREET REQUIREMENTS

Type of Street	Minimum Radius Horizontal Curves (feet)	Minimum Sight Distance Vertical Curves (feet)	Minimum Length Vertical Curves (feet)	Maximum Grades (%)	Minimum Grades (%)
Over 500 Lots Served or Industrial	650	350	200	8	0.40
51 to 500 Lots Served	200	200	100	12	0.40
26 to 50 Lots Served	150	200	100	15	0.40
25 or Less Lots Served	75	100	50	15–20**	0.40

* SIGHT DISTANCE CONTROLS OVER MINIMUM LENGTH OF VERTICAL CURVE WHERE THERE IS A CONFLICT.

** 15% STREET SLOPE IS ALLOWED FOR UNLIMITED DISTANCE, 15 TO 17% STREET SLOPE IS ALLOWED FOR DISTANCE NOT EXCEEDING 500 FEET. 17 TO 20% STREET SLOPE IS ALLOWED FOR DISTANCE NOT EXCEEDING 200 FEET. STREET SLOPES MAY EXCEED 15% IN A SEGMENT NOT EXCEEDING 500 FEET IN LENGTH. STREET SEGMENTS ADJACENT TO THAT IN WHICH THE STREET SLOPE EXCEEDS 15% SHALL BE 15% OR LESS, AND THESE SEGMENTS SHALL BE AT LEAST THE SAME LENGTH AS THE SEGMENTS IN WHICH THE STREET SLOPE EXCEEDS 15%. IN ANY 2000 FOOT LENGTH OF STREET, THE AVERAGE STREET SLOPE OVER THE ENTIRE 2000 FOOT LENGTH SHALL NOT EXCEED 16%.



CITY OF SCOTTS VALLEY STANDARD DETAIL

GENERAL STREET REQUIREMENTS

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
ST-02

SCALE: NONE

DATE:
12/06/17

FLEXIBLE PAVEMENT SECTIONS STRUCTURAL DESIGN TABLE

The following flexible pavement sections were calculated using Test Method No. Calif. 301-F procedures (1978) in which gravel equivalent $GE=0.0032 (T.I.)(100-R) = (0.384)(T.I.)(100-R)$.

AGGREGATE BASE (AB) $R \geq 78$
AGGREGATE SUBBASE (ASB) $R \geq 50$

TRAFFIC INDEX (T.I.)	PAVEMENT MATERIALS	PAVEMENT SECTION IN INCHES											
		SUBGRADE R-VALUES											
		5			10			15			20		
4.5	AC	2.0	2.0	6.0	2.0	2.0	6.0	2.0	2.0	5.5	2.0	2.0	5.5
	AB	4.0	11.0	—	4.0	11.0	—	4.0	9.0	—	4.0	9.0	—
	ASB	7.0	—	—	7.0	—	—	6.0	—	—	5.0	—	—
5.0	AC	2.0	2.0	7.5	2.0	2.0	7.0	2.0	2.0	6.0	2.0	2.0	5.5
	AB	5.0	12.0	—	5.0	12.0	—	5.0	10.0	—	5.0	9.0	—
	ASB	8.0	—	—	7.0	—	—	6.0	—	—	6.0	—	—
5.5	AC	2.0	2.0	5.5	2.0	2.0	5.0	2.0	2.0	7.5	2.0	2.0	6.5
	AB	6.0	14.0	—	6.0	13.0	—	6.0	12.0	—	6.0	10.0	—
	ASB	9.0	—	—	8.0	—	—	7.0	—	—	6.0	—	—
6.0	AC	2.5	2.5	9.0	2.5	2.5	2.5	2.5	3.5	5.0	2.5	2.5	7.5
	AB	6.0	15.0	—	6.0	14.0	—	6.0	13.0	—	5.0	12.0	—
	ASB	10.0	—	—	9.0	—	—	8.0	—	—	6.0	—	—
6.5	AC	3.0	3.0	10.5	3.5	3.5	10.0	2.5	2.5	9.0	3.5	2.5	8.0
	AB	6.0	16.0	—	7.0	16.0	—	7.0	14.0	—	7.0	12.0	—
	ASB	11.0	—	—	10.0	—	—	8.0	—	—	7.0	—	—
7.0	AC	3.0	3.0	11.0	3.0	3.0	10.5	3.0	3.0	10.0	3.0	3.0	8.5
	AB	7.0	18.0	—	7.0	17.0	—	7.0	15.0	—	7.0	13.0	—
	ASB	12.0	—	—	11.0	—	—	9.0	—	—	8.0	—	—
7.5	AC	3.5	3.5	11.5	3.5	3.5	11.0	3.5	3.5	10.5	3.5	3.5	9.0
	AB	7.0	19.0	—	7.0	17.0	—	7.0	16.0	—	7.0	14.0	—
	ASB	13.0	—	—	11.0	—	—	10.0	—	—	9.0	—	—
8.0	AC	3.5	3.5	11.5	3.5	3.5	11.5	3.5	3.5	11.0	3.5	3.5	10.5
	AB	5.0	21.0	—	5.0	19.0	—	8.0	18.0	—	8.0	16.0	—
	ASB	14.0	—	—	12.0	—	—	11.0	—	—	9.0	—	—
8.5	AC	4.0	4.0	13.0	4.0	4.0	12.0	4.0	4.0	11.5	4.0	4.0	11.0
	AB	5.0	22.0	—	5.0	20.0	—	5.0	19.0	9.0	5.0	17.0	—
	ASB	15.0	—	—	14.0	—	—	12.0	—	—	10.0	—	—

GENERAL GUIDELINES FOR DESIGN:

RESIDENTIAL STREETS WITH LESS THAN 10 DWELLING UNITS — T.I.=5.0
RESIDENTIAL STREETS WITH 10-25 DWELLING UNITS — T.I.=5.5
RESIDENTIAL STREETS WITH 26-50 DWELLING UNITS — T.I.=6.0
RESIDENTIAL COLLECTOR — T.I.=6.5
RESIDENTIAL ARTERIAL — T.I.=7.0
COMMERCIAL — T.I.=7.5
INDUSTRIAL — T.I.=8.5
SCOTT'S VALLEY DRIVE & Mt. HERMON ROAD — T.I.=9.0



CITY OF SCOTT'S VALLEY STANDARD DETAIL

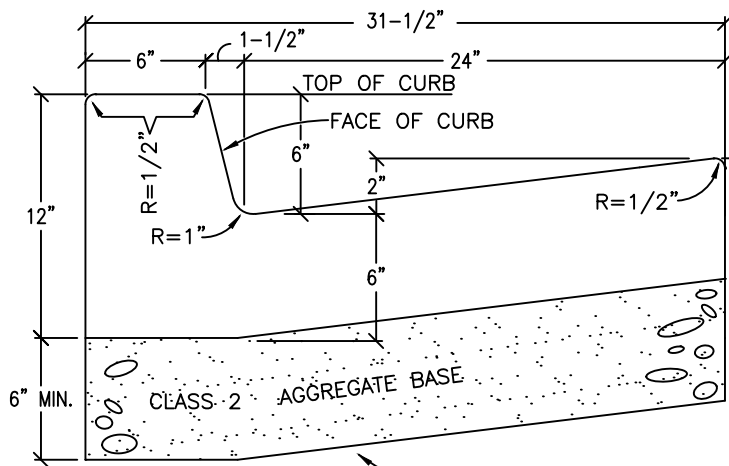
STRUCTURAL SECTION REQUIREMENTS

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

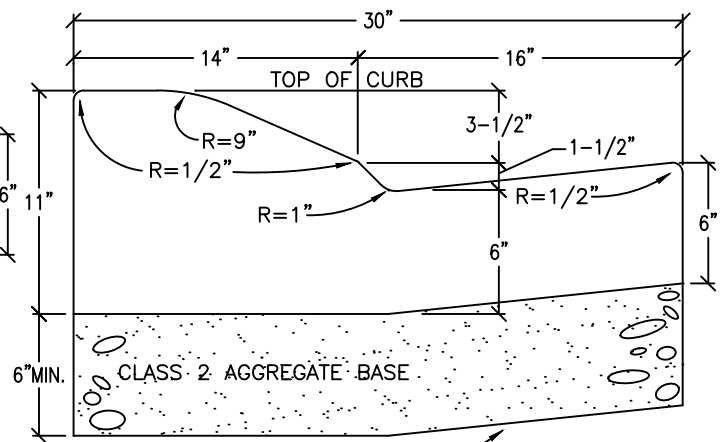
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ST-03

SCALE: NONE

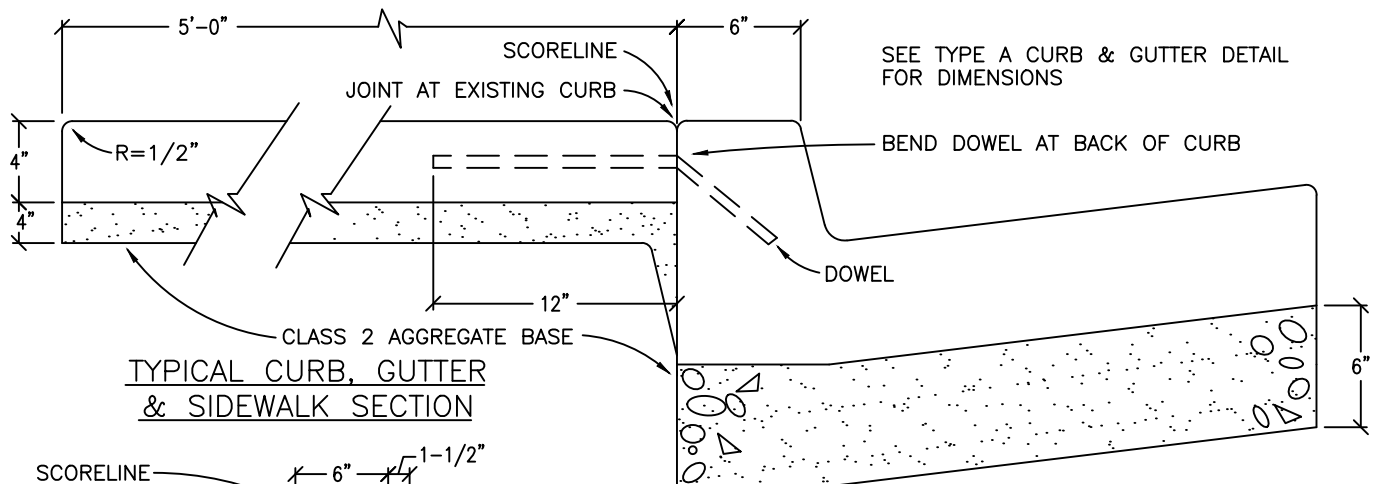
DATE:
06/06/17



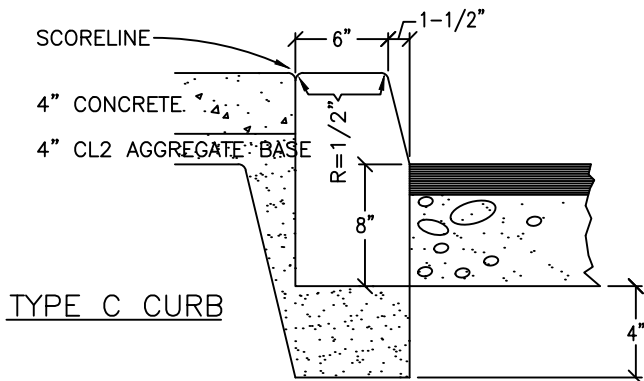
TYPE A CURB AND GUTTER



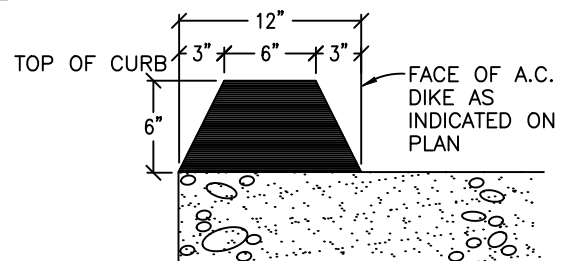
TYPE B CURB AND GUTTER



TYPICAL CURB, GUTTER
& SIDEWALK SECTION



TYPE C CURB



A.C. DIKE

1. TYPE A, B & C CURB, GUTTER & SIDEWALK ARE TO BE CONSTRUCTED OF CLASS A CONCRETE
2. WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 12' INTERVALS, AND AT THE ENDS OF RETURNS. EXPANSION JOINTS SHALL BE AT MAXIMUM 60 FEET SPACING.
3. TYPE B CURB TO BE USED ONLY TO CONFORM TO EXISTING TYPE B CURB OR FOR REPLACEMENT IN KIND. TYPE B CURB MAY NOT BE USED IN NEW CONSTRUCTION.
4. IF SIDEWALK IS NOT INSTALLED MONOLITHICALLY WITH CURB & GUTTER, PLACE #4 DOWELS 18" LONG AT 4' O.C. IN BACK OF CURB 3" DOWN FROM TOP OF CURB, 6" IN CONCRETE.

CITY OF SCOTTS VALLEY STANDARD DETAIL

CURB, GUTTER, SIDEWALK
AND A.C. DIKE

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

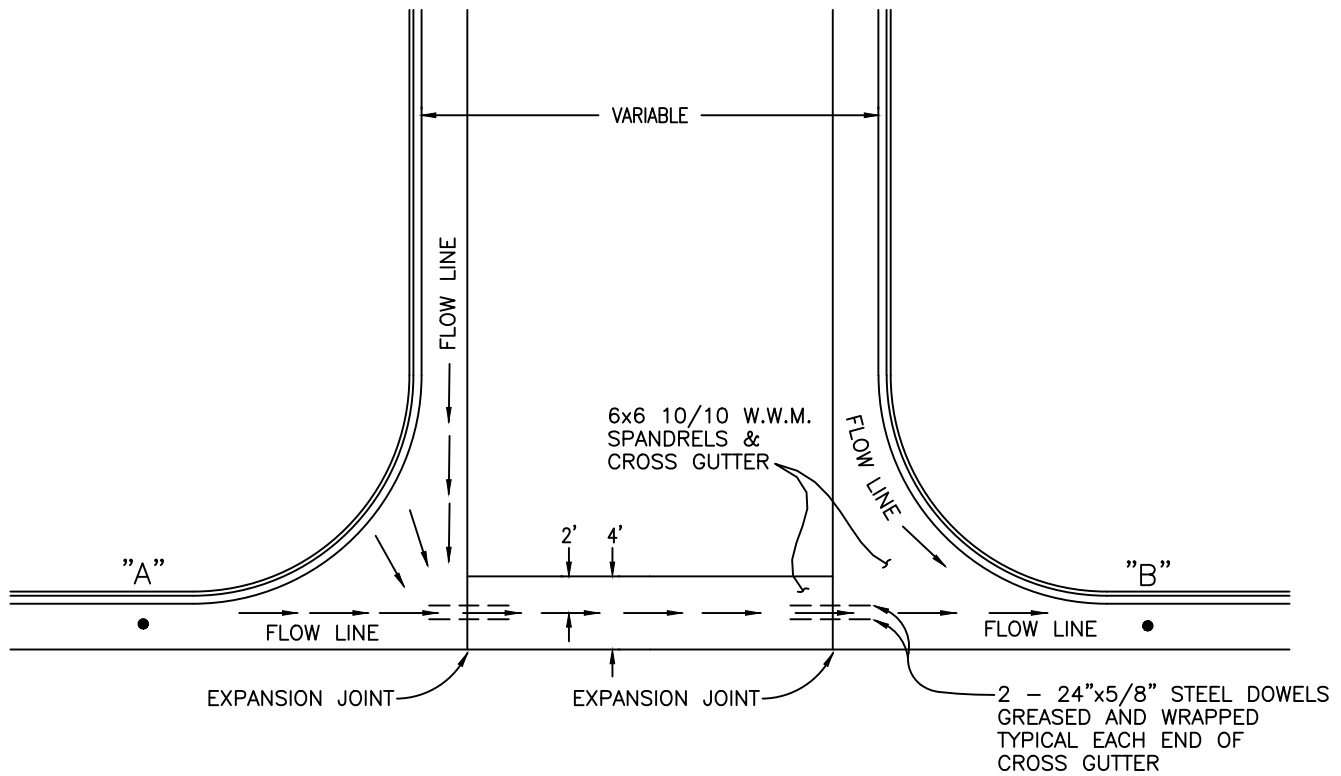
DRAWING NO:

ST-04

SCALE: NONE

DATE
12/06/17





1. TYPE A CURB & 6" THICK CLASS B P.C.C. SPANDRELS & CROSS GUTTER ON 6" CLASS 2 AGGREGATE BASE.
2. MAXIMUM DEPRESSION IN CROSS GUTTER AT FLOW LINE IS $\frac{1}{2}$ "
3. THIS DETAIL IS ONLY REQUIRED WHEN DROP INLETS ARE NOT PROVIDED AT THE RETURN AT POSITION "A"



CITY OF SCOTTS VALLEY STANDARD DETAIL

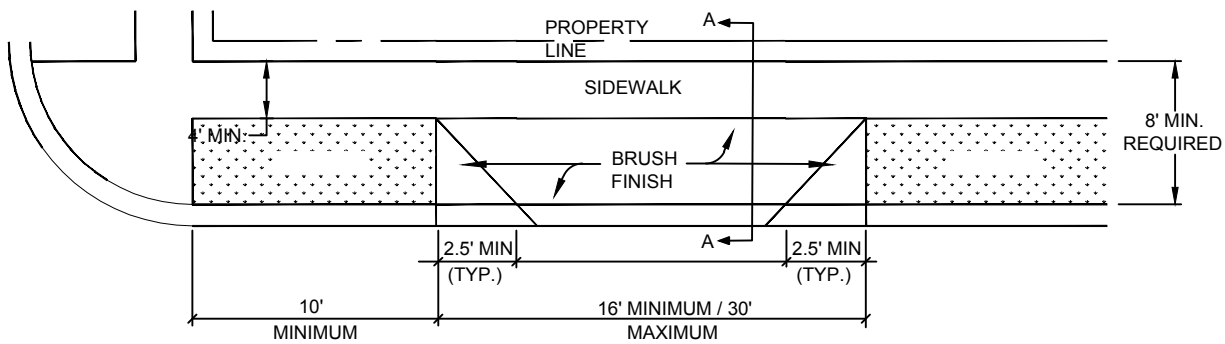
CONCRETE CROSS GUTTER

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

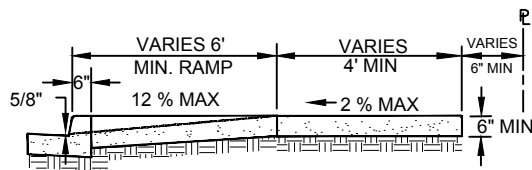
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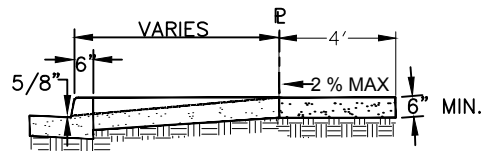
DATE
12/06/17



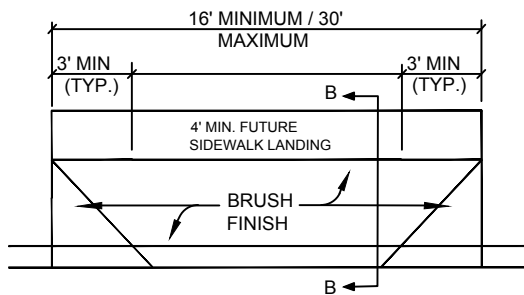
PLAN
TYPE "A" DRIVEWAY



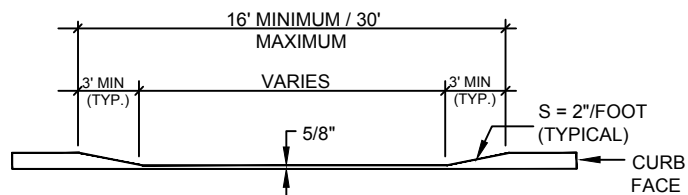
SECTION A-A



SECTION B-B



PLAN
TYPE "B" DRIVEWAY
(WITH FUTURE SIDEWALK)



TYPICAL ELEVATION

1. SIDEWALK AREA ADJACENT TO DRIVEWAY APPROACH SHALL HAVE A < 2% CROSS SLOPE
2. ALL CONCRETE TO BE CLASS "B" CONCRETE



CITY OF SCOTTS VALLEY STANDARD DETAIL

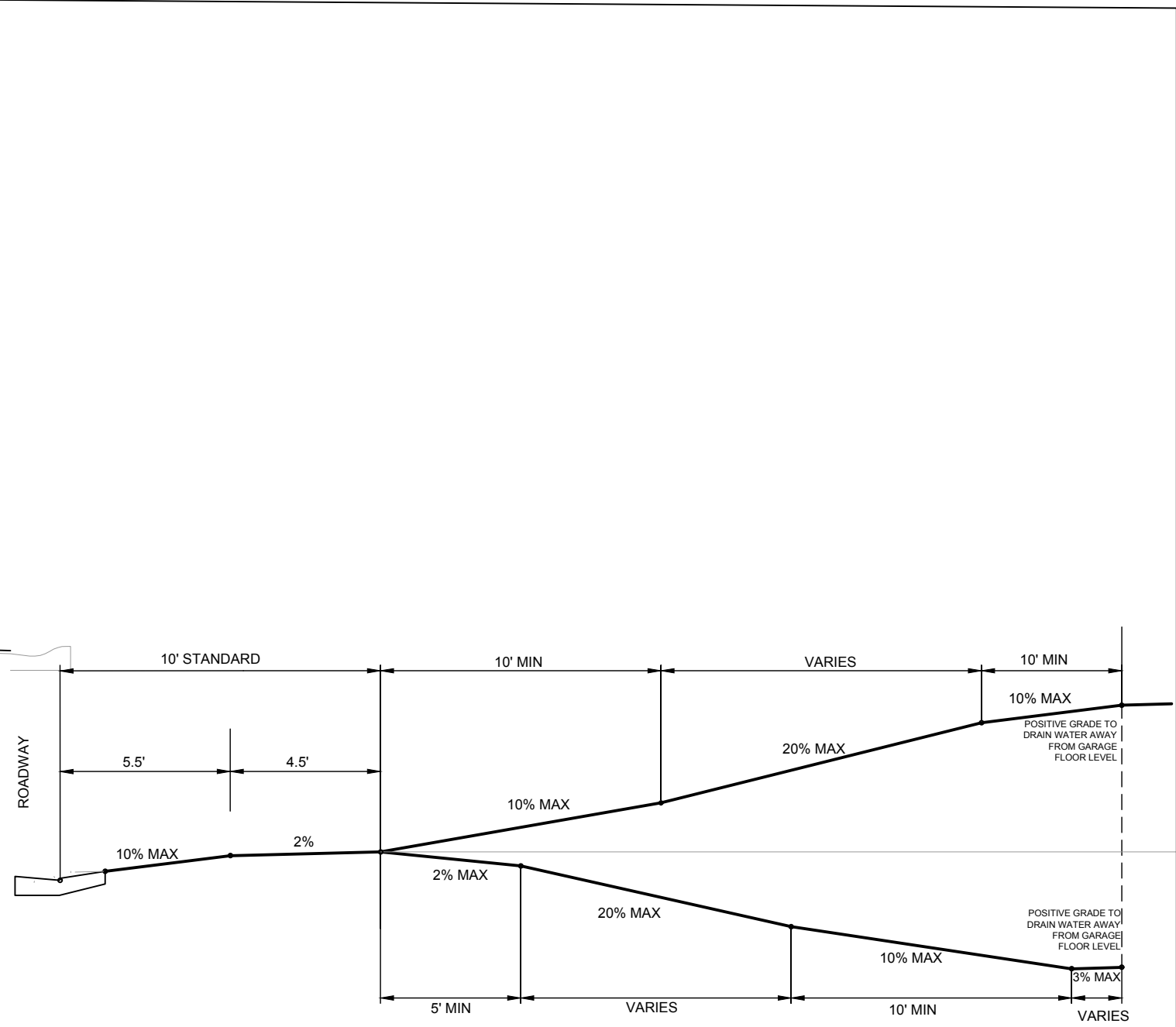
DRIVEWAY APPROACH

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
ST-06

SCALE: NONE

DATE
12/06/17



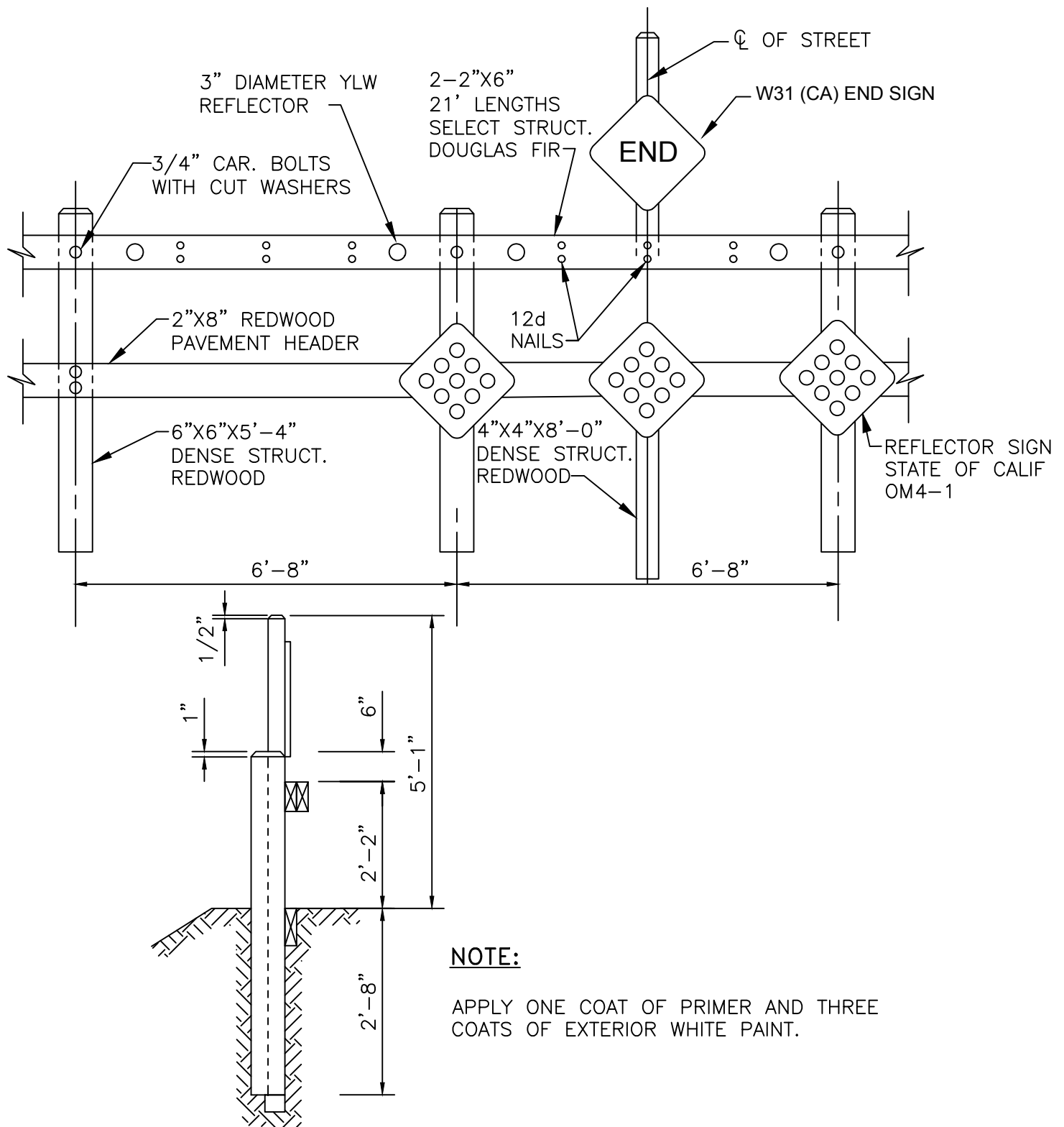
1. PROVIDE A DRIVEWAY PROFILE SHOWING EXISTING AND PROFILE GRADES FOR APPROVAL
2. BEYOND THE ROAD RIGHT-OF-WAY, THE DRIVEWAY SURFACE SHALL BE AN ALL WEATHER TYPE
3. DRIVEWAY PAVEMENT MATERIAL TYPE AND STRUCTURE SECTION ARE SUBJECT TO APPROVAL BY THE DIRECTOR OF PUBLIC WORKS



CITY OF SCOTTS VALLEY STANDARD DETAIL
DRIVEWAY PROFILE

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO: ST-07
SCALE: NONE
DATE: 12/06/17 064



CITY OF SCOTTS VALLEY STANDARD DETAIL

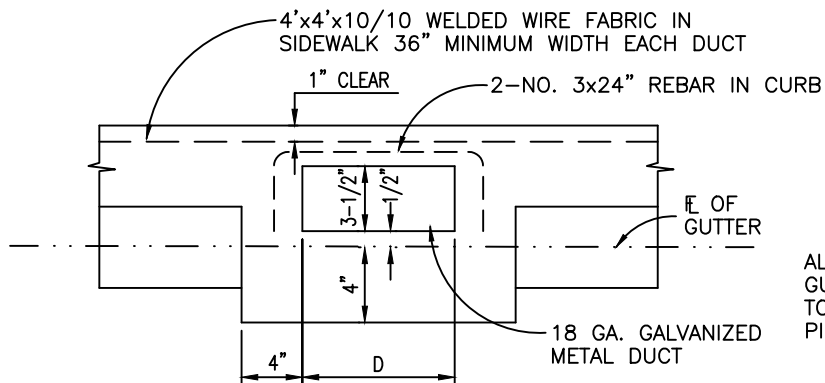
ROAD BARRICADE

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
ST-08

SCALE: NONE

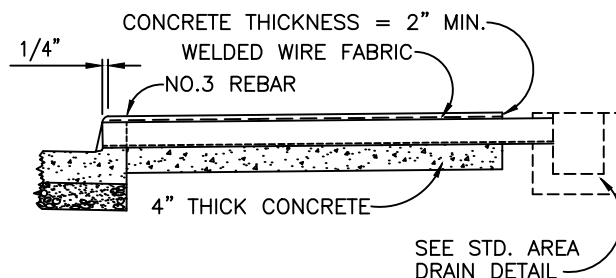
DATE:
12/06/17



DIMENSION D	MAXIMUM CAPACITY
6"	0.57 C.F. PER SECOND
9"	0.94 C.F. PER SECOND
12"	1.29 C.F. PER SECOND

ALL PERSONS SETTING CURB DRAINS AFTER CURB, GUTTER & SIDEWALK HAVE BEEN POURED WILL HAVE TO SAWCUT C, G & S OUT AT LEAST 1' EACH SIDE OF PIPE & REPOUR SAME IN MONOLITHIC MANNER.

METAL DUCT SECTION



TYPICAL METAL DUCT LONGITUDINAL SECTION

THE CONCRETE BASE AND COVER FOR METALLIC DUCT DRAINS SHALL EXTEND CONTINUOUSLY FROM PROPERTY LINE TO FACE OF CURB.

- ALL CAPACITIES ARE BASED ON:
 - $S = 2\%$
 - $N = 0.011$
- METAL DUCT FORM SHALL BE SUPPORTED FROM DISTORTION DURING POUR OF CONCRETE BY FILLING WITH SAND, TEMPORARY SUPPORT WEDGED IN PLACE OR OTHER SUITABLE MEANS.



CITY OF SCOTTS VALLEY STANDARD DETAIL

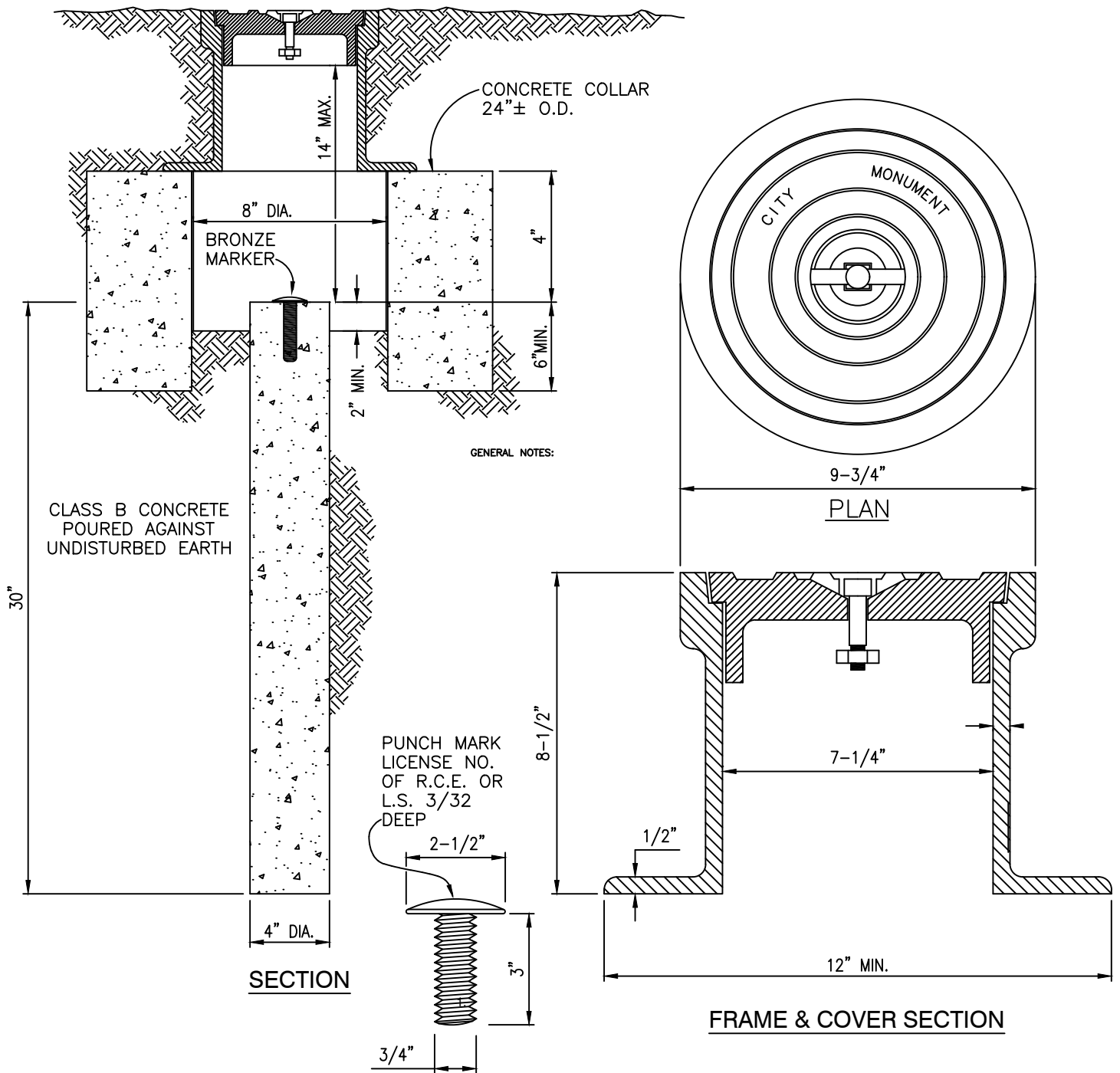
CURB DRAIN

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
ST-09

SCALE: NONE

DATE
12/06/17



BRONZE MARKER DETAIL

1. MONUMENT FRAME AND COVER SHALL BE GRAY CAST IRON, FREE OF BLISTERS, BLOWHOLES, WARPAGE, AND COLD SHUTS.
2. MONUMENT SHALL BE FURNISHED AND INSTALLED AS PER PLANS AND SECTION 81 OF THE STANDARD SPECIFICATIONS, COMPLETE WITH MARKER.
3. BEARING SURFACES OF FRAME & COVER SHALL FIT WITH POSITIVE PRESSURE ON ALL SURFACES & SHALL BE NON-ROCKING.
4. ALL CONCRETE SHALL BE CONSTRUCTED IN ACCORDANCE WITH CLASS "B" OF THE STANDARD SPECIFICATIONS.
5. RING AND COVER SHALL BE CAST IRON-PHOENIX IRON WORKS CAT. NO. P-2001, OR APPROVED EQUAL.



CITY OF SCOTTS VALLEY STANDARD DETAIL

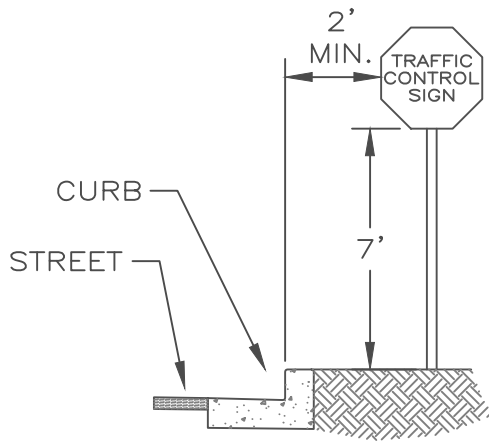
SURVEY MONUMENT

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

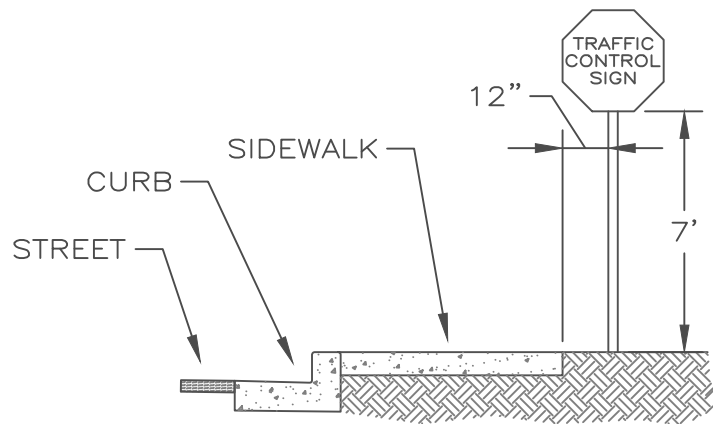
DRAWING NO:
ST-10

SCALE: NONE

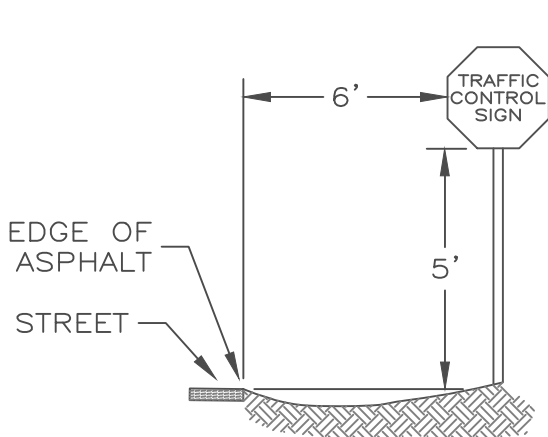
D067
12/06/17



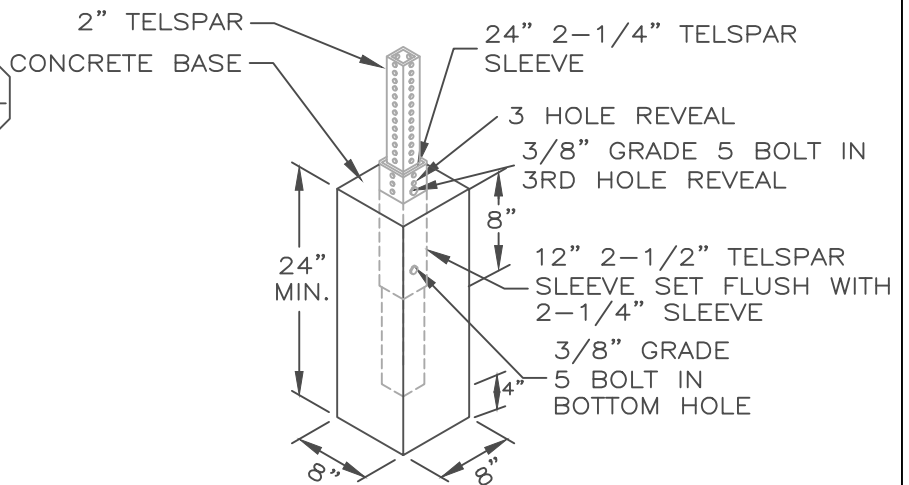
BEHIND CURB



BEHIND SIDEWALK



NO CURB OR SIDEWALK



FOOTING DETAIL

1. CONCRETE FOOTINGS SHALL BE PREFORMED 8" SQUARE
2. 2-1/2" AND 2-1/4" SLEEVES SHALL BE WRAPPED WITH DUCT TAPE PRIOR TO THE EMBEDMENT IN CONCRETE. SLEEVES SHALL BE EMBEDDED TO 20".
3. FOR APPLICATIONS WHERE TOTAL SIGN AREA IS GREATER THAN 1300 IN² (36"x36"), A 30" DEEP FOOTING SHALL BE UTILIZED.
4. ALL SIGNAGE SHALL BE INSTALLED AS SHOWN ON THE PLANS AND IN CONFORMANCE WITH THE MUTCD, CURRENT EDITION.
5. ALL SIGN FOOTINGS SHALL BE VISUALLY INSPECTED PRIOR TO BACKFILLING AND COMPACTION.



CITY OF SCOTTS VALLEY STANDARD DETAIL

STREET SIGN PLACEMENT

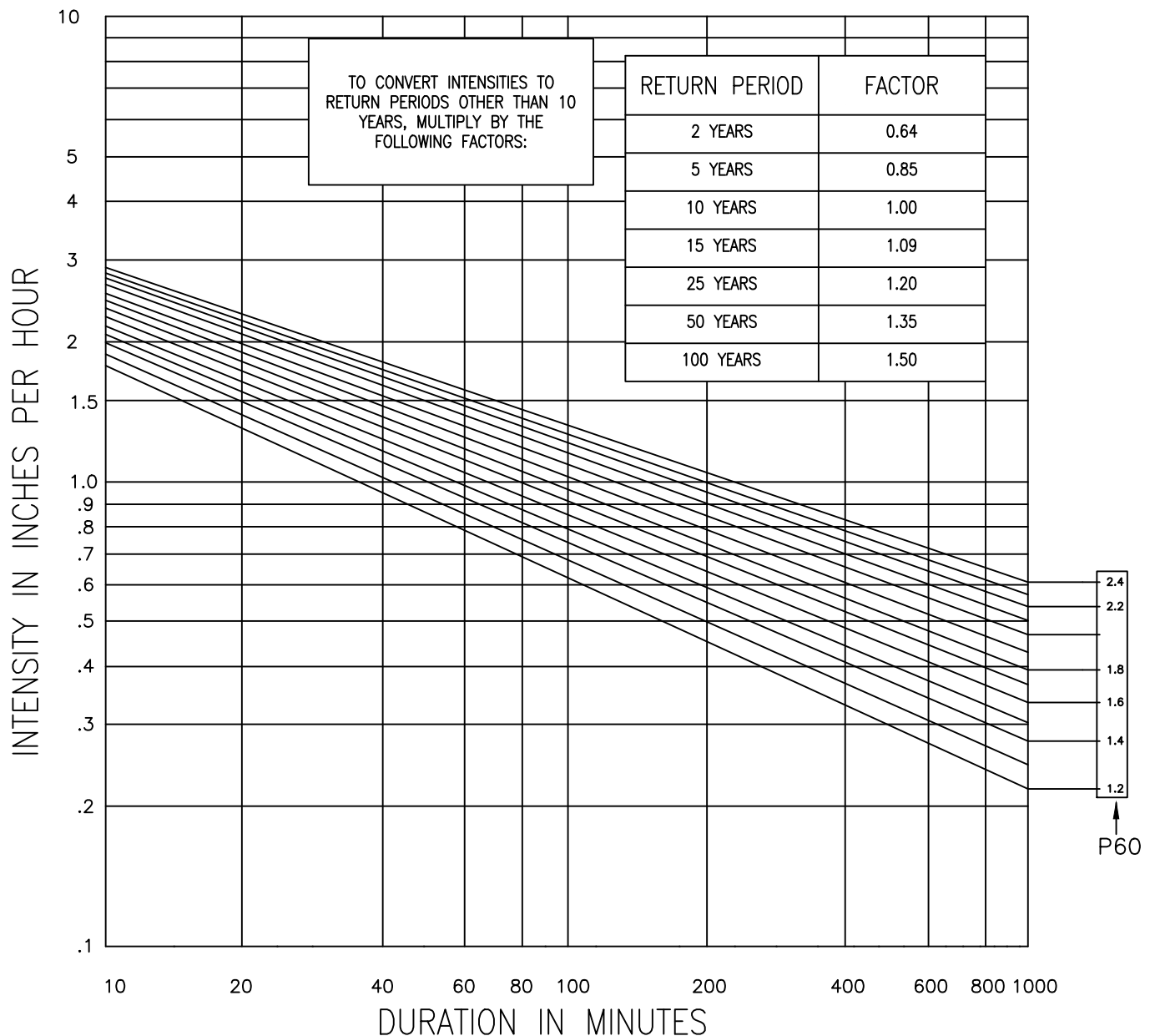
SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
ST-11

SCALE: NONE

DATE
12/06/17

RAINFALL INTENSITY DURATION CURVES FOR 10 YEAR RETURN PERIOD



$$Intensity = \frac{(4.29112)(1.1952^{P_{60}})}{Duration^{(0.60924)(0.78522^{P_{60}})}}$$

NOTE: SCOTTS VALLEY $P_{60} = 1.8$ IN./HR.



CITY OF SCOTTS VALLEY STANDARD DETAIL

RAINFALL INTENSITY
DURATION CURVES

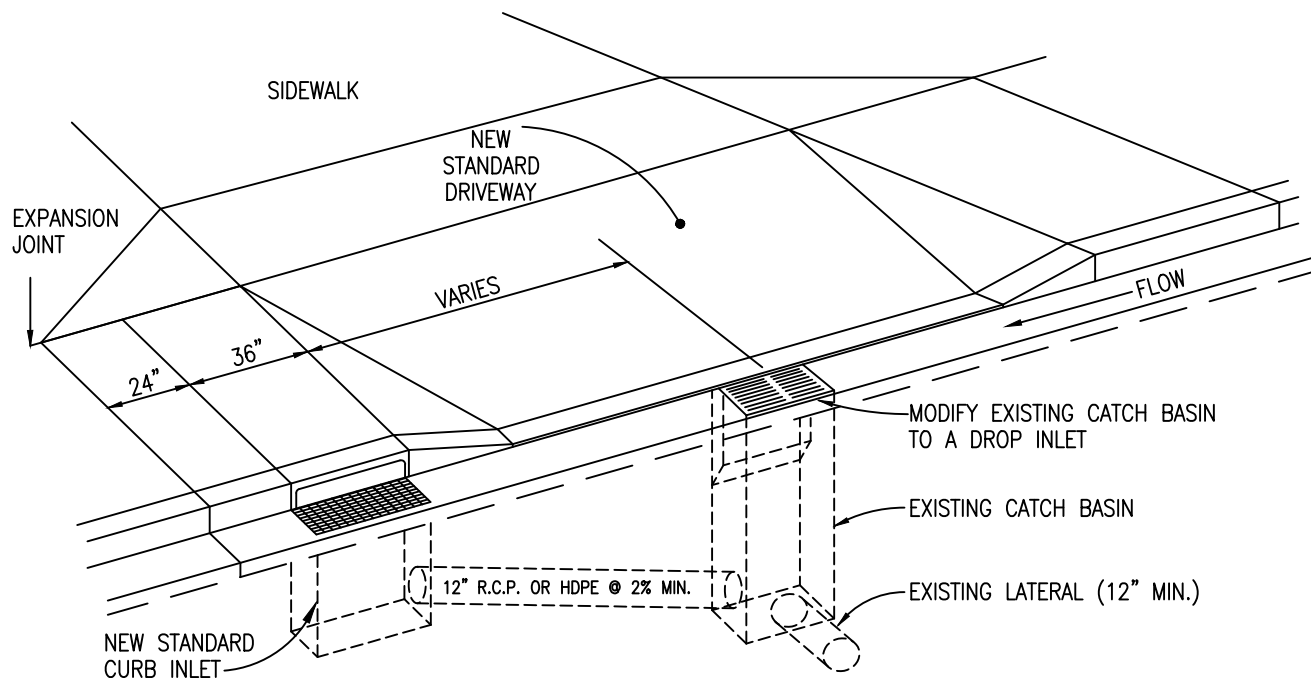
SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

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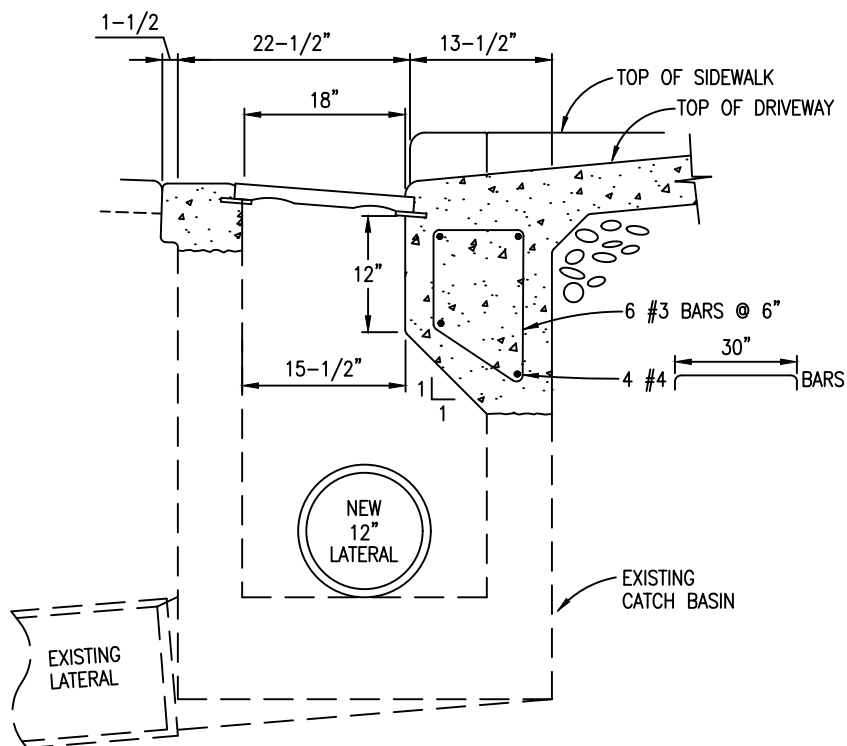
SD-01

SCALE: NONE

DATE
12/06/17



VIEW SHOWING CONNECTION & LOCATION
OF CATCH BASINS



SECTION OF MODIFIED CATCH BASIN

1. THIS METHOD OF CONNECTING A NEW CURB INLET IS TO BE USED ONLY IF THE EXISTING CATCH BASIN AND LATERAL ARE IN GOOD CONDITION AND THE LATERAL IS AT LEAST 12" I.D., OTHERWISE THE EXISTING CATCH BASIN SHALL BE REMOVED OR FILLED IN AND A NEW LATERAL INSTALLED FROM THE NEW CURB INLET TO THE NEAREST MANHOLE.
2. CONSTRUCT NEW CURB INLET ON THE DOWNSTREAM SIDE OF NEW DRIVEWAY OR SHORTEST UPSTREAM SIDE OF DRIVEWAY IF ORIGINAL CATCH BASIN IS CONSTRUCTED AT A LOW POINT.
3. FRAME AND GRATE FOR MODIFIED DROP INLET SHALL BE EQUAL TO PHOENIX IRON WORKS NO. P-4203 ON 24" x 36" CATCH BASINS. USE EXISTING GRATE AND FRAME WHEN MODIFYING 24" x 36" CATCH BASIN.
4. PRECAST CONCRETE STRUCTURES SHALL NOT BE USED.



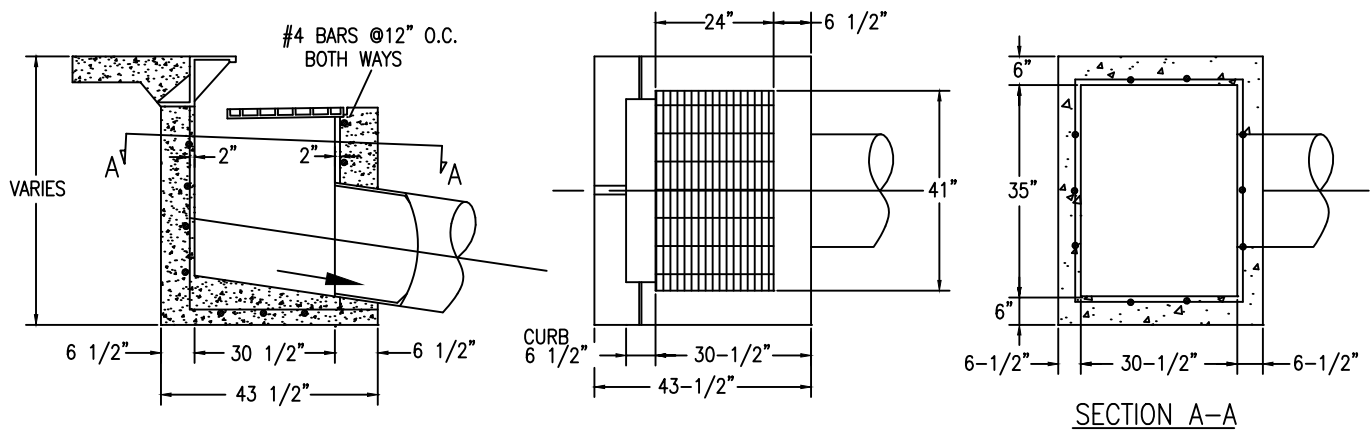
CITY OF SCOTTS VALLEY STANDARD DETAIL
ADAPTION FOR EXISTING CB
IN NEW DRIVEWAY

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
SD-02

SCALE: NONE

DATE
12/06/17



1. REAR- OPENING HOOD TO BE SOUTH BAY FOUNDRY CAST IRON HOOD ITEM # C2010.
2. FRAME AND GRATE TO BE HOT DIPPED GALVANIZED STEEL, HEAVY TRAFFIC BICYCLE PROOF SOUTH BAY FOUNDRY GRATE ITEM # E2020, FRAME ITEM # E2060.
3. BUTTER FLOWLINE SHALL DROP 2" MIN FROM 6' ON EACH SIDE OF CATCH BASIN.
4. FRAME AND GRATE TO BE STATE BICYCLE PROOF GRATE TYPE 24-13.
5. CONCRETE SHALL BE CLASS "A", 6 SACK MIN.
6. UNLESS SPECIFICALLY SHOWN ON THE IMPROVEMENT PLANS, ALL DROP INLETS SHALL BE CAST IN PLACE. WHERE THE USE OF PRECAST CONCRETE STRUCTURES IS SPECIFIED OR ALLOWED BY THE IMPROVEMENT PLANS OR BY THE CITY ENGINEER, THE PRECAST PORTION SHALL TERMINATE NOT LESS THAN 1-FOOT BELOW THE GUTTER FLOWLINE AND THE REMAINING PORTION OF THE DROP INLET STRUCTURE SHALL BE CAST IN PLACE. UNDER NO CIRCUMSTANCES SHALL MONOLITHIC PRECAST STRUCTURES BE USED.
7. THE UPPER 1-FOOT OF THE DROP INLET STRUCTURE (MEASURED DOWN FROM THE GUTTER FLOWLINE) SHALL BE FORMED AND POURED CONCURRENT WITH OR SUBSEQUENT TO THE INSTALLATION OF ADJACENT PORTIONS OF CURB AND GUTTER.

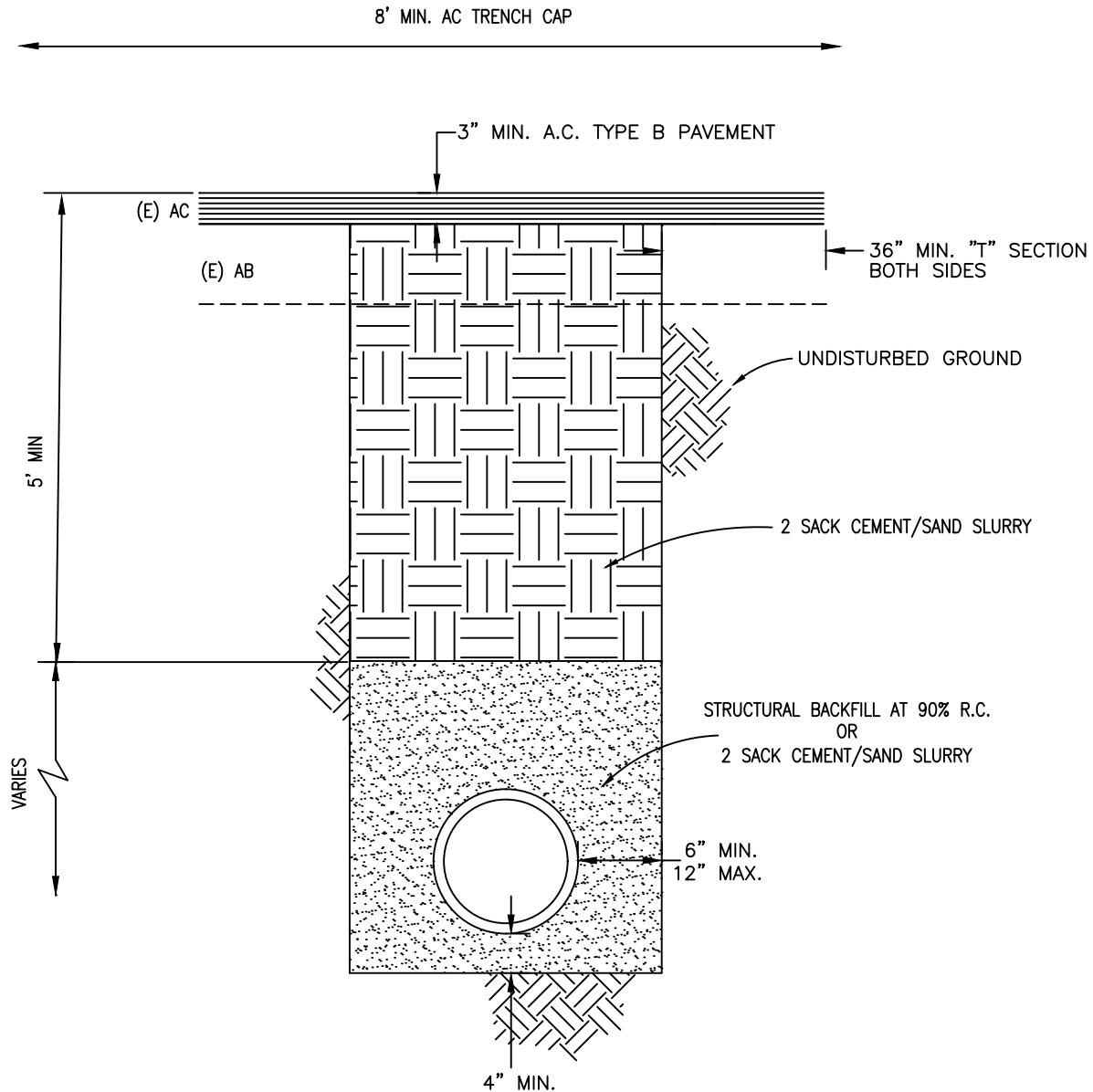


DROP INLET WITH APRON

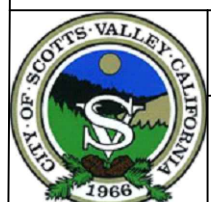
SD-03

SCALE: NONE

DATE: 12/06/17



1. OTHER METHODS OF TRENCH BACKFILL MAY BE USED ONLY WITH WRITTEN PERMISSION FROM THE DIRECTOR OF PUBLIC WORKS.
2. CUT EXISTING PAVEMENT TO PRODUCE A STRAIGHT VERTICAL FACE AGAINST WHICH TO BUTT THE TRENCH PAVEMENT OR DEEP LIFT AC PLUG TO SAME DEPTH AS AC AND COMPACTED BASE.
3. TRENCH SHALL BE CAPPED WITH 3' A.C, TYPE B MINIMUM, WHERE THE EXISTING PAVEMENT IS GREATER THAN 3' THICK, IT SHALL BE REPLACED IN KIND.
4. CEMENT/SAND SLURRY SHALL BE MIXED IN A TRANSIT MIXER (CERTIFICATION TAGS REQUIRED), SHALL CONSIST OF 188 LBS. OF CEMENT FOR EACH CUBIC YARD OF MATERIAL, AND SHALL HAVE A 7-9 INCH SLUMP.
5. PRECAUTION SHALL BE TAKEN TO AVOID FLOATING CONDUITS.
6. OPTIONAL1 SHAPED BEDDING OR SAND CRADLE TO 6' ABOVE PIPE,
7. FOR TRENCHES LESS THAN FIVE FEET DEEP, SLURRY BACKFILL SHALL EXTEND FROM 6" ABOVE TOP OF PIPE TO AC PAVEMENT.



CITY OF SCOTTS VALLEY STANDARD DETAIL

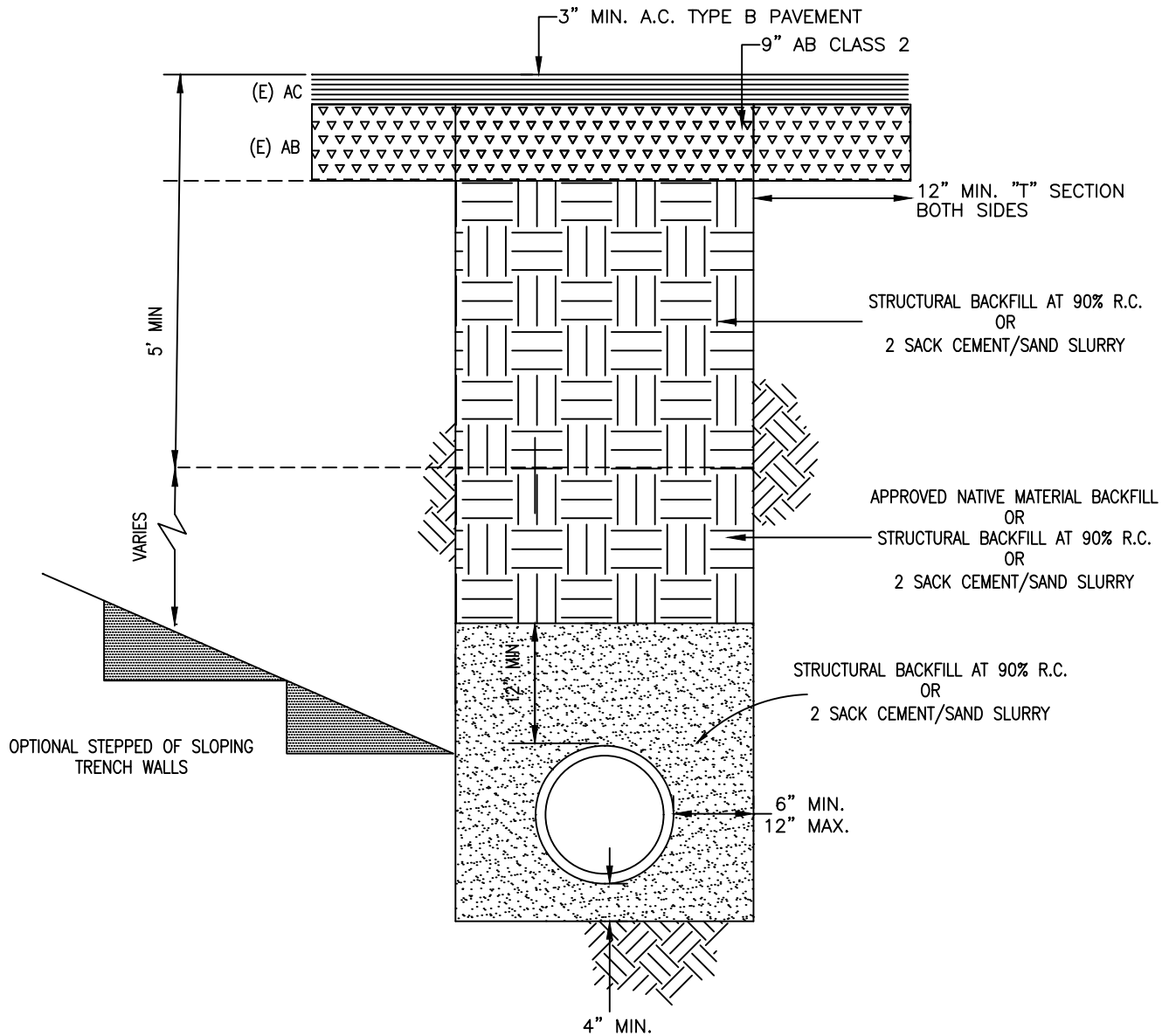
CROSS TRENCH BACKFILL

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
SS-02, SD-04

SCALE: NONE

DATE
12/06/17



- PAVEMENT SHALL BE REPLACED IN KIND, HOWEVER, MINIMUM STANDARDS ARE AS FOLLOWS:
 - PAVED ROADS- 3" AC TYPE B OVER 9" PRIME COATED AB CLASS 2
 - NON-PAVED ROADS- SINGLE SEAL COAT OVER 6" AB CLASS 2 IN TRENCH AREA, THEN SINGLE SEAL COAT ENTIRE ROAD SECTION.
- CUT EXISTING PAVEMENT TO PRODUCE A STRAIGHT VERTICAL FACE AGAINST WHICH TO BUTT THE TRENCH PAVEMENT OR DEEP LIFT AC PLUG TO SAME DEPTH AS AC AND COMPACTED BASE.
- LONGITUDINAL TRENCHES WITHIN A PAVED AREA OR ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AS SHOWN ABOVE.
- TRENCHES OUTSIDE A PAVED AREA OR ROAD RIGHT-OF-WAY SHALL HAVE BACKFILL COMPACTED TO NOT LESS THAN 90% RELATIVE COMPACTION.
- AN INSPECTOR, APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE ON SITE DURING ALL COMPACTION WORK TO OBSERVE UNIFORM COMPACTION METHODS AND MATERIALS.
- IF THE EDGE OF THE ASPHALT CAP IS WITHIN 2' OF THE EXISTING EDGE OF PAVEMENT OR LIP OF GUTTER, THE REMAINING PAVEMENT SHALL BE REMOVED AND THE TRENCH PAVING SHALL BE EXTENDED TO THE EDGE OF THE PAVEMENT LIP OF GUTTER.



CITY OF SCOTTS VALLEY STANDARD DETAIL

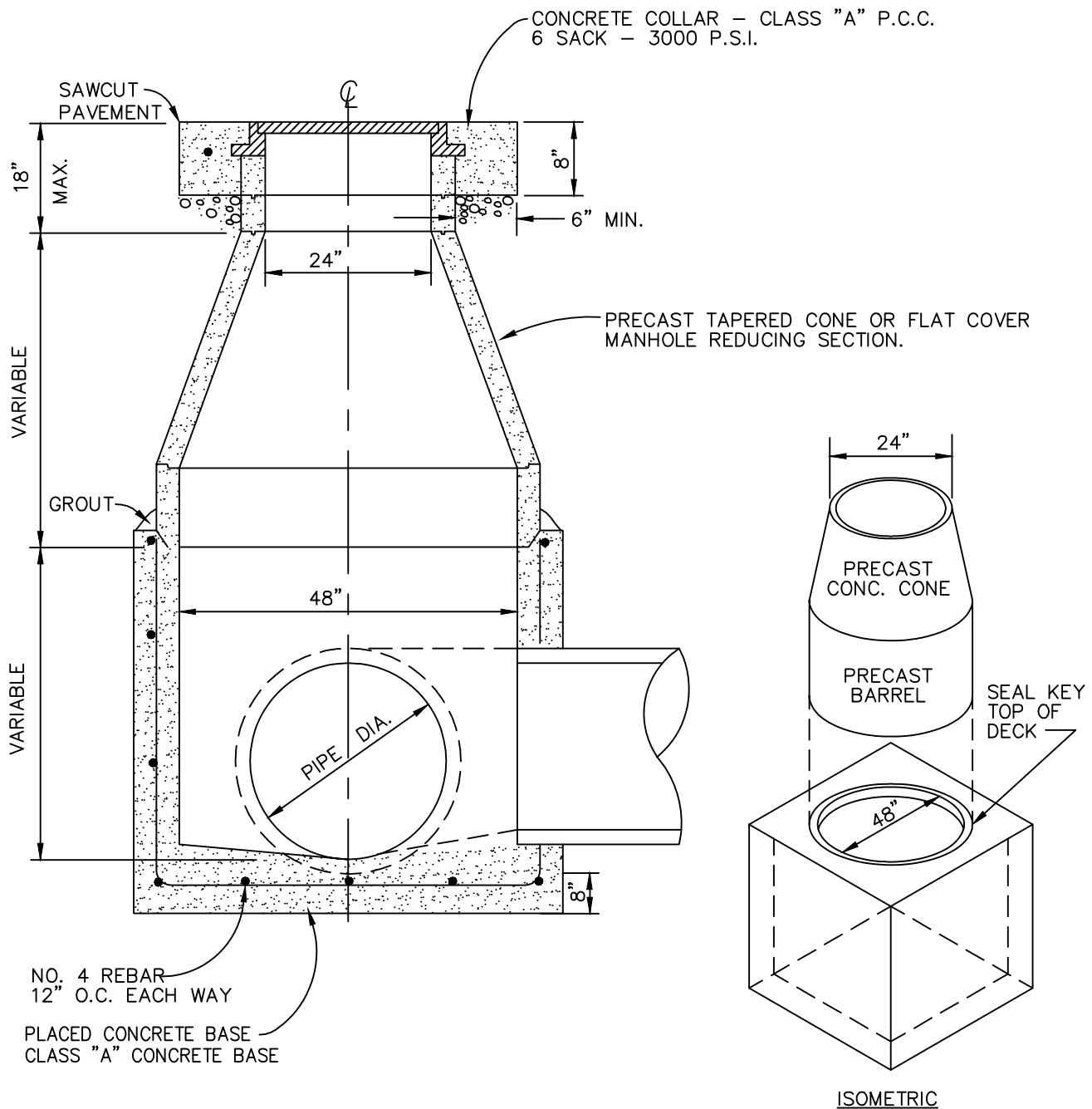
LONGITUDINAL TRENCH BACKFILL

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
SS-03, SD-05

SCALE: NONE

DATE
12/06/17



1. ALL JOINTS BETWEEN PRECAST SECTIONS SHALL BE SEALED, INSIDE AND OUTSIDE.
2. INTERIOR OF MANHOLE SHALL HAVE A SMOOTH TROWELED SURFACE,
3. PIPES LARGER THAN 48" REQUIRE SPECIAL DESIGN.



CITY OF SCOTTS VALLEY STANDARD DETAIL

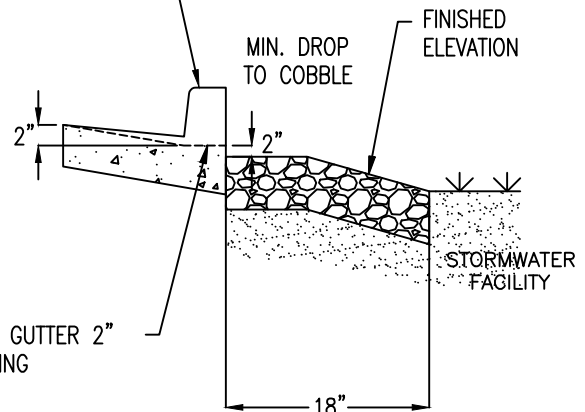
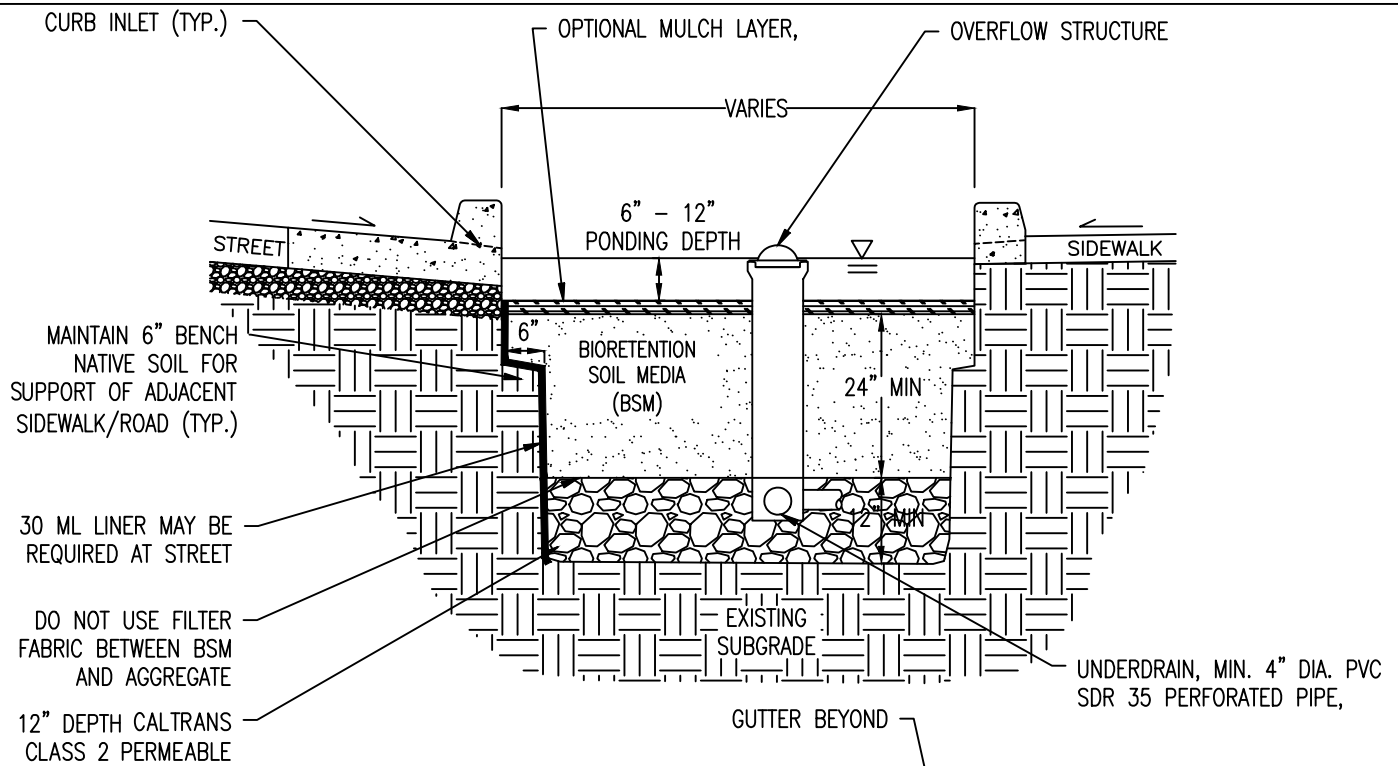
STORM DRAIN MANHOLE

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

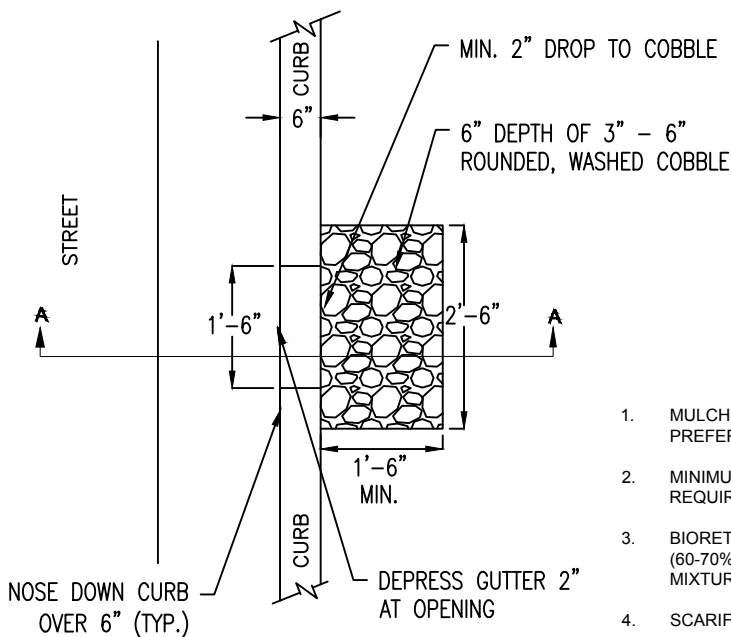
DRAWING NO:
SD-06

SCALE: NONE

DATE
12/06/17



CURB CUT INLET - SECTION A-A



CURB CUT INLET - PLAN

- MULCH DEPTH 2-3", USE OF MULCH BELOW PONDING HIGH WATER MARK IS OPTIONAL. PREFERRED MULCH TYPE: AGED, STABILIZED, NON-FLOATING.
- MINIMUM CURB DEPTH ALONG CITY RIGHT-OF-WAY SHALL BE 24". STEEL REINFORCEMENT IS REQUIRED FOR PLANTER WALLS INSTALLED ALONG CITY RIGHT-OF-WAY.
- BIORETENTION SOIL MEDIA (BSM): MINIMUM INFILTRATION RATE 5 IN/HR. USE CONCRETE SAND (60-70%) MEETING ASTM C33 SPECIFICATIONS AND STABLE, WEED-FREE COMPOST (30-40%) MIXTURE.
- SCARIFY SUBGRADE BEFORE INSTALLING BIORETENTION AREA AGGREGATE AND BSM.
- USE MIN. 4" DIA. PVC SDR36 PERFORATED PIPE. INSTALL NEAR THE TOP OF AGGREGATE LAYER WITH HOLES FACING DOWN.
- UNDERDRAIN DISCHARGE SHALL BE NO LOWER THAN THE TOP OF THE AGGREGATE LAYER. UNDERDRAIN SLOPE MAY BE FLAT.
- PROVIDE 4" MIN. DIAMETER CAPPED AND THREADED PVC CLEANOUT FOR UNDERDRAIN, WITH SWEEP BEND.



CITY OF SCOTTS VALLEY STANDARD DETAIL

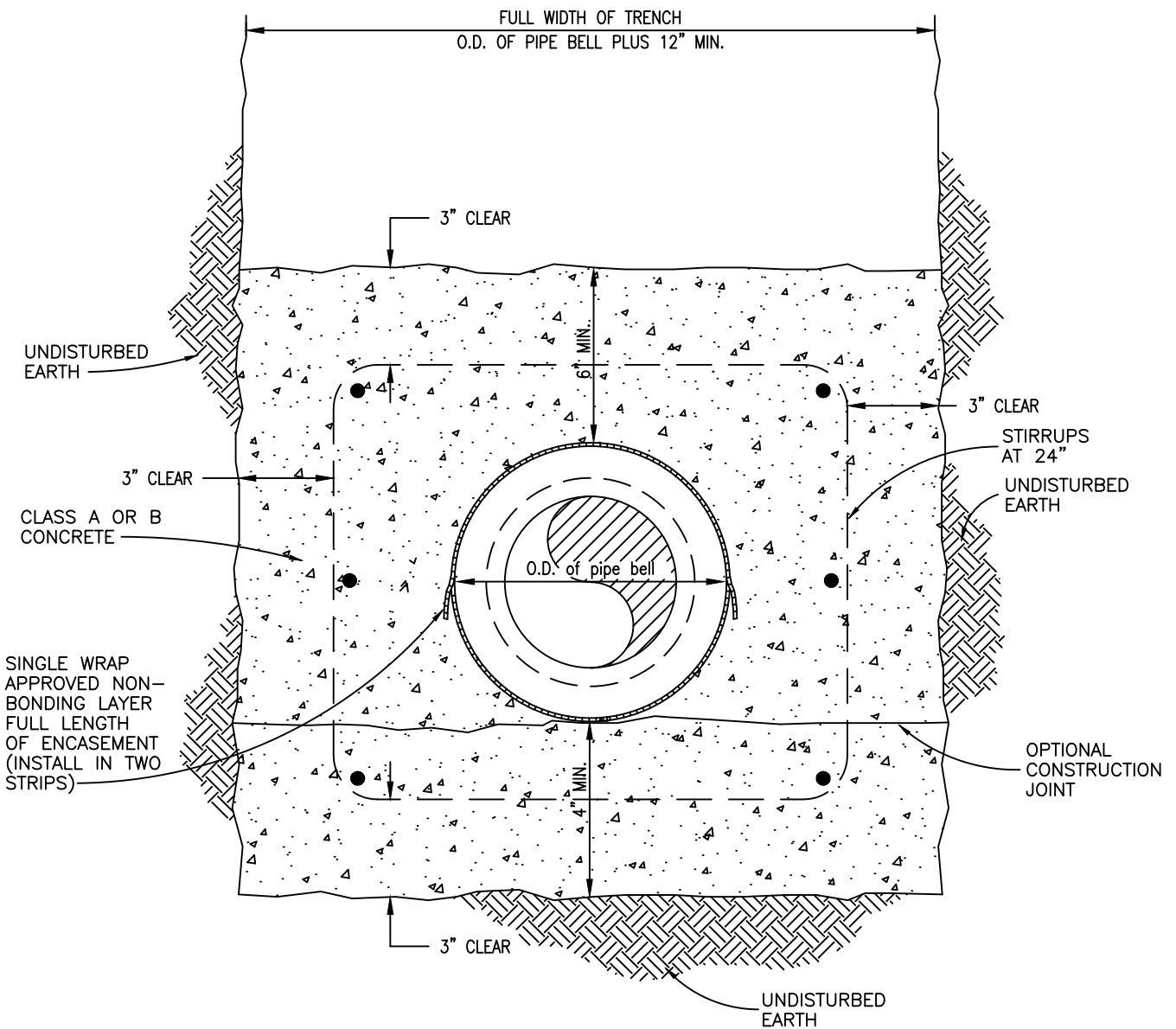
BIORETENTION FACILITY

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
SD-07

SCALE: NONE

DATE
12/06/17



SECTION

1. ALL REINFORCING, #4 BARS AS SHOWN.



CITY OF SCOTTS VALLEY STANDARD DETAIL

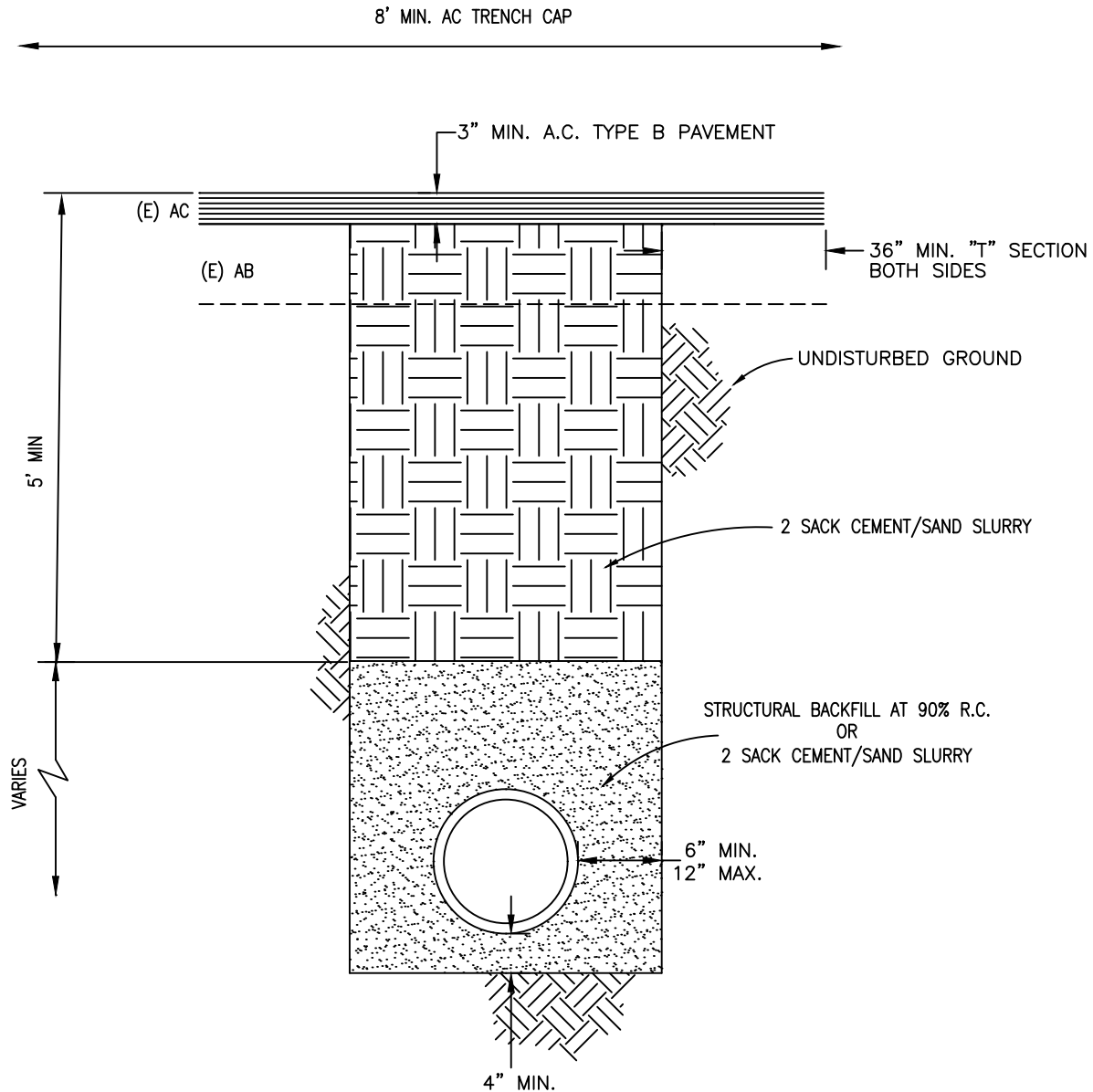
CONCRETE ENCASEMENT

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

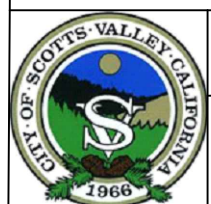
DRAWING NO:
SS-01

SCALE: NONE

DATE
12/06/17



1. OTHER METHODS OF TRENCH BACKFILL MAY BE USED ONLY WITH WRITTEN PERMISSION FROM THE DIRECTOR OF PUBLIC WORKS.
2. CUT EXISTING PAVEMENT TO PRODUCE A STRAIGHT VERTICAL FACE AGAINST WHICH TO BUTT THE TRENCH PAVEMENT OR DEEP LIFT AC PLUG TO SAME DEPTH AS AC AND COMPACTED BASE.
3. TRENCH SHALL BE CAPPED WITH 3' A.C, TYPE B MINIMUM, WHERE THE EXISTING PAVEMENT IS GREATER THAN 3' THICK, IT SHALL BE REPLACED IN KIND.
4. CEMENT/SAND SLURRY SHALL BE MIXED IN A TRANSIT MIXER (CERTIFICATION TAGS REQUIRED), SHALL CONSIST OF 188 LBS. OF CEMENT FOR EACH CUBIC YARD OF MATERIAL, AND SHALL HAVE A 7-9 INCH SLUMP.
5. PRECAUTION SHALL BE TAKEN TO AVOID FLOATING CONDUITS.
6. OPTIONAL1 SHAPED BEDDING OR SAND CRADLE TO 6' ABOVE PIPE,
7. FOR TRENCHES LESS THAN FIVE FEET DEEP, SLURRY BACKFILL SHALL EXTEND FROM 6" ABOVE TOP OF PIPE TO AC PAVEMENT.



CITY OF SCOTTS VALLEY STANDARD DETAIL

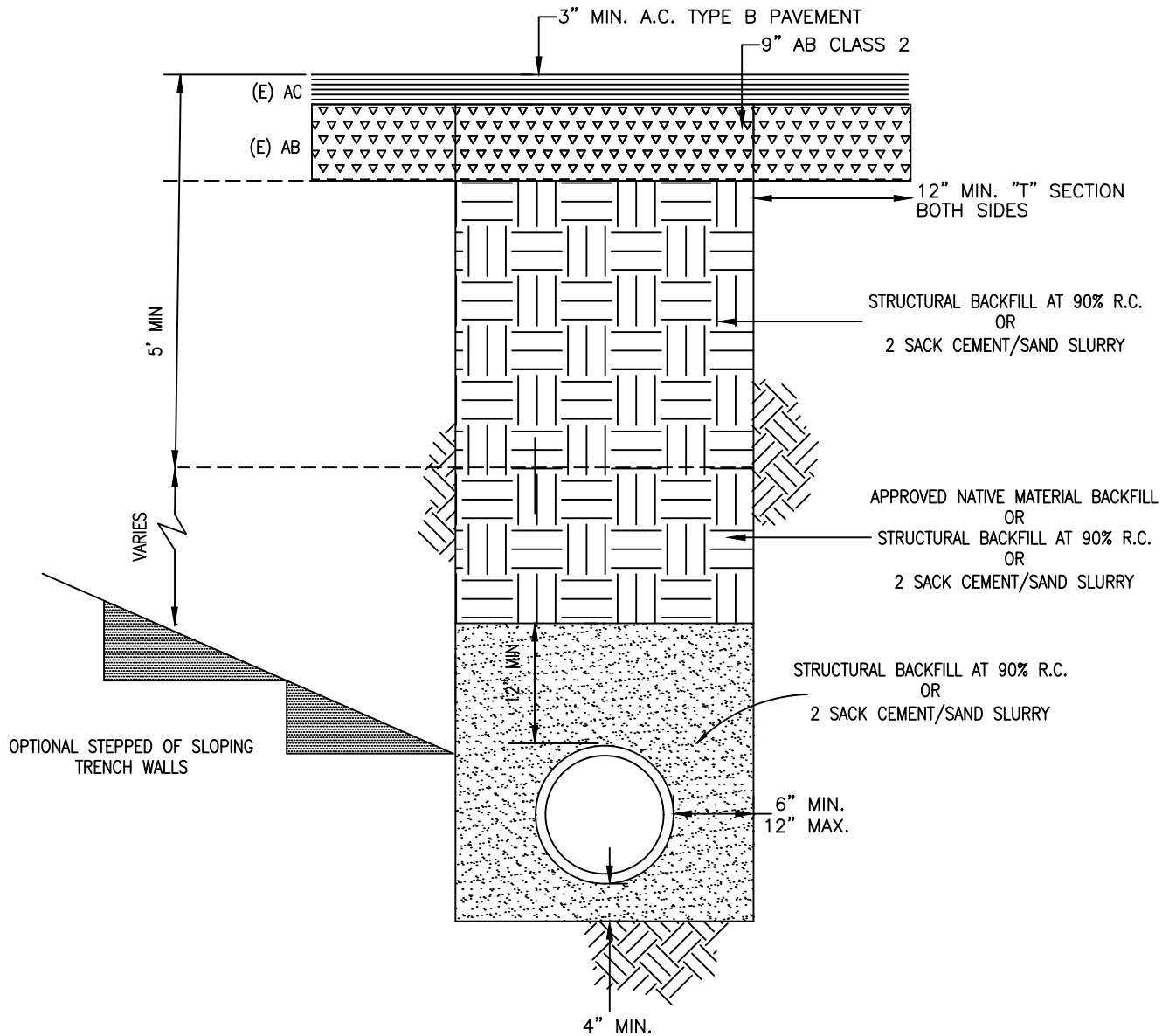
CROSS TRENCH BACKFILL

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
SS-02, SD-04

SCALE: NONE

DATE: 077
12/06/17



- PAVEMENT SHALL BE REPLACED IN KIND, HOWEVER, MINIMUM STANDARDS ARE AS FOLLOWS:
 - PAVED ROADS- 3" AC TYPE B OVER 9" PRIME COATED AB CLASS 2
 - NON-PAVED ROADS- SINGLE SEAL COAT OVER 6" AB CLASS 2 IN TRENCH AREA, THEN SINGLE SEAL COAT ENTIRE ROAD SECTION.
- CUT EXISTING PAVEMENT TO PRODUCE A STRAIGHT VERTICAL FACE AGAINST WHICH TO BUTT THE TRENCH PAVEMENT OR DEEP LIFT AC PLUG TO SAME DEPTH AS AC AND COMPACTED BASE.
- LONGITUDINAL TRENCHES WITHIN A PAVED AREA OR ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AS SHOWN ABOVE.
- TRENCHES OUTSIDE A PAVED AREA OR ROAD RIGHT-OF-WAY SHALL HAVE BACKFILL COMPACTED TO NOT LESS THAN 90% RELATIVE COMPACTION.
- AN INSPECTOR, APPROVED BY THE DIRECTOR OF PUBLIC WORKS, SHALL BE ON SITE DURING ALL COMPACTION WORK TO OBSERVE UNIFORM COMPACTION METHODS AND MATERIALS.
- IF THE EDGE OF THE ASPHALT CAP IS WITHIN 2' OF THE EXISTING EDGE OF PAVEMENT OR LIP OF GUTTER, THE REMAINING PAVEMENT SHALL BE REMOVED AND THE TRENCH PAVING SHALL BE EXTENDED TO THE EDGE OF THE PAVEMENT LIP OF GUTTER.



CITY OF SCOTTS VALLEY STANDARD DETAIL

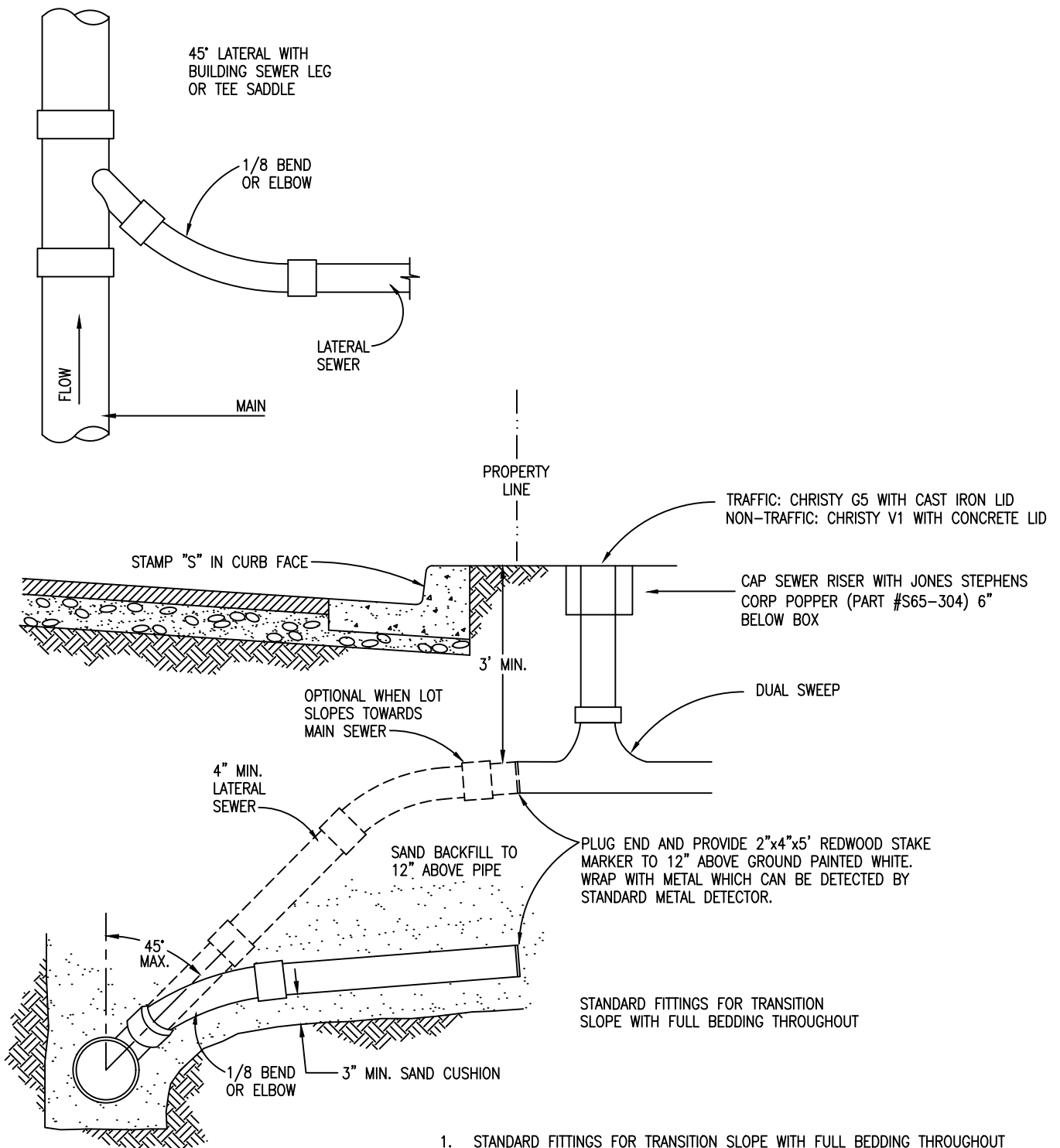
LONGITUDINAL TRENCH BACKFILL

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
SS-03, SD-05

SCALE: NONE

DATE
12/06/17



1. STANDARD FITTINGS FOR TRANSITION SLOPE WITH FULL BEDDING THROUGHOUT
2. LOCATE A CLEANOUT BOX IN THE CONCRETE SIDEWALK OR DRIVEWAY. CLEANOUT BOX IN DRIVEWAY SHALL BE TRAFFIC RATED. LOCATE CLEANOUT BOX 12" BEHIND CURB IF IN VEGETATED AREA.

CITY OF SCOTTS VALLEY STANDARD DETAIL

LATERAL SEWER CONNECTION DETAIL

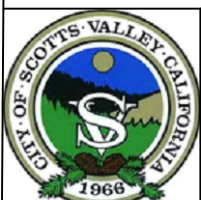
SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

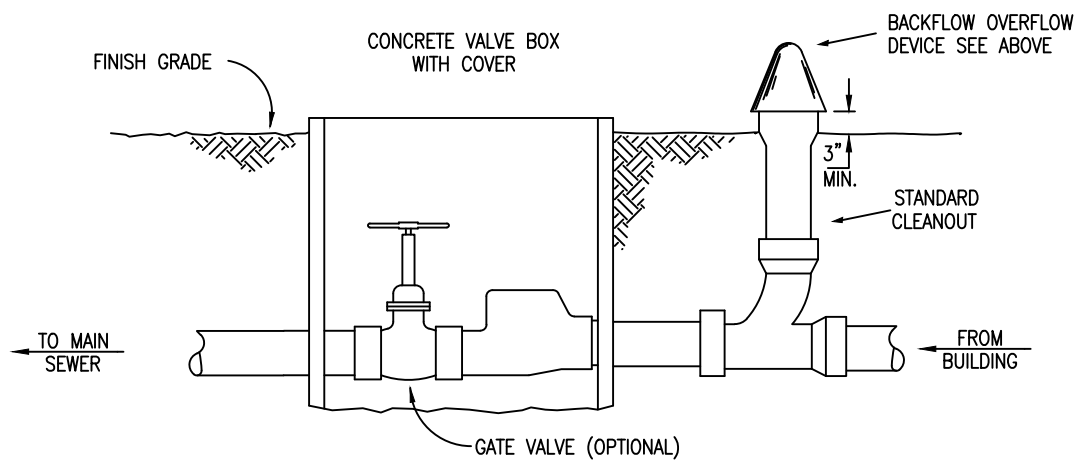
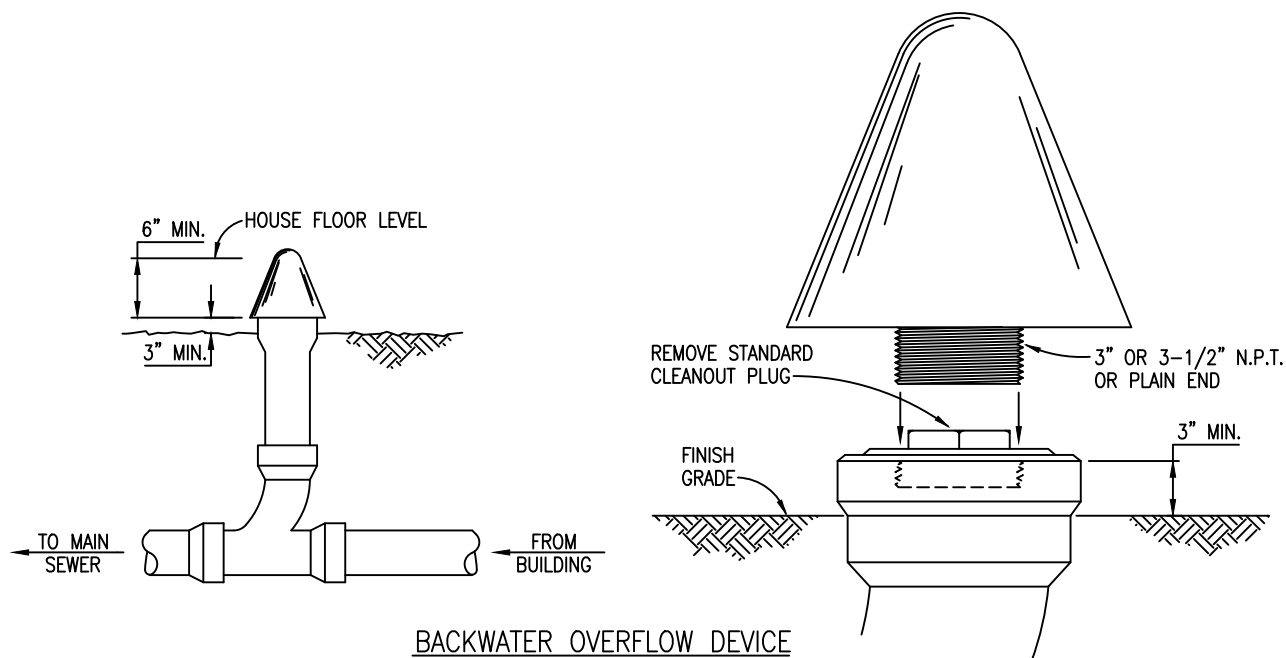
DRAWING NO:

SS-04

SCALE: NONE

DATE:
12/06/17





1. AN OVERFLOW SYSTEM IS REQUIRED AND SHALL BE INSTALLED WHERE THE FINISH FLOOR ELEVATION OF THE BUILDING TO BE CONNECTED IS LESS THAN ONE FOOT ABOVE THE RIM OF THE NEAREST UPSTREAM MANHOLE.
2. THE INSTALLATION OF THE BACKWATER OVERFLOW DEVICE SHALL BE MADE AFTER THE FINAL GRADING AROUND THE BUILDING IS COMPLETED. THE BACKWATER OVERFLOW DEVICE SHALL BE AS DETAILED, OR AN APPROVED EQUAL.
3. CONSIDERATION MUST BE GIVEN TO THE DAMAGE POTENTIAL TO ADJACENT PROPERTY BY SEWAGE RELEASED THROUGH THE BACKWATER OVERFLOW DEVICE.



CITY OF SCOTTS VALLEY STANDARD DETAIL

**BACKFLOW PREVENTION
DEVICES**

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

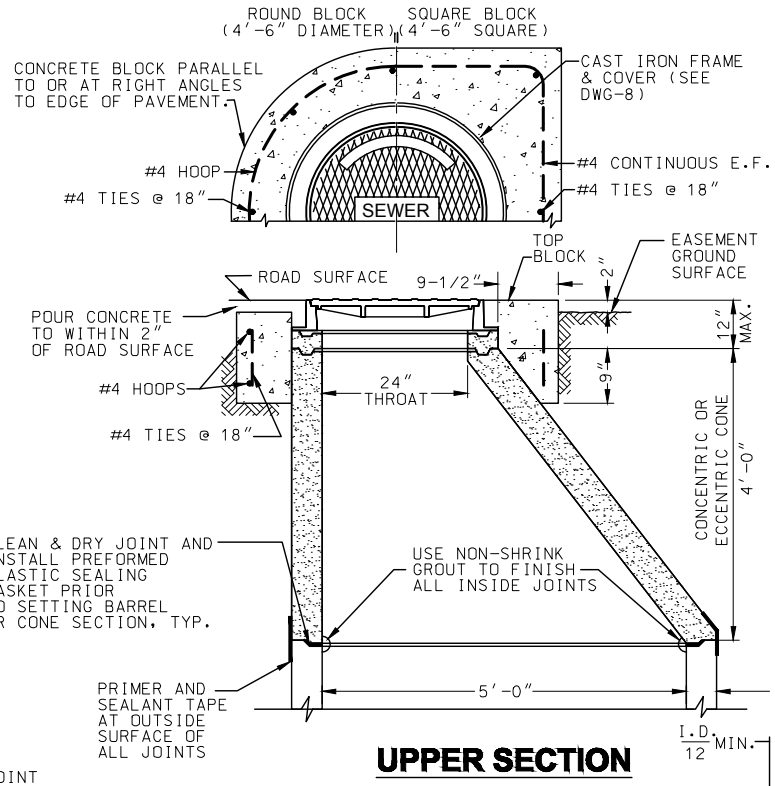
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SCALE: NONE

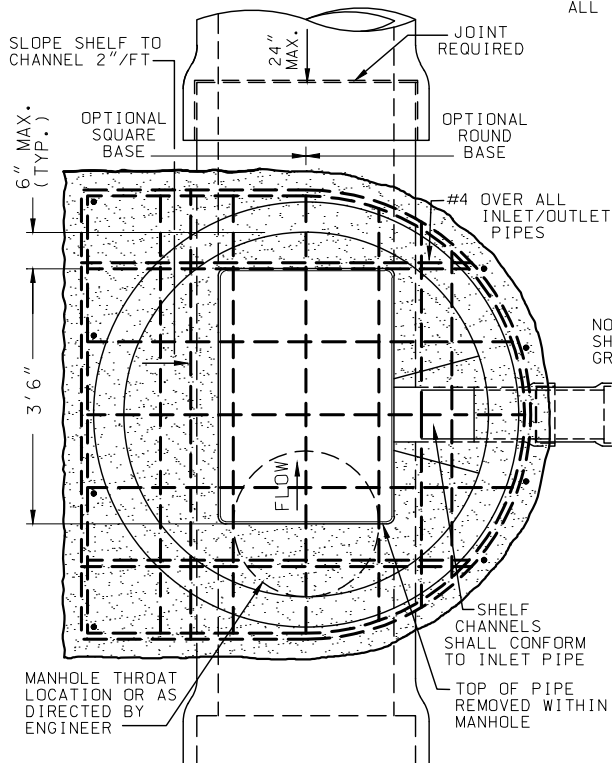
DATE
080
12/06/17



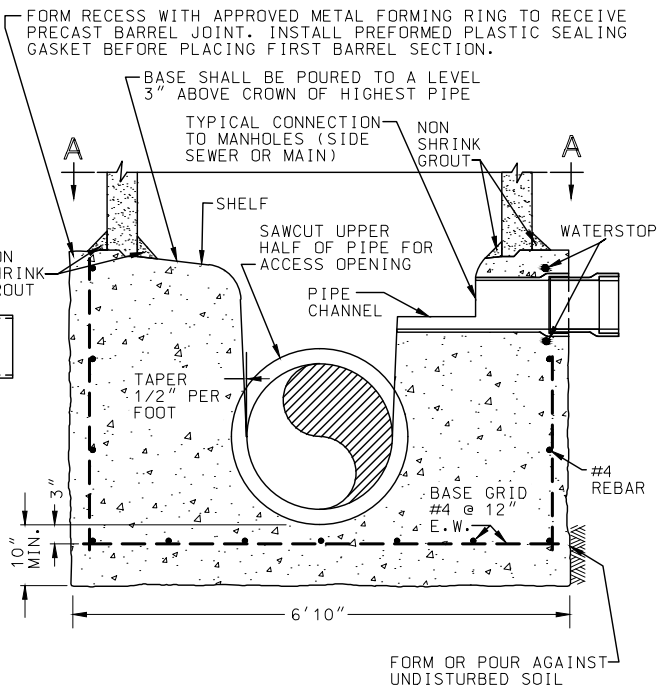
1. LAY PIPE THRU MH WHEN POSSIBLE OR FORM CHANNEL TO MAINTAIN PIPE SECTION. TRUNK SEWER PIPES ENTERING OR LEAVING THE MH BASE SHALL HAVE A STANDARD JOINT LOCATED 12" TO 24" FROM THE BASE.
2. ALL STEEL REINF. SHALL HAVE 3" MINIMUM CONCRETE COVER.
3. SQUARE TOP BLOCKS SHALL BE USED IN EASEMENTS.
4. ROUND TOP BLOCKS SHALL BE USED IN STREETS.
5. FOR CONNECTION OF MAIN OR SIDE SEWERS BELOW SHELF, SEE DWG-1.



UPPER SECTION



BASE SECTION A-A



BASE SECTION



CITY OF SCOTTS VALLEY STANDARD DETAIL

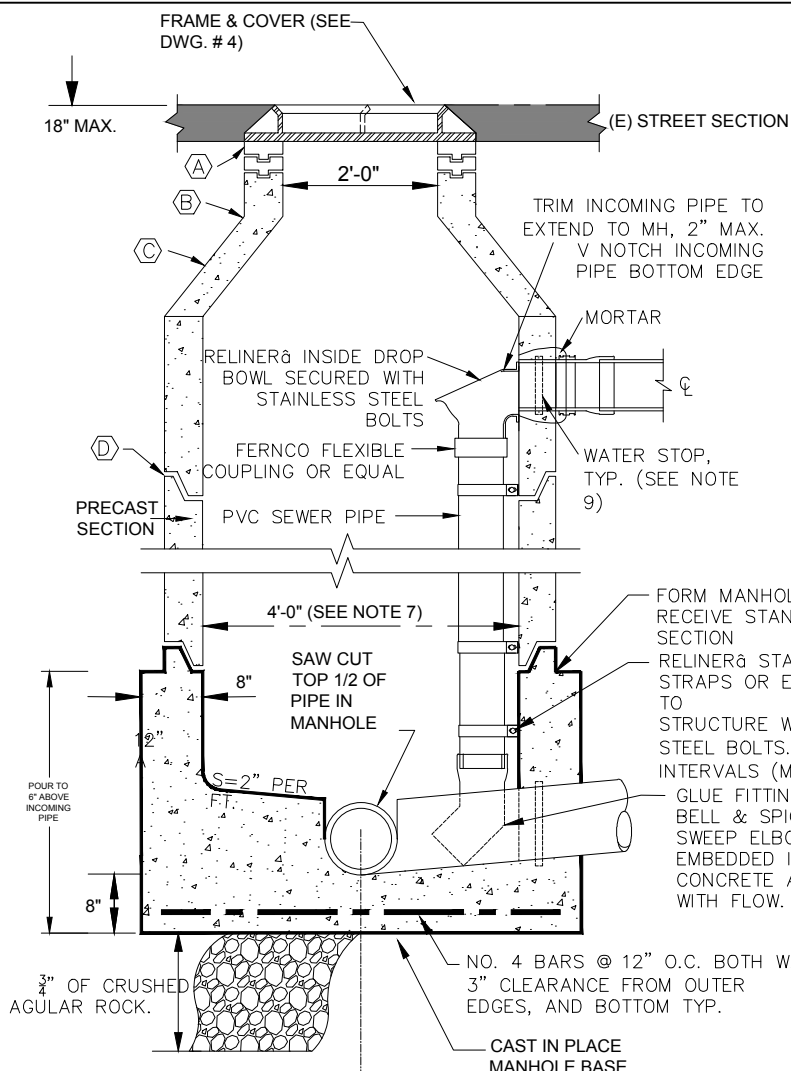
STANDARD TRUNK MANHOLE

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
SS-07

SCALE: NONE

DATE
12/06/17



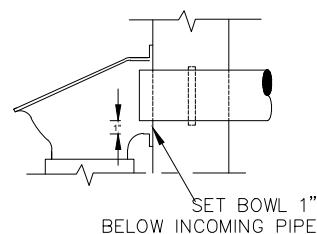
(A) PRECAST ADJUSTMENT RINGS

(B) USE OF ECCENTRIC CONES WILL ONLY BE ALLOWED WITH SPECIAL APPROVAL BY THE ENGINEER. IF USED, VERTICAL WALL SHALL BE SITUATED OPPOSITE OUTLET PIPE

(C) PRECAST TAPERED SECTION

(D) 2\"/>

INSTALLATION DETAIL



1. MANHOLE BASE SHALL BE CAST IN PLACE (SIX SACK 3/4\"/>

2. MANHOLE BASES SHALL BE CAST OR PLACED AGAINST 12\"/>

3. SHELF SHALL BE VERTICAL FROM PIPE SPRINGLINE TO HEIGHT OF CROWN. THE SHELF (SLOPED AT 2\"/>

4. VERTICAL PIPE AND TAPER SECTIONS TO BE REINFORCED CONCRETE A.S.T.M. C-76 CLASS II.

5. FOR SANITARY SEWERS PROVIDE DROP INLET WHERE GRADE OF ENTERING LINE IS 24\"/>

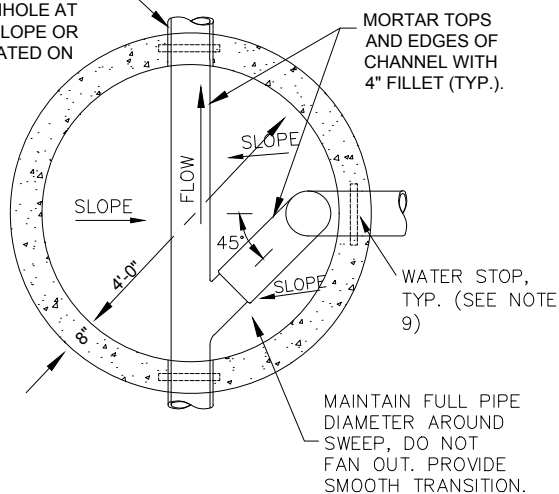
6. HOUSE LATERALS ARE NOT TO CONNECT TO THE MANHOLE WITHOUT THE PERMISSION OF THE CITY ENGINEER.

7. MANHOLES WITH PIPE GREATER THAN 24\"/>

8. FALSE CHANNELS SHALL BE INSTALLED AS NEEDED TO ALLOW INSERTION OF VIDEO CAMERA INTO PIPES.

9. PRESS-SEAL GASKET CORPORATION, WS SERIES WATERSTOP GROUTING RINGS OR APPROVED EQUAL TO BE INSTALLED.

BEFORE POURING BASE, PIPE SHALL BE LAID THROUGH MANHOLE AT THE PROPER SLOPE OR GRADES INDICATED ON PLANS.



CITY OF SCOTTS VALLEY STANDARD DETAIL

DROP MANHOLE

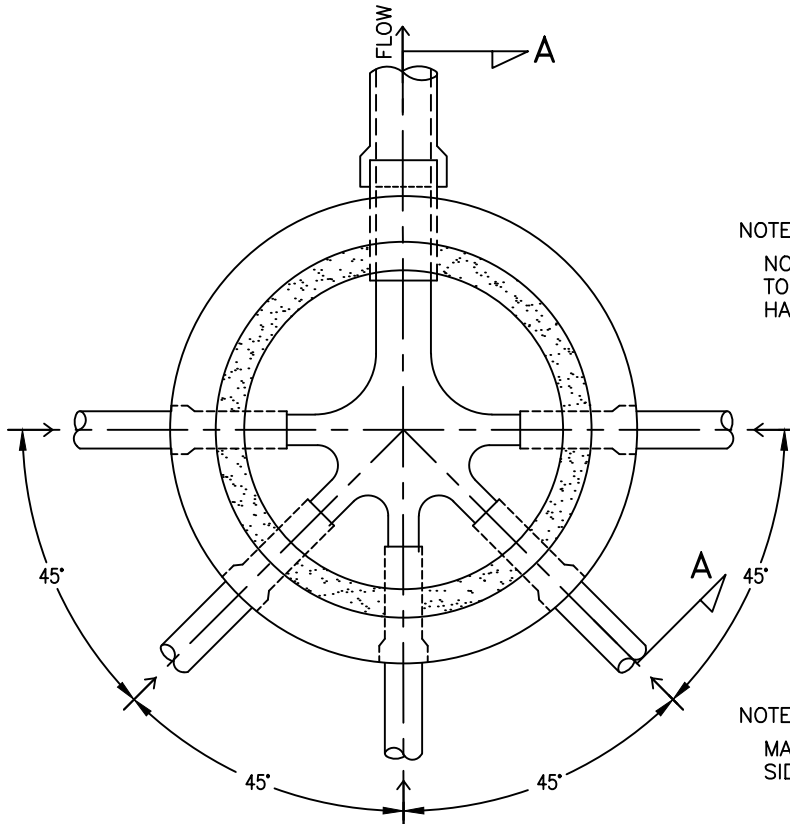
SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
SS-08

SCALE: NONE

DATE
12/06/17

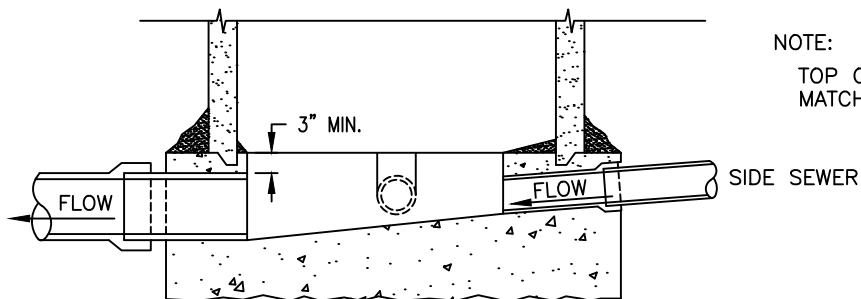




NOTE:
NO LATERAL CONNECTIONS
TO BE MADE IN DOWNSTREAM
HALF OF MANHOLE

NOTE:
MAXIMUM NUMBER OF
SIDE SEWERS ALLOWED = 5

TOP SECTION SAME AS
STANDARD MANHOLE



NOTE:
TOP OF SIDE SEWERS SHALL
MATCH TOP OF OUTLET PIPE



CITY OF SCOTTS VALLEY STANDARD DETAIL

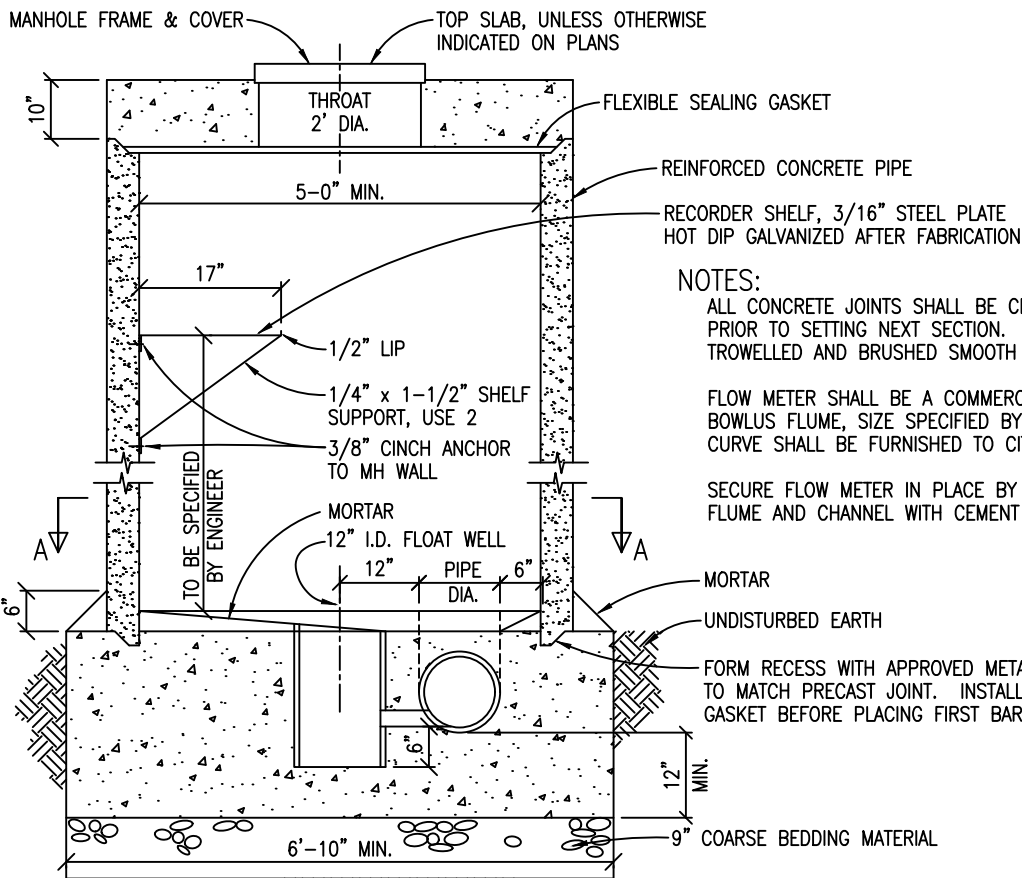
CUL-DE-SAC MANHOLE

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:
SS-09

SCALE: NONE

DATE
12/06/17



NOTES:

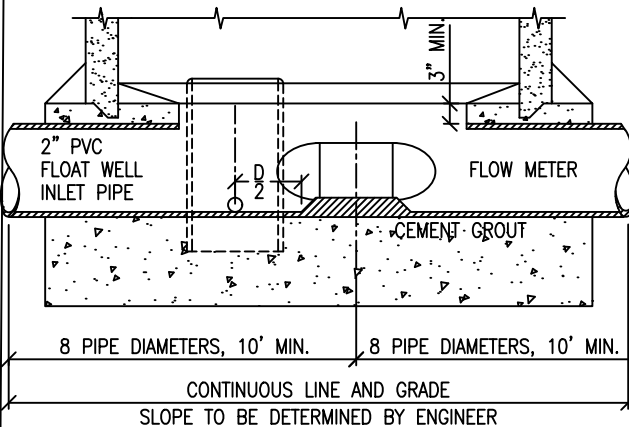
ALL CONCRETE JOINTS SHALL BE CLEANED, WETTED AND MORTARED PRIOR TO SETTING NEXT SECTION. THE JOINTS SHALL BE PACKED, TROWELLED AND BRUSHED SMOOTH WHILE MORTAR IS PLASTIC.

FLOW METER SHALL BE A COMMERCIALY MANUFACTURED PALMER-BOWLUS FLUME, SIZE SPECIFIED BY DISTRICT. FLUME RATING CURVE SHALL BE FURNISHED TO CITY.

SECURE FLOW METER IN PLACE BY FILLING ENTIRE VOID BETWEEN FLUME AND CHANNEL WITH CEMENT GROUT.

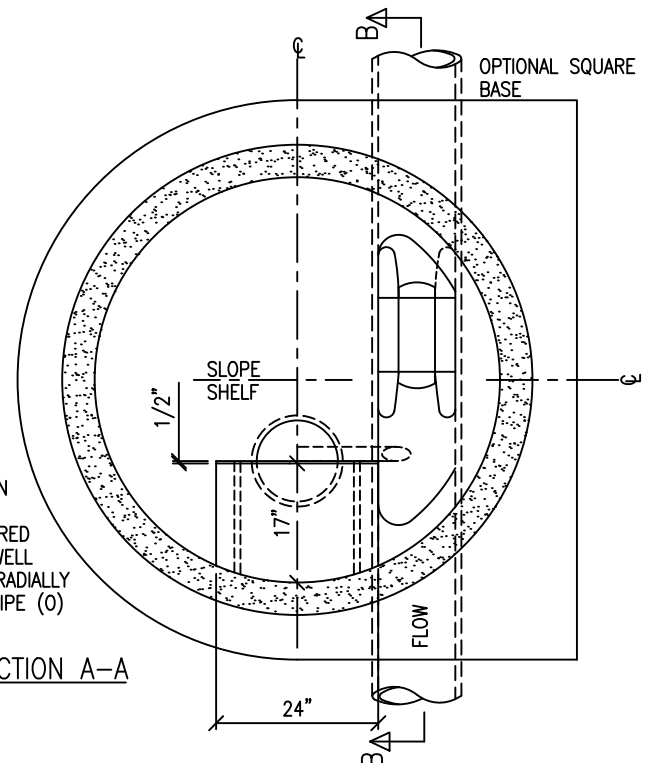
VERTICAL SECTION

OPTIONAL ROUND
BASE



TRUE LOCATION
OF RECORDER
SHELF, CENTERED
OVER FLOAT WELL
WILL ROTATE RADIALLY
AS SIZE OF PIPE (Ø)
INCREASES.

SECTION A-A



CITY OF SCOTTS VALLEY STANDARD DETAIL

METERING MANHOLE

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

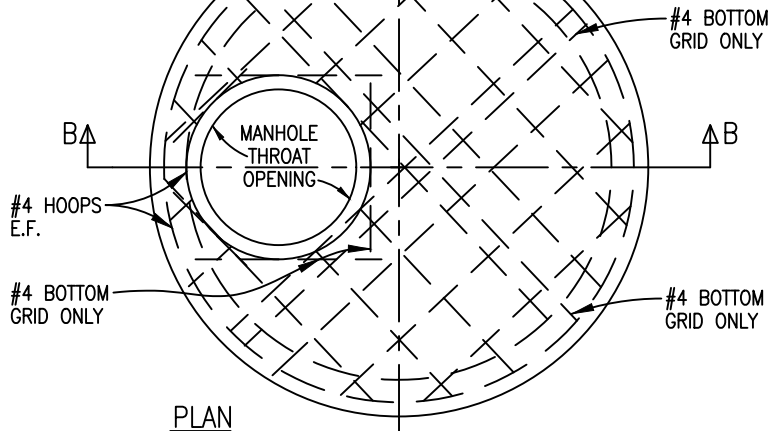
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SS-10

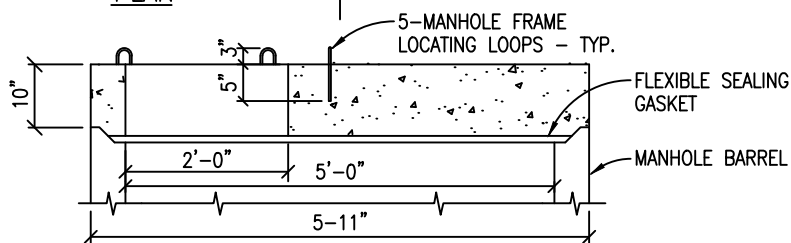
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DATE
12/06/17

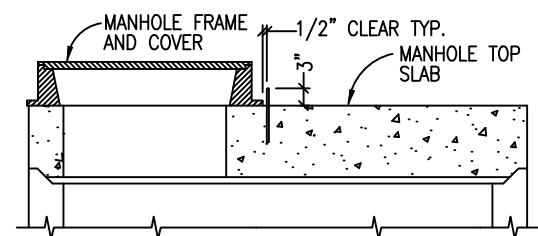
5-MANHOLE FRAME
LOCATING LOOPS



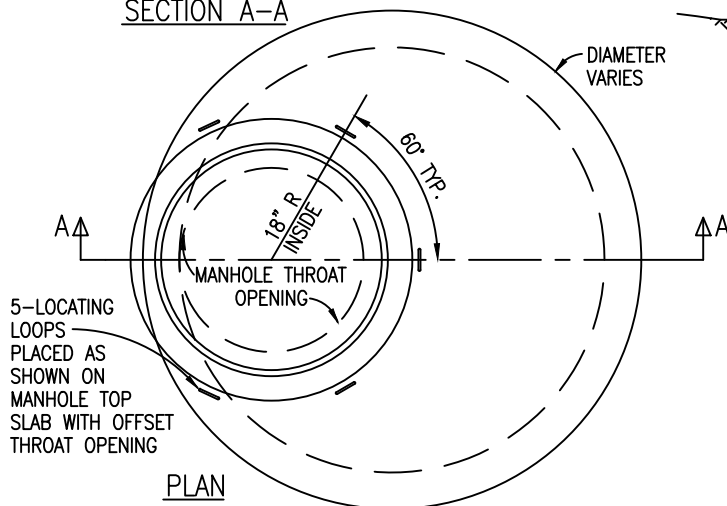
PLAN



SECTION B-B



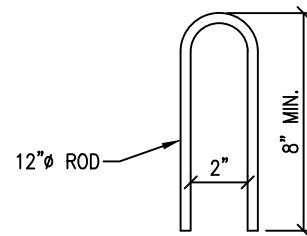
SECTION A-A



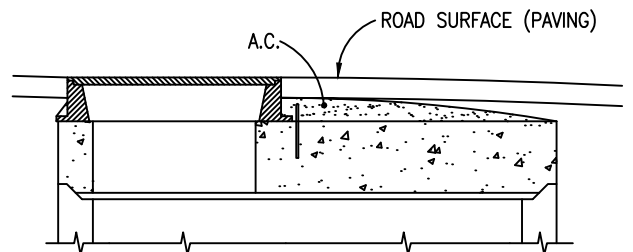
PLAN

JOINT RECESS SHALL IN ANY EVENT BE
FORMED TO FIT MANHOLE BARREL
SECTION USED.

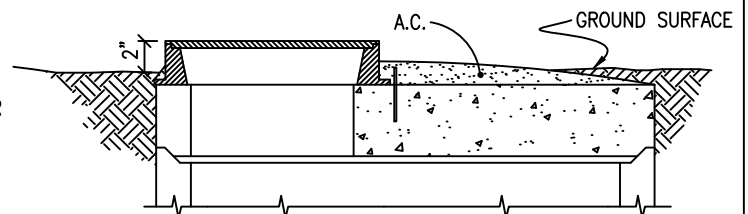
ALL STEEL TO BE #4 BARS PLACED
AS SHOWN. MAXIMUM SPACING 9".



MANHOLE FRAME
LOCATING LOOP DETAIL



ROADWAY PLACEMENT



EASEMENT PLACEMENT

CITY OF SCOTTS VALLEY STANDARD DETAIL

METERING MANHOLE
TOP SLAB

SCOTT HAMBY
DIRECTOR OF PUBLIC WORKS

DRAWING NO:

SS-11

SCALE: NONE

DATE
12/06/17

