

Ordinance No. _____

Ordinance of the Council of the City of Palo Alto Repealing and Replacing
Section 18.40.140 (Stream Corridor Protection and Review) of the Palo Alto Municipal
Code

The Council of the City of Palo Alto ORDAINS as follows:

SECTION 1. Findings and Declarations. The City Council of the City of Palo Alto finds and declares as follows:

- A. On November 13, 2017, the City Council adopted the 2030 Comprehensive Plan, which recognizes the value of its creeks and riparian areas for habitat, connectivity, design, and flood control. Specifically, Policy N3.3 aims to mitigate development impacts on creeks by establishing setback requirements and preserving their function as habitat corridors.
- B. On March 5, 2024, a virtual Community Information Session was conducted to inform about the ordinance update effort and to receive feedback from the community.
- C. On April 4, 2024, an informational report was prepared to inform the Architectural Review Board about the ordinance update effort.
- D. On August 14, 2024, the Planning and Transportation Commission conducted a study session and provided feedback and direction in preparing for the draft ordinance.
- E. On October 9, 2024, the Planning and Transportation Commission recommended that the City Council adopt the draft ordinance.
- F. The updated Stream Corridor Protection Ordinance intends to preserve and strengthen water and riparian resources, protect improvements from damage caused by potential stream flooding and bank erosion, and minimize storm water pollution.
- G. The updated Stream Corridor Protection Ordinance provides a better balance between development and conservation by establishing varying streamside setback distances for different areas of the City.

SECTION 2. Section 18.40.140 (Stream Corridor Protection and Review) of Chapter 18.40 (General Standards and Exceptions) of Title 18 (Zoning) of the Palo Alto Municipal Code is repealed in its entirety and replaced as follows:

18.40.140 Stream Corridor Protection and Review

(a) Purpose

The purpose of the natural resources protection measures specified below is to provide site planning and development standards intended to preserve and strengthen water and riparian resources, protect improvements from damage caused by potential stream flooding and bank erosion, and minimize storm water pollution.

(b) Definitions

Whenever the following terms are used in this chapter, they shall have the meaning established by this section:

- (1) "Bank" means any embankment, dike, levee, wall or similar feature of natural or man-made origin which adjoins or parallels any watercourse and which has as a function the confinement of the water of said watercourse.
- (2) "Fence" means an artificially constructed barrier or wall of any material or combination of materials erected to physically separate properties, provide privacy, or provide security or confinement.
- (3) "Fence, Wildlife-Friendly" means a fence that allows for safe passage of wildlife over or under the fence, and is visible especially to hooved animals and birds.
- (4) "Riparian Buffer" means land next to a stream or river within which development shall be controlled. It is often vegetated, usually with trees and shrubs, that serves as habitat and a protective filter for streams. This typically begins at top of bank and extends the distance specified in this chapter to form a continuous buffer of uniform width.
- (5) "Riparian Vegetation" means:
 - (A) Native vegetation which occurs in and/or adjacent to a watercourse.
 - (B) Vegetation growing on or near the banks of a stream or other body of water on soils that exhibit some wetness characteristics during some portion of the growing season.
 - (C) Vegetation which occurs along watercourses, and is structurally or floristically distinct from nearby, non-streamside vegetation.
 - (D) Terrestrial vegetation that grows beside rivers, streams, and other freshwater bodies and that depends on these water sources for soil moisture greater than would otherwise be available from local precipitation.
- (6) "Slope Stability Protection Area" means the area in which all development shall be excluded, subject to the provisions of this chapter. The slope stability protection area shall extend to a point 20 feet landward from the top of bank or to a point measured at a ratio of 2:1 (horizontal: vertical) landward from the toe of bank, whichever is greater.
- (7) "Stream" means any number of natural watercourses flowing from the hill areas to San Francisco Bay in which water flows at least periodically or intermittently through a bed or channel having banks; usually characterized by a distinct channel and a band of dense vegetation along the banks. This may include watercourses having a surface or subsurface flow that supports or has supported riparian vegetation, fish and/or aquatic life.

The presence of a stream is determined by one or more of the following criteria:

- (A) As designated by the City of Palo Alto as shown on maps maintained by the City;
- (B) As designated by a solid line or dash and three dots symbol on the largest scale of the USGS maps most recently published or any replacement to that symbol;
- (C) As designated by the Santa Clara Valley Water District as shown on maps maintained by the District;

- (D) As designated on the most recent maps maintained by Santa Clara County;
 - (E) As determined by a survey of the property by a licensed land surveyor.
 - (F) On a site plan which may be required by a permitting agency using the Criteria to Verify or Identify a Watercourse as a Stream set forth in the Santa Clara Valley Water Resources Protection Collaborative User Manual Guidelines and Standards for Land Uses Near Streams.
- (8) "Stream, Channelized" means a stream that has been straightened and/or enlarged for the purposes of storm runoff control or ease of navigation; may include lining of streambanks with a retaining material such as concrete.
 - (9) "Stream, Culverted/Underground" means a stream or portion of a stream located underground in a fully enclosed engineered structure such as a pipe or concrete box.
 - (10) "Stream, Natural" means a stream that remains in a natural or mostly undisturbed state.
 - (11) "Streambank Erosion" means to the wearing away or removal of soil and other material, such as rock and vegetation, from the stream bank.
 - (12) "Streamside Setback" means the area measured from top of bank in which the siting of buildings and other structures, impervious surfaces, outdoor activity areas, and ornamental landscaped areas is regulated by this Section.
 - (13) "Toe of Bank" (Figures 1 and 2) means the point in a channel where the slope of the bank meets the streambed.
 - (14) "Top of Bank" (Figures 1 and 2) means a stream channel boundary, which is determined as follows:
 - (A) "Stream with Defined Bank." Top of bank is the line connecting all the points where there is substantial grade change between the stream bank and the property as determined by a qualified biologist or otherwise determined at the discretion of the Director.
 - (B) "Stream without Defined Bank." Where there is no defined bank and the slope from the streambed is less than 2:1, top of bank is considered the one-hundred-year storm surface elevation established in the most recent flood insurance study for the City of Palo Alto or the water surface elevation as calculated by a qualified biologist.
 - (C) "Channelized Stream." Where a fully channelized stream exists, top of bank is the highest edge of the engineered channel.

//

//

FIGURE 1: TOP OF BANK, STREAM WITH DEFINED BANK

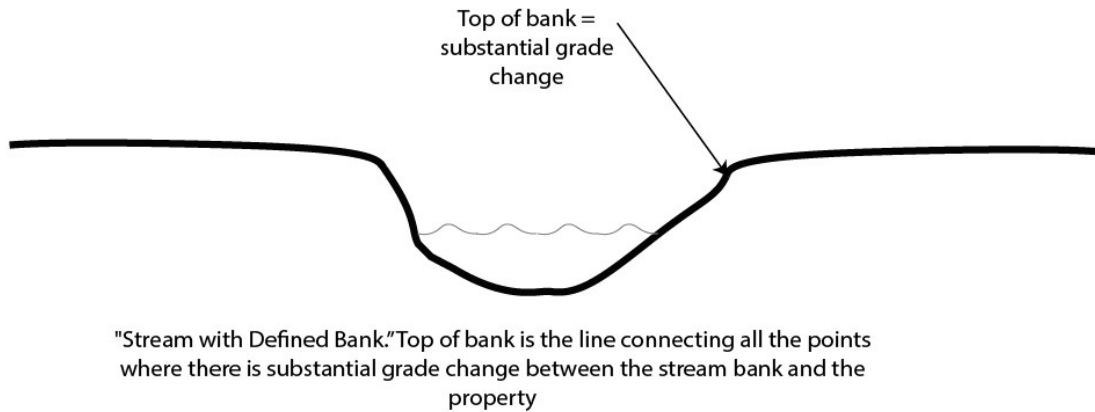
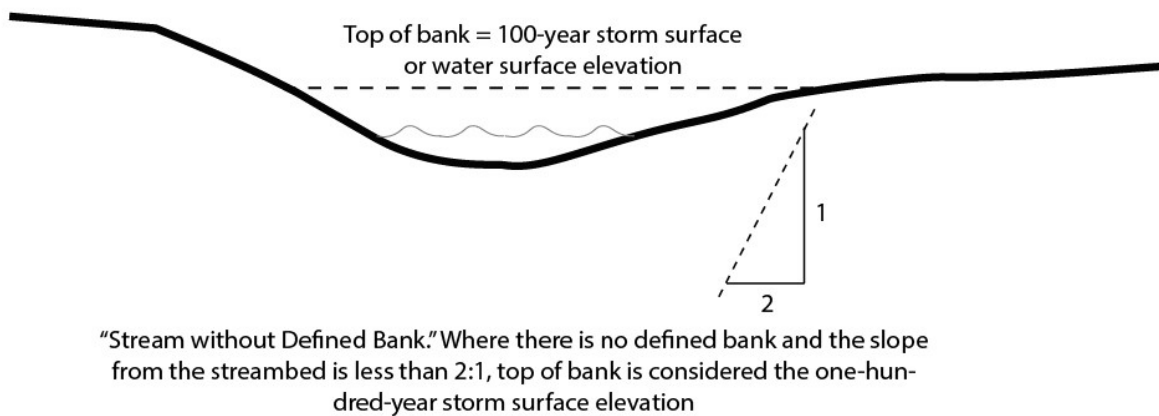


FIGURE 2: TOP OF BANK, STREAM WITHOUT DEFINED BANK



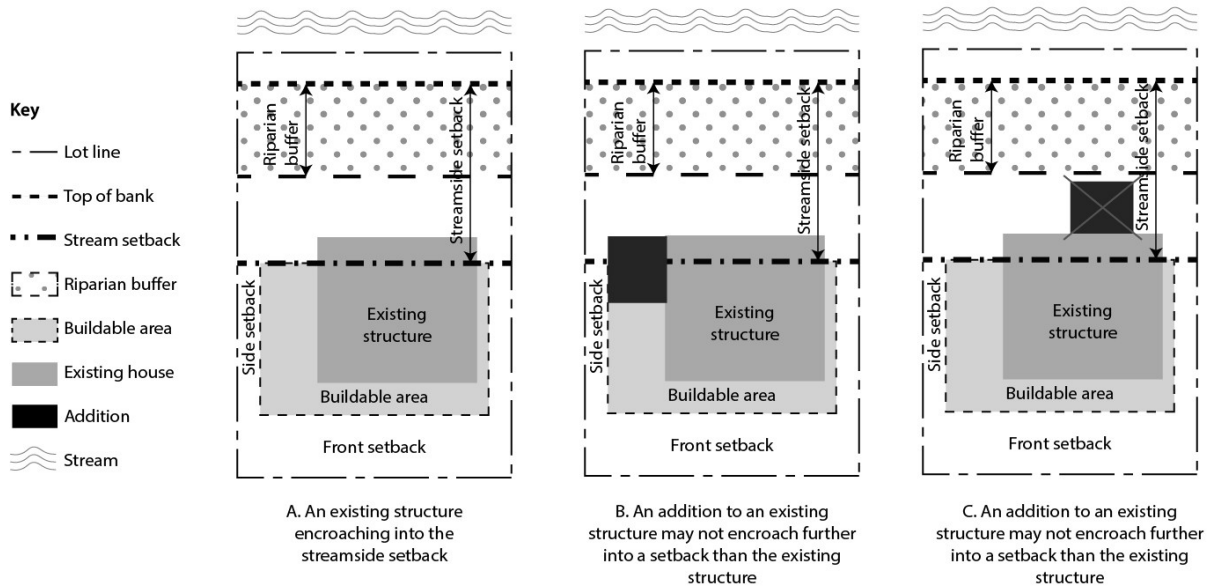
- (15) "Wall, Retaining" means a structural wall designed to hold in place a mass of soil so that it can be retained at different levels on each side of the wall, and/or restrain a slope.

(c) Applicability.

The following types of developments are subject to this Section:

- (1) Development in all zoning districts except the R-1, R-2 and RMD districts.
- (2) Development in the R-1, R-2, or RMD zoning districts that:
 - a. Require discretionary review; or
 - b. Propose to encroach further into the Streamside Setback than the existing condition (Figure 3).

FIGURE 3: ENCROACHMENTS INTO STREAMSIDE SETBACK



(d) Exemptions

The following projects are exempt from this Section:

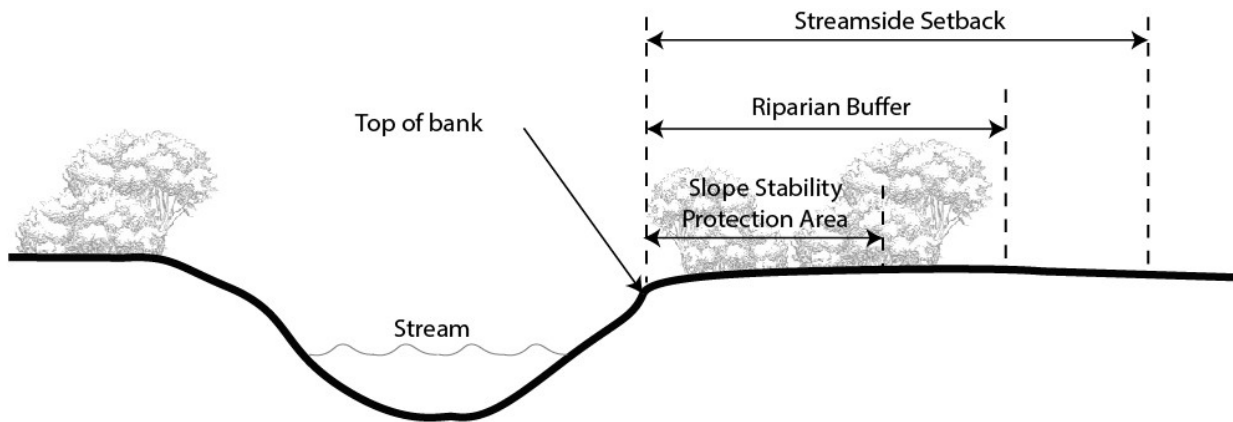
- (1) Properties separated from the stream by a public street;
- (2) Less than 3 cubic yards of earthwork associated with landscaping with native riparian vegetation or with remedial stream bank stability work deemed necessary by the director of public works;
- (3) Retaining walls less than three feet in height that are located outside of the Slope Stability Protection Area;
- (4) Interior construction or alterations;
- (5) Replacement of utility service laterals where location outside the protected areas is not readily available.
- (6) Storage buildings not greater than 120 sq. ft.;
- (7) Building improvements that do not expand the building footprint further into the Streamside Setback.
- (8) expansion of existing development along channelized streams in Urbanized Areas.

(e) Requirements Within the Streamside Setback and Riparian Buffer

Table 1: Streamside Setback and Riparian Buffer Regulations

	Streamside Setback (ft) ⁽¹⁾	Riparian Buffer (ft)
Open Space and Rural Areas (west of Foothill Expressway)		
Natural Stream	150	30
Channelized Stream	150	none
Culverted/Underground Stream	n/a	none
Urbanized Areas (east of Foothill Expressway, west of Highway 101)		
Natural Stream	40	20
Channelized Stream	40	none
Culverted/Underground Stream	none	none
Baylands Areas (east of Highway 101)		
Natural Stream	150	30
Channelized Stream	150	none
Culverted/Underground Stream	n/a	none
NOTES:		
(1) For natural streams and channelized streams in all locations, a Slope Stability Protection Area shall be maintained consisting of 20 feet landward from the top of bank or to a point measured at a ratio of 2:1 (horizontal: vertical) landward from the toe of bank, whichever is greater.		

FIGURE 4: STREAMSIDE REVIEW ELEMENTS



(1) Streamside Setback Requirements:

(A) Vegetation

- (i) Existing native riparian vegetation within the Streamside Setback shall be retained unless its removal is approved by the Director. Replacement planting shall be required when native riparian vegetation is approved for removal.

- (ii) Planting of non-native invasive plant species within a riparian corridor or adjacent to a riparian corridor shall not be permitted. Prohibited plant material is listed in the Santa Clara Valley Water Resources Protection Collaborative's User Manual *Guidelines and Standards for Land Uses Near Streams*, or other species that will negatively impact the area, to the satisfaction of PDS and SCVWD.
 - (iii) Only native riparian vegetation shall be planted between the top of the banks of a stream or within the Riparian Buffer.
 - (iv) Installation of new ornamental landscaping shall be allowed provided plantings are non-invasive species.
 - (v) Removed trees shall be replaced with native riparian trees following the replacement ratios of the tree technical manual.
 - (B) Fences.
 - (i) Fence shall conform to PAMC 16.24.
 - (ii) In the areas west of Foothill Expressway, Wildlife-Friendly Fences shall have at least one gate which can be opened in the event an animal become trapped and needs to be released.
 - (C) Uses and Structures.
 - (i) No buildings or structures shall be permitted in the Streamside Setback without an exception pursuant to subdivision (e)(4).
 - (ii) Loading docks, trash enclosures, chemical storage areas, and stationary noise-producing mechanical equipment shall be located a minimum of 50 feet from the top of bank of a stream, provided that the Director of Planning and Development Services may allow equipment closer than 50 feet where site conditions and/or other setback requirements make compliance impractical; the Director shall not allow noise-producing (50 dBA or greater) equipment closer than 50 feet unless located within an enclosure to reduce noise impacts.
 - (iii) Septic tanks and leach fields may not be located closer than 50 feet from the top of bank.
 - (iv) No more than Light Reflectance Value (LRV) of 83 of building finishes on buildings facing streams or riparian areas shall be allowed.
 - (D) Grading. Pursuant to Chapter 16.28, a Grading Permit is generally required for all work within 100 (one hundred) feet of top of bank.
- (2) Riparian Buffer General Requirements:
- (A) Vegetation
 - (i) All native riparian vegetation within the Streamside Setback shall be retained unless its removal is approved by the Director. Replacement planting shall be required when native riparian vegetation is approved for removal.

- (ii) Planting of non-native invasive plant species within a riparian corridor or adjacent to a riparian corridor shall not be permitted. Prohibited plant material is listed in the Santa Clara Valley Water Resources Protection Collaborative's User Manual *Guidelines and Standards for Land Uses Near Streams*, or other species that will negatively impact the area, to the satisfaction of PDS and SCVWD.
- (iii) Only native riparian vegetation shall be planted between the top of the banks of a stream or within the Riparian Buffer.
- (iv) Installation of new ornamental landscaping shall not be permitted within the Riparian Buffer of Natural Streams.
- (v) Removed trees shall be replaced with native riparian trees following the replacement ratios of the tree technical manual.
- (vi) Irrigation systems shall be designed such that they do not cause soil erosion. If within outboard stream bank slope, irrigation must be bubbler or drip-type systems, and must be used for establishment purposes only.

(B) Fences

- (i) New Wildlife-friendly fences shall not be constructed within the Slope Stability Protection Area unless an exception is granted by the Director of Public Works pursuant to 18.40.140(e)(4)(B).
- (ii) Fence materials shall conform to PAMC 16.24.
- (iii) In the areas west of Foothill Expressway, Wildlife-Friendly Fences shall be allowed with the following specifications:
 - I. Distance from ground to top of fence shall not exceed 40 inches (total fence height).
 - II. The distance from the ground to the bottom of the fence shall be at least 18 inches.
 - III. Fence posts shall be spaced at intervals no greater than 16 feet.
 - IV. Fences shall be constructed with a top rail wooden bar for visibility and to prevent entanglement.
 - V. If a wire fence, wires shall be spaced at least 12 inches apart, shall be smooth, and shall be kept tight.
 - VI. Fences shall have at least one gate which can be opened in the event an animal become trapped and needs to be released.

- (C) No buildings or structures shall be allowed without an exception pursuant to subdivision (e)(4).

(3) Slope Stability Protection Area:

- (A) In all instances a Slope Stability Protection Area shall be maintained consisting of 20 feet landward from the top of bank or to a point measured at a ratio of 2:1 (horizontal: vertical) landward from the toe of bank, whichever is greater.
- (B) No structures or uses are permitted within the Slope Stability Protection area unless an exception is granted by Director of Public Works where the applicant provides a geotechnical slope stability analysis, demonstrating that the proposed development would not threaten the stability of the stream bank slope, require introduction of hardscape in order to maintain the stream bank slope, or be at risk of damage from future bank stability or erosion, and demonstrating how maintenance and repair of the stream could be provided with the proposed development in place.

(4) Exceptions

(A) Minor Exceptions.

- (i) Minor deviations shall be granted as part of a proposed improvement or addition to an existing single-family or two-family structure, or accessory structure, or both, in the RE, R-1, RMD, or R-2 district, under all of the following conditions:
 - I. The required Stream Setback covers more than 40 percent of the parcel.
 - II. The deviation would not result in removal of existing riparian vegetation.
- (ii) Projects meeting the criteria of subsection (i) above may be granted up to three of the following deviations, not to exceed the specified limits:
 - I. To allow the primary building to encroach up to 15 feet into the required stream setback.
 - II. To allow a basement to encroach, along with above grade floor area, up to 15 feet into a required stream setback.
 - III. To allow an alternative stream setback to be the average of the existing setbacks of the adjoining property or properties, rather than the stream setback requirement in Table 1.
 - IV. To allow a legal non-conforming building wall that encroaches up to 15 feet into the required stream setback to be extended up to one-quarter of the length of the existing wall or ten feet, whichever is shorter.
 - V. To allow a horizontal extension (pursuant to Section 18.12.050(a) (Setback/Yard Encroachments and Projections) of a portion of an existing legal nonconforming building wall that is more than twelve feet above grade into the required stream setback. Such horizontal extensions must remain within the height and daylight plane limits for the district unless an HIE or variance for a height or daylight plane encroachment is granted (pursuant to Section 18.12.120).
 - VI. To allow an increase in the height of an existing legally non-conforming building wall that encroaches into the stream setback. Such vertical extensions must remain within the height and daylight plane limits for the district unless an HIE or variance

for a height or daylight plane encroachment is granted (pursuant to Section 18.12.120).

- VII. To allow similar minor exceptions, when determined by the director to be similar in magnitude and scope to those listed in subsections (I) through (VI) above. Provided, under no circumstances may such exceptions exceed the limits established in subsections (I) through (VI) above.
- (B) Major Exceptions. A Major Exception may be granted for those requests that do not meet the criteria for a Minor Exception, as outlined in Section 18.40.140(e)(4). Applicants requesting a Major Exception from a required Stream Setback must submit documentation supporting all of the following findings:
 - i. There is no reasonable alternative for the proposed project that avoids or reduces the encroachment into the setback area;
 - ii. The reduced setback will not significantly reduce or adversely impact the streamside environment;
 - iii. The granting of the exception will not be detrimental or injurious to properties that are adjacent, upstream, downstream, or on the opposing bank.
- (C) Major Exception Review Process. Notwithstanding PAMC 18.77.075(a), any Major Deviation requests shall follow the review process set forth in 18.77.075:

(f) Lot Measurement Along Watercourses

No portion of a lot which is located within the easement lines, or top of the banks in the event such easement lines cannot be ascertained, of any natural watercourse, river, stream, creek, waterway, channel, or flood-control easement or drainage easement shall be included in the determination of lot area and lot dimensions. In the case of any such lot which is bounded, in whole or in part, by any such natural watercourse, river, stream, creek, waterway, channel, or flood-control easement or drainage easement, for those portions of the lot so bounded, all measurements and dimensions specified by this title and related to or determined from lot lines shall be measured from said easement line, or top of the bank, of such watercourse. Provided the expansion of an existing easement over a lot adjacent to San Francisquito Creek and fronting on Edgewood Drive in favor of the Santa Clara Valley Water District (or its successor in interest) on or after January 1, 2002 shall not alter the calculation of lot area. Lot area, lot dimensions, and setbacks shall be calculated for such lots as if the post-January 1, 2002 easement had not been created. Lot area shall be defined per 18.04.030 (85).

SECTION 3. If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by a 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 passed this Ordinance and each and every section, subsection, sentence, clause, or phrase not declared invalid or unconstitutional without regard to whether any portion of the Ordinance would be subsequently declared invalid or unconstitutional.

SECTION 4. The Council finds that the Ordinance is exempt from the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15308 because adoption of this ordinance is an action to protect the environment.

SECTION 5. This Ordinance shall be effective on the thirty-first date after the date of its adoption.

INTRODUCED:

PASSED:

AYES:

NOES:

ABSENT:

ABSTENTIONS:

ATTEST:

City Clerk

Mayor

APPROVED AS TO FORM:

APPROVED:

Assistant City Attorney

City Manager

Director of Planning and
Development Services