September 18, 2026

Terrill L. Tillman, AICP
Principal Planner
Pima County Development Services
201 N. Stone Avenue, 1st Floor
Tucson, AZ 85701

RE: Objection to Rezoning Application P26SP00002

Subject: Shadowing Effect Concerns Letter

Dear Ms. Tillman and Members of the Pima County Planning and Zoning Commission:

On behalf of the Mission Hills Townhomes Homeowners Association's Board of Directors ("the Board"), I am writing to formally register our strong objection to **Rezoning Application P26SP00002**, submitted by The Club at Skyline, LLC for the property located at 5200 East Saint Andrews Drive ("the Plan").

Background and Context

The Mission Hills Townhomes sit on the lower eastern edge of a ravine, approximately **20 feet lower** than the upper western natural edge. Placing multi-story structures (**26 feet high** according to the Plan) on the opposing high ridge of the shared ravine amplifies the vertical scale difference from 20 feet to **46 feet**, creating a severe and disruptive grade imbalance.

Additional Technical Detail

As demonstrated by an objective topographic cross-section (see Attachment 1), the proposed western townhome development has the potential to cause severe, detrimental shadow casting over the existing Mission Hills Townhomes, fundamentally altering living conditions and violating standard planning principles regarding equitable light and air access.

Based on Tucson's specific latitude, an analysis of the winter solstice (December 21) reveals severe impacts to the Mission Hills Townhomes at sun angles of 15.1° and 7.8°

respectively, effectively stripping the neighborhood and the eastern slope of the ravine of over one and a half hours of natural late-afternoon sunlight:

- 3:15 PM – Total Eastern Slope Shade & "Front Blockout" Begins: With the sun at an altitude of 15.1°, the massive scale of the proposed western structure will immediately cast the entire eastern slope of the ravine into total shade and begin blocking direct sunlight across the western facades of the Mission Hills Townhomes.
- 3:45 PM – 100% Full Community Shade Reached: Within just 30 minutes, by 3:45 PM (with the sun at 7.8°), the shadow line will entirely engulf the roofs, casting the Mission Hills Townhomes into total, continuous shade.
- Over 1.5 Hours of Daily Sunlight Lost: Because the winter solstice sunset in Tucson occurs at approximately 5:18 PM, the development of the new townhomes on the western side of the ravine prematurely ends the afternoon daylight. Mission Hills Townhomes residents will be deprived of direct sunlight for approximately 1.5 hours before natural sunset occurs.
- Localized Temperature Drop and "Cold Sink" Microclimate Effect: In Tucson's arid desert climate, building surfaces rely heavily on direct solar radiation to maintain warmth. The immediate cut-off of afternoon sunlight will trigger rapid cooling, causing a localized surface temperature drop the moment the shadow hits. Furthermore, because cold air is dense and naturally sinks, the deep shade cast across the ridge will turn the lower east side of the ravine into an artificial "cold sink," trapping cold air and frost pockets around the Mission Hills Townhomes hours before natural sunset. This could artificially drive up winter heating utility costs by forcing HVAC systems to activate prematurely.
- Disruption of Ravine Flora and Desert Microecology: Natural ravines in the Sonoran Desert function as fragile, highly localized ecological microclimates. Native desert vegetation relies heavily on precise cycles of winter solar radiation to survive low nighttime temperatures and morning frosts. By prematurely casting the eastern slope into total shade by 3:15 PM, the proposed development drastically limits the heat-loading capability of the ravine's soil. This artificial increase in frost duration and drop in ambient temperature threatens the survival of sensitive native species (such as localized desert succulents, cacti, and microphyllous nurse plants) that cannot adapt to a prolonged, human-induced "cold sink."
- Compounded Risk of Slope Instability and Accelerated Soil Erosion: The structural integrity of the ravine's steep slopes relies entirely on the root-matrix cohesion provided by native flora and photosynthetic biological soil crusts (biocrusts) unique

to the Sonoran Desert. By disrupting the microecology and driving a decline in vegetative cover, the proposed development will systematically degrade this natural binding network. Stripped of healthy root systems and protective biocrusts, the highly erodible ravine soils will likely face severe stability failure. This can create an imminent hazard of accelerated gully erosion, severe sediment runoff, and potential slope failure along the shared ravine edge during Southern Arizona's heavy monsoon and winter storm events.

- Impact on Wildlife Corridors: Ravines are primary movement corridors for local Tucson wildlife seeking shelter, forage, and thermal relief. Artificially forcing a rapid evening drop in temperature and light availability alters the natural twilight activity patterns of native wildlife, forcing animals out of their natural habitat prematurely or exposing them to harsher localized winter freezes.

For the reasons listed above, the Board urges Pima County Development Services and the Planning and Zoning Commission to **deny this rezoning request** in its current form. The proposed elevation and massing fail to respect the unique topography of the ravine, unfairly shifting the burden of this high-density design onto the lower-lying existing residents while introducing severe risks of localized microclimatic cooling, ecological disruption, and slope instability.

Please ensure this letter is fully incorporated into the official staff report and public record for Rezoning Application P26SP00002. We request formal notification of all future public hearings and staff reports.

Sincerely,

Janet Emery
President, Mission Hills Townhomes Homeowners Association
5251 E Mission Hill Drive, Box 7

Attachments: 1

Attachment 1 – Winter Solstice (Dec 21) Shadow Progression Across the Ravine - Case No. P26SP00002

Cross-section looking North across the ravine with the proposed 26 ft high townhomes shown in blue and the Mission Hills Townhomes (approximately 12 ft high) shown in yellow.

The grey shaded region clearly visualizes how the proposed townhomes on the western edge of the ravine combined with the ridge height completely engulfs the eastern side of the ravine by 3:15 PM and the Mission Hills Townhomes by 3:45 pm (northern most row of Mission Hills Townhomes used in this example).

