

Piedmont Hills High School Science Courtyard

San Jose, California
Completed – May 2019

GENERAL DESIGN

Concept Statement

In response to a dramatic increase in interest in the science curriculum, Piedmont Hills High School (San Jose, California) sought to construct a brand-new science hub. The new facility puts these disciplines on full display, with prominent connections between classroom instruction spaces and outdoor learning pods. In addition to supporting the science curriculum, the new courtyard space provides an interactive gateway between the heart of the campus and the main student parking area.

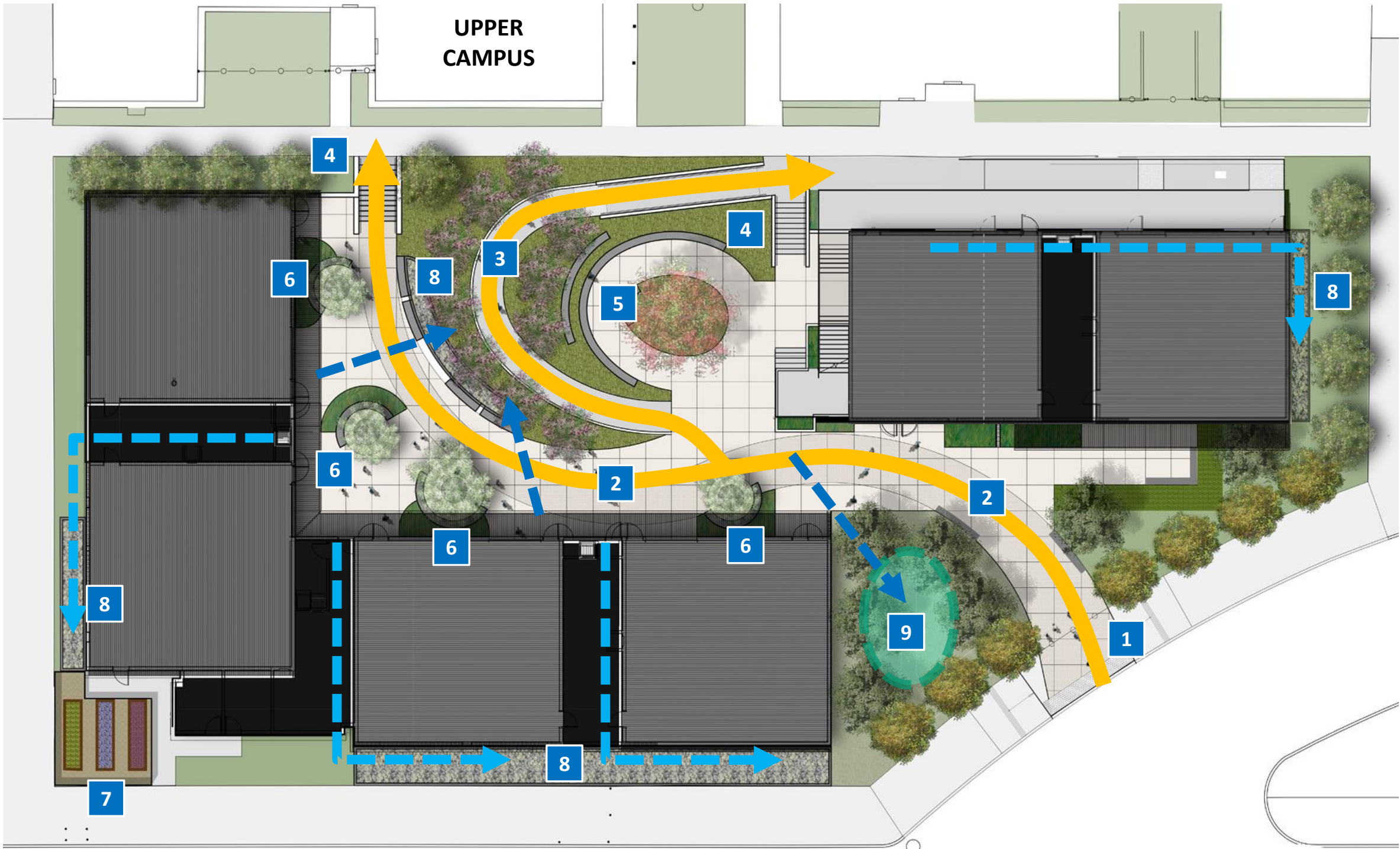
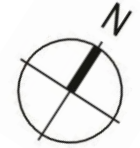
Placed on a sloping site, the two building wings frame the interior courtyard. The design utilizes the existing grade change to create an intimate outdoor amphitheater/classroom, while also providing an exterior accessible path of travel, alleviating the need for an expensive elevator. The sinuous paving patterns and sloping walkway provide a contrast to the sharp angles of the architecture and direct foot-traffic towards the central portion of the campus.

Large garage doors create a seamless connection between the classroom and adjacent outdoor learning spaces, allowing students the option of taking their work outside while also providing visual access for teachers. Located on the north and east side of the building wing, with an abundance of near-perfect weather days, these outdoor spaces take advantage of the shade cast by the architecture.

The limited space for the project and the need to accommodate both learning spaces as well as campus circulation created an opportunity to express the stormwater collection and treatment in a compact and transparent fashion. Stormwater from the building roofs is collected and flows through downspouts that daylight at the concrete flow-through planters located around the perimeter. The courtyard space drains to a central flow through planter as well as a bioretention basin near the arrival. This creates a learning opportunity which dovetails with the science curriculum and directs pedestrian flow through the interactive space.

SITE PLAN

- 1** ARRIVE
- 2** PEDESTRIAN FLOW
- 3** ACCESSIBLE PATH OF TRAVEL
- 4** STAIRWAYS
- 5** AMPHITHEATER
- 6** LEARNING PODS
- 7** GARDEN
- 8** CONCRETE FLOW-THROUGH PLANTER
- 9** BIORETENTION BASIN



STUDENT PARKING



Multi-functional Gateway

The new science complex creates a campus gateway where none existed before and provides a social hub and connection between the central campus and the student parking (located under the solar panels). The view further east shows the nearby open space preserve.





Compact Solutions

Set at the southern end of the campus, the project is a gateway to the central campus and student life.

Building and site systems work in close concert to maintain strict sustainability goals. Stepped flow-through planters in the foreground are used to capture all roof run-off.



Learning on Display

Individual semi-circular learning pods at the perimeter extend the classrooms to the outdoors. The central amphitheater encourages larger group learning and provides an informal gathering space. The flow-through planter provides a real-world learning opportunity for sustainability and can be used as a teaching tool for water flow and treatment.



Pedestrian Thoroughfare

The science complex and courtyard create an active new threshold for student arrival on campus, providing circulation, social gathering and outdoor learning. The meandering pathways are informed by the topography and functional space requirements, while also giving form to such features as the amphitheater and and flow-through planter.

Expanded Learning

Students can easily move between the indoor classrooms and the outdoor learning spaces and can pull instructional equipment, tables and chairs to the outside. The architecture provides ample shade against the building.





New Opportunities

The welcoming character of the indoor-outdoor spaces and visual access to the classrooms creates a dynamic gathering opportunity for parent involvement and evening events.

Form and Function

The sinuous paving patterns direct students through the space while allowing them to engage with one another and the learning opportunities that are on display.

