



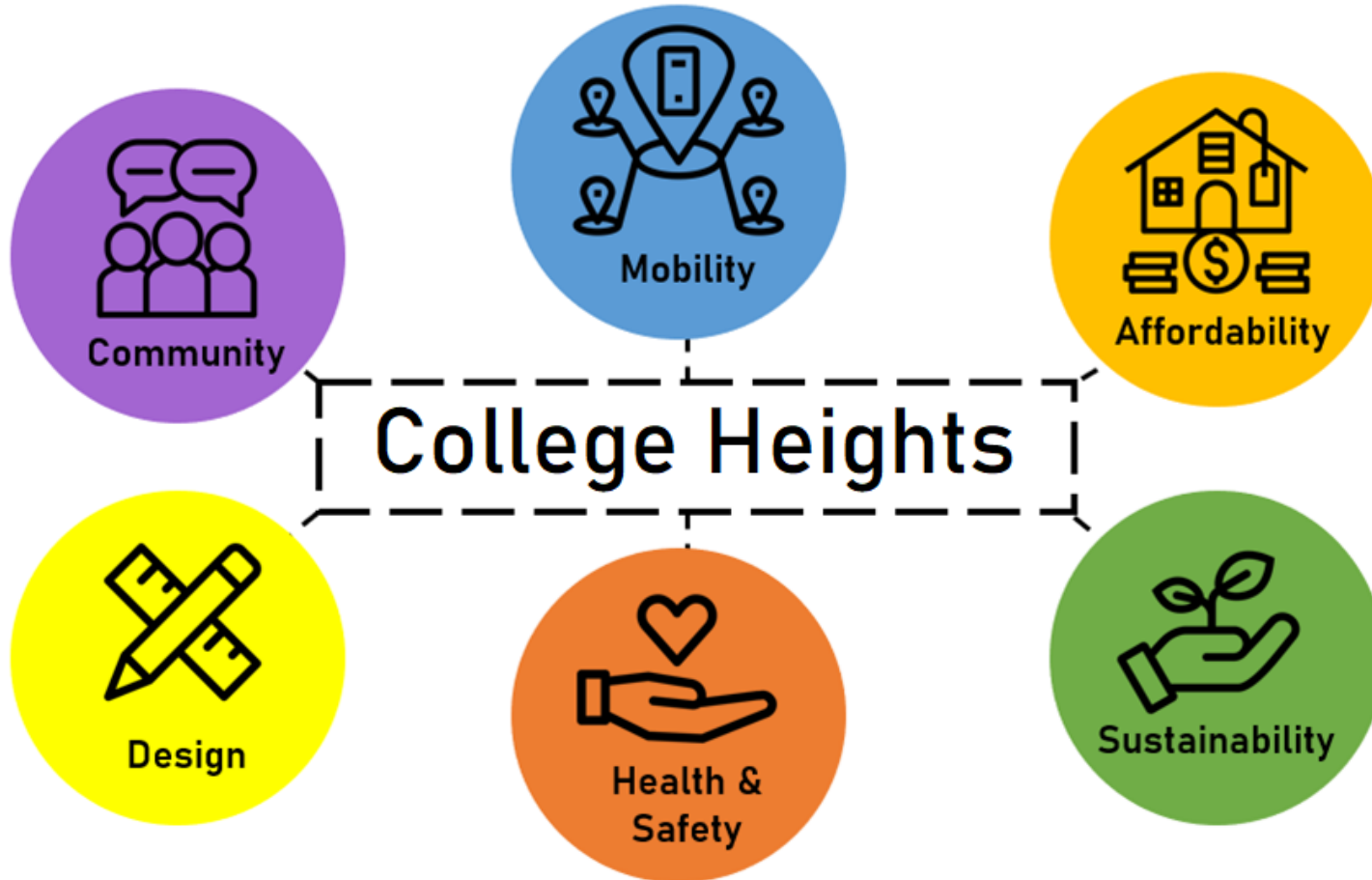
The Quarry

Hayward Area Planning Association proposes

College Heights

The Rebirth of the Walking Neighborhood
Killed by the Car

College Heights achieves



We will talk about...

- The Costs of Suburbia
 - A Better Way: Walkable Neighborhood Systems
 - The Site, The Site Plan
 - Village Center + Parks & Rec
 - Floor Plans: Unit Designs for our target markets
 - Six goals: Affordability; Sustainability; Mobility; Health, Safety, Security; Design, Community
 - Target Markets
 - Finances
 - Next Steps
-

Suburbia has costs

- Detached single family housing on large lots is inherently expensive both economically and environmentally
- Costs are necessarily higher for building and for car infrastructure, reducing affordability
- The system is not sustainable due to greenhouse gases, pollution, water consumption, and resource use
- Loss of farmland reduces land for food
- Loss of habitat reduces land for wildlife, nature

More...

- Suburbia is a car dependent monoculture lacking flexibility in travel modes
- Overuse of cars makes us fat, lazy, unhealthy
- Auto accidents maim and kill us
- Cars are inefficient in times of congestion or a lack of parking



Out of date already!

More...

- Cars are expensive in time and money.
Purchase, use, insure, maintain, repair, operate,
pay tolls, parking, tickets, accidents
 - Parking lots are ugly, and increase temperatures
on hot days
 - Suburbs can lack neighborliness, community
amenities and social interaction
 - Loss of nature and biodiversity diminishes the
human spirit
-

Walkable Neighborhood Systems (WNS)

- Neighborhood systems are a combination of land use and transportation, including how they are paid for
 - WNS look at neighborhoods defined by convenient walking distances and sufficient density to reduce the cost of housing, utilities, and transportation combined
 - WNS reach economics of scale that support mixed use, walking, transit, and low auto use
-

More...

- WNS have energy-efficient land use and housing, maximizing walking and transit, minimizing and dependency on cars
 - WNS sustainable transportation options have prices reflecting the real costs of fossil fuels
 - WNS use land and water efficiently and have low pollution
 - The general market does not offer sustainable housing in walkable neighborhoods
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College Heights is a WNS

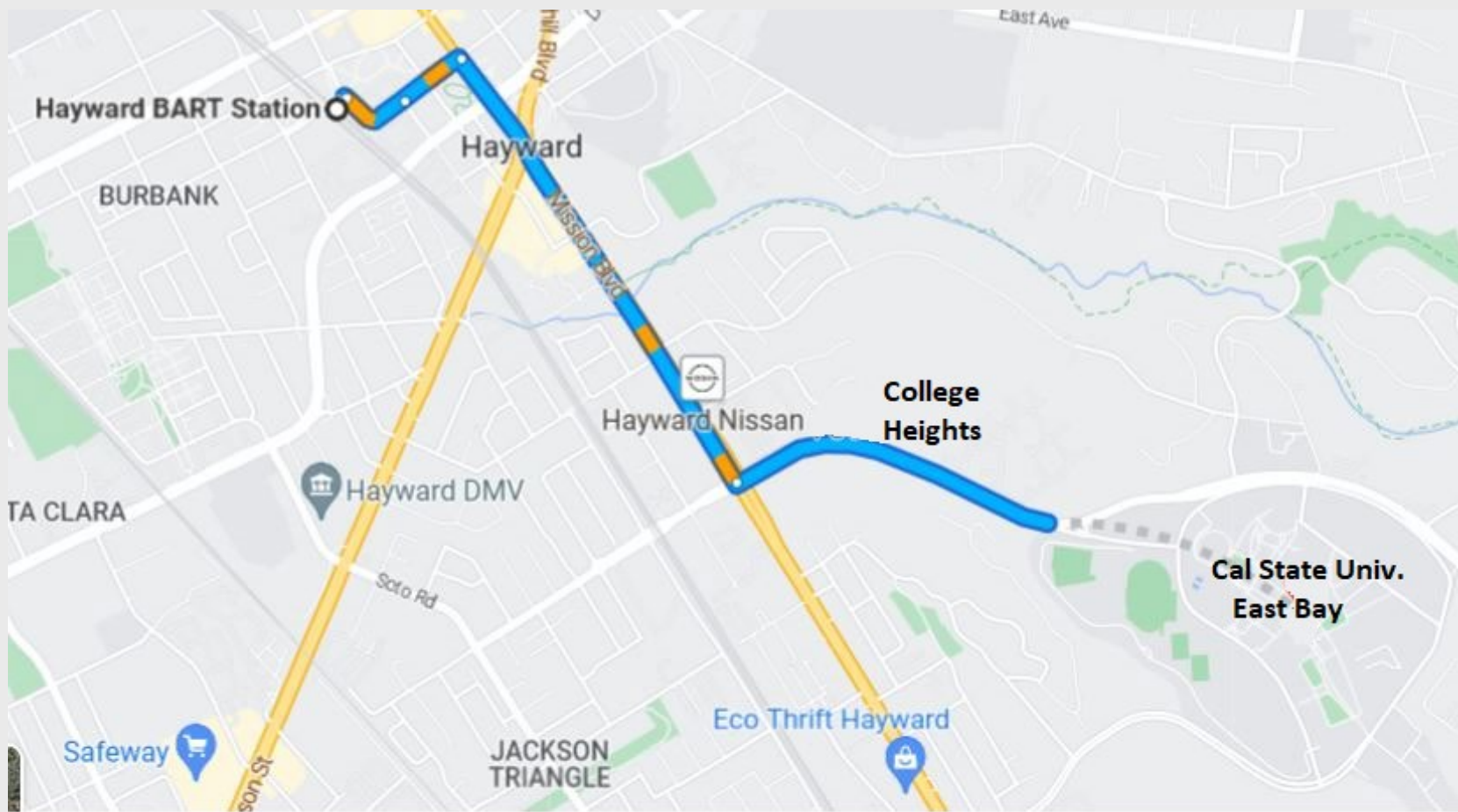
- Proposed in the hills near the California State University campus in Hayward
 - Designed for 732 units and about 1,800 residents
 - 120 persons per neighborhood acre
 - Low car dependence, yet convenient, healthy, attractive, safe, and affordable
 - Environmentally sustainable in housing, energy, water, resources and transportation
-

More...

- Mixed Use: residential, café, store, recreation
 - Village Bus, unbundled parking charges, public cars, vouchers
 - Parking is optional (unbundled) – no car – no pay
 - Designed for walking and transit: enough people in a walkable area generate walk-in demand to support a Village Center, a café, a store, a Village Bus, and other features that meet or exceed suburban standards
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Location

between Cal State University and downtown Hayward

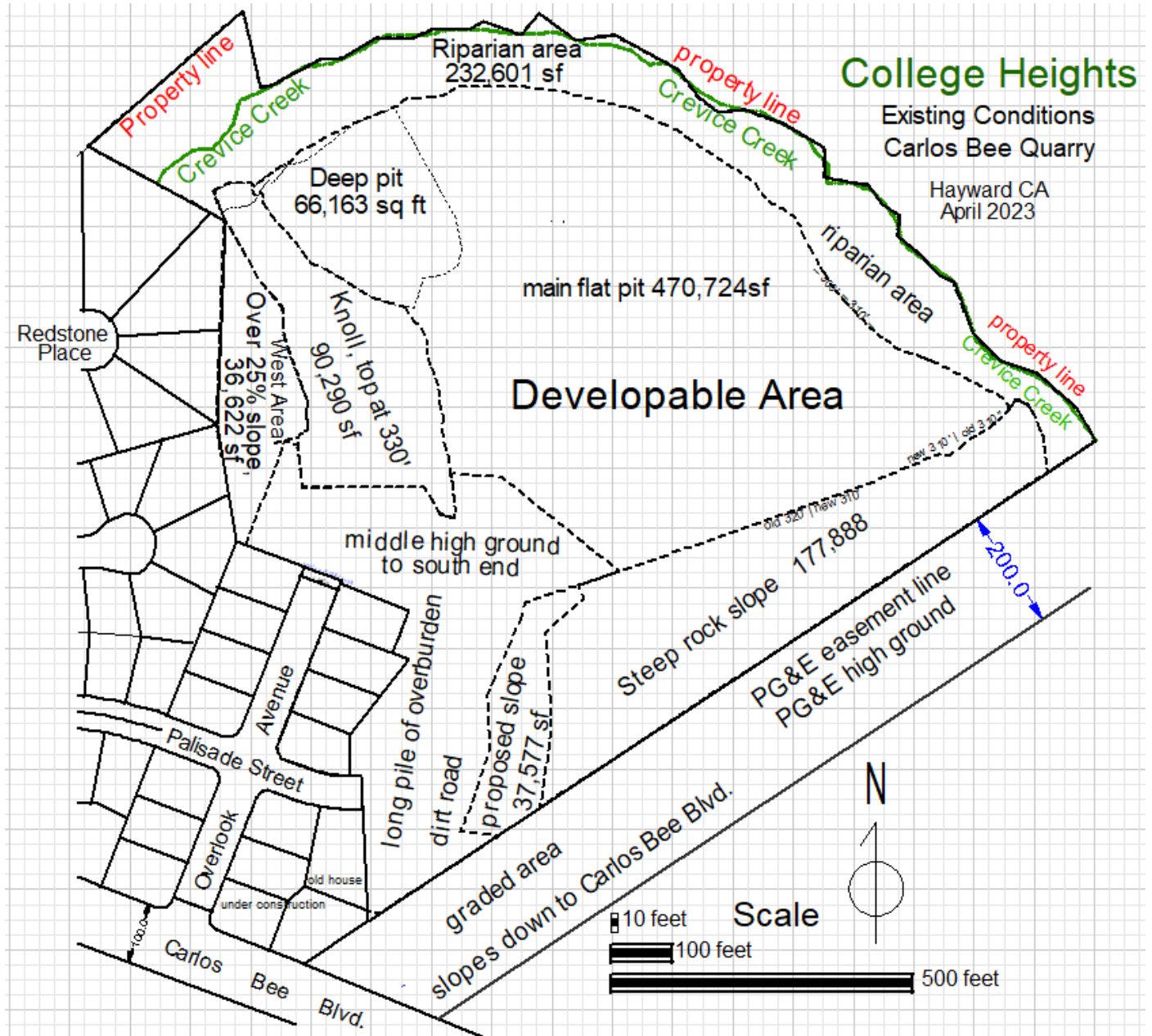


2.2 miles, campus to BART

The Site

- Quarry owned by the City of Hayward, which planned to sell it to developers
- Years later, developers withdrew their application, no others have come forward
- Sustainable Mixed-Use Zoning supporting a project like College Heights
- Quarry has 29.8 acres, of which 18.7 acres are developable
- Adjacent PG&E easement can be used for busway, community garden, orchard, landscaping

Existing Conditions

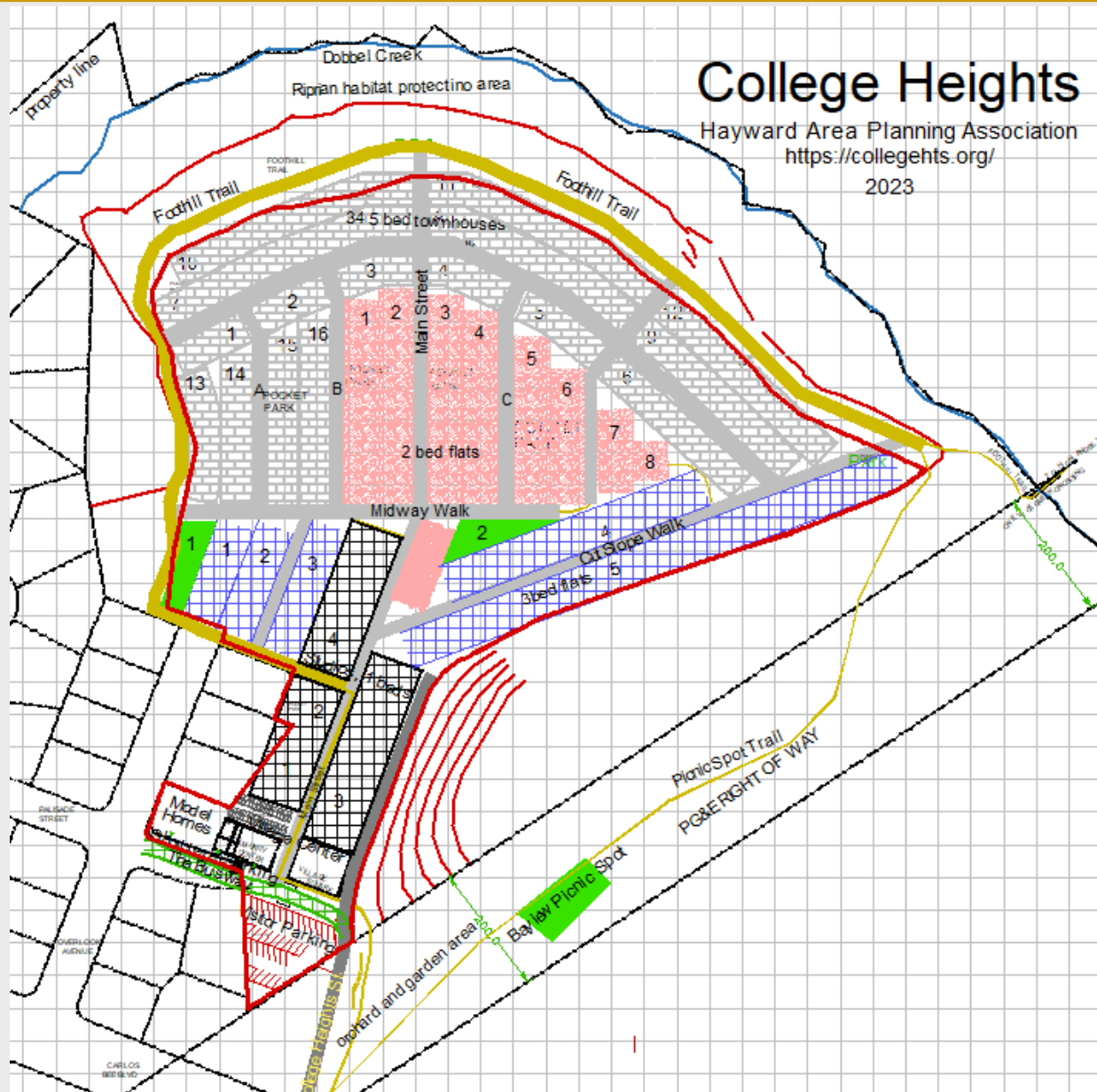


Existing Conditions	sq ft	acres	percent
Undevelopable Area			
Crevice Creek Riparian Corridor. Ravine and creek	230,000	5.28	17.8%
Steep Cut Slope on east side, existing	176,940	4.06	13.7%
Steep Rock Slope on east side, proposed	36,500	0.84	2.8%
West Area. steep drop off and slope over 25%	35,930	0.82	2.8%
Undevelopable	479,370	11.00	37.2%
Developable Area			
main flat pit	470,724	10.81	36.5%
deep pit, northwest corner	66,163	1.52	5.1%
knoll	90,290	2.07	7.0%
from middle high ground to south end	183,610	4.22	14.2%
Total Developable Area	810,787	18.61	62.8%
Total Property	1,290,157	29.62	100.0%

The Site Plan

- Walkways provide access to Village Center, Foothill Trail, and parking podium.
 - Focal point at Village Center.
 - The parking ratio is one space per unit.
 - Private vehicles are not allowed within project; only vehicles for maintenance, moving, postal, delivery to parcel boxes, public safety, and sanitation.
 - Residential parking will be in a podium below the mail project with access from Carlos Bee Blvd.
-

The Site Plan



Site Plan Areas

Project Area Acreage	sq ft	acres	percent
Foothill Trail	127,730	2.93	16%
Model Homes	8,652	0.20	1%
Residential lots	474,579	10.89	59%
4 pocket parks	11,872	0.27	1%
Walkways	122,344	2.81	15%
Village Center	20,566	0.47	3%
South parking	13,807	0.32	2%
Busway	6,720	0.15	1%
Landscaping	7,717	0.18	1%
College Heights Ave. at grade	15,316	0.35	2%
Total	809,303	18.58	100.0%

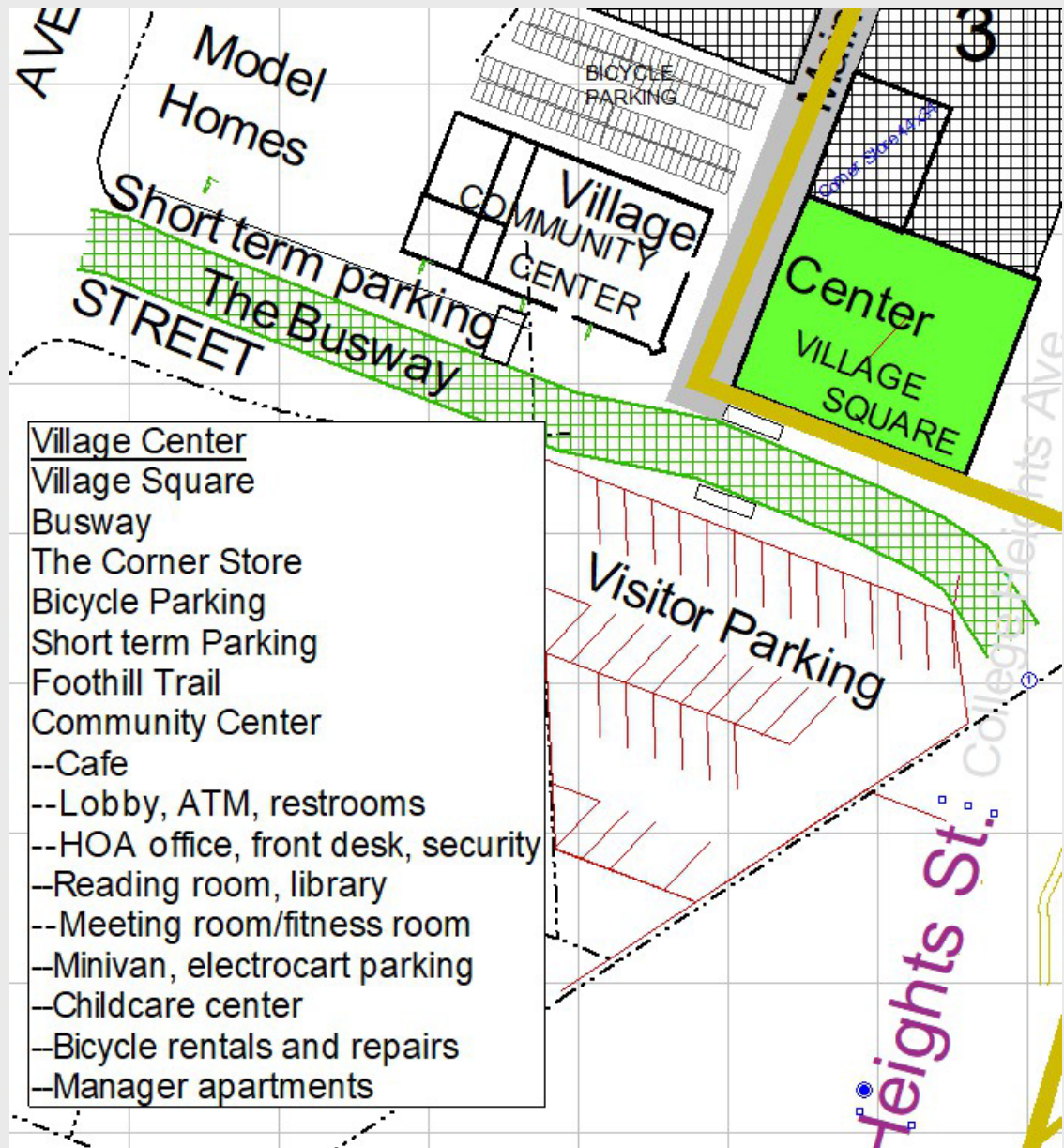
Site Plan Units Overview

Unit type	unit area	unit count	% of units	total area	bed-rooms	total beds
Studios	512	24	3%	12,288	1	24
Ones	704	181	25%	127,424	1	181
2 bed small	936	97	13%	90,792	2	194
2 bed large	1080	97	13%	104,760	2	194
3 bed flats	1360	110	15%	149,600	3	330
3 bed THs	1536	80	11%	122,880	3	240
4 bed THs	1728	108	15%	186,624	4	432
5 bed THs	2112	35	5%	73,920	5	175
Total/average/%	1,186	732	100%	868,288		1,770

The Community Center



The Village Center





Village Center functions

- Below Busway level: bike shop, Village Van parking, childcare
- Busway level: HOA service counter, ATM, fireplace reading room, security
- Second floor: café with bay view, multi-purpose room for fitness center, meetings and events; kitchen/coffee bar, small offices and co-working spaces to rent or lease
- Third floor: managers' residences



Spectacular views from the café

Another spectacular view from the café





Parks and Recreation

■ Parks in the Village:

- ❑ 4 small parks within developed area
- ❑ Tot lot; Bocce court
- ❑ Village Square

❑ Recreational Trails:

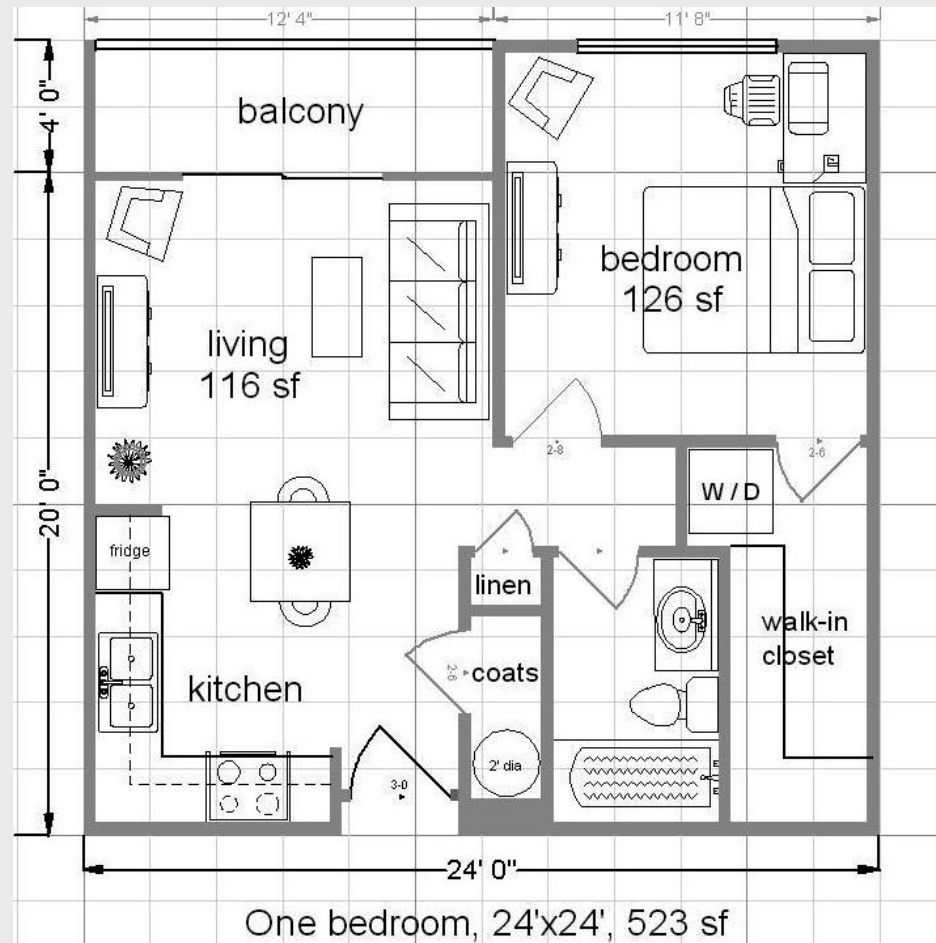
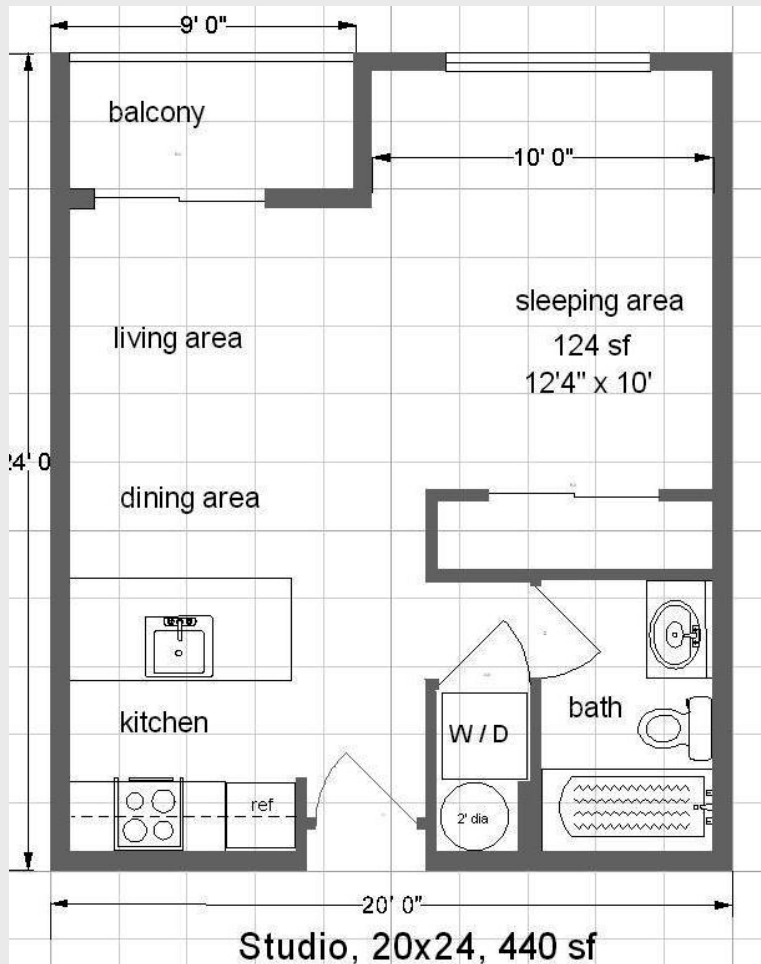
- ❑ The Foothill Trail comes through the project from north to south Hayward
- ❑ The Picnic Spot Trail goes from the Village Center goes to a picnic area on the rocky cut slope above the project

■ Nearby: Hidden Hills Health and Racquet Club, Cal State playing fields

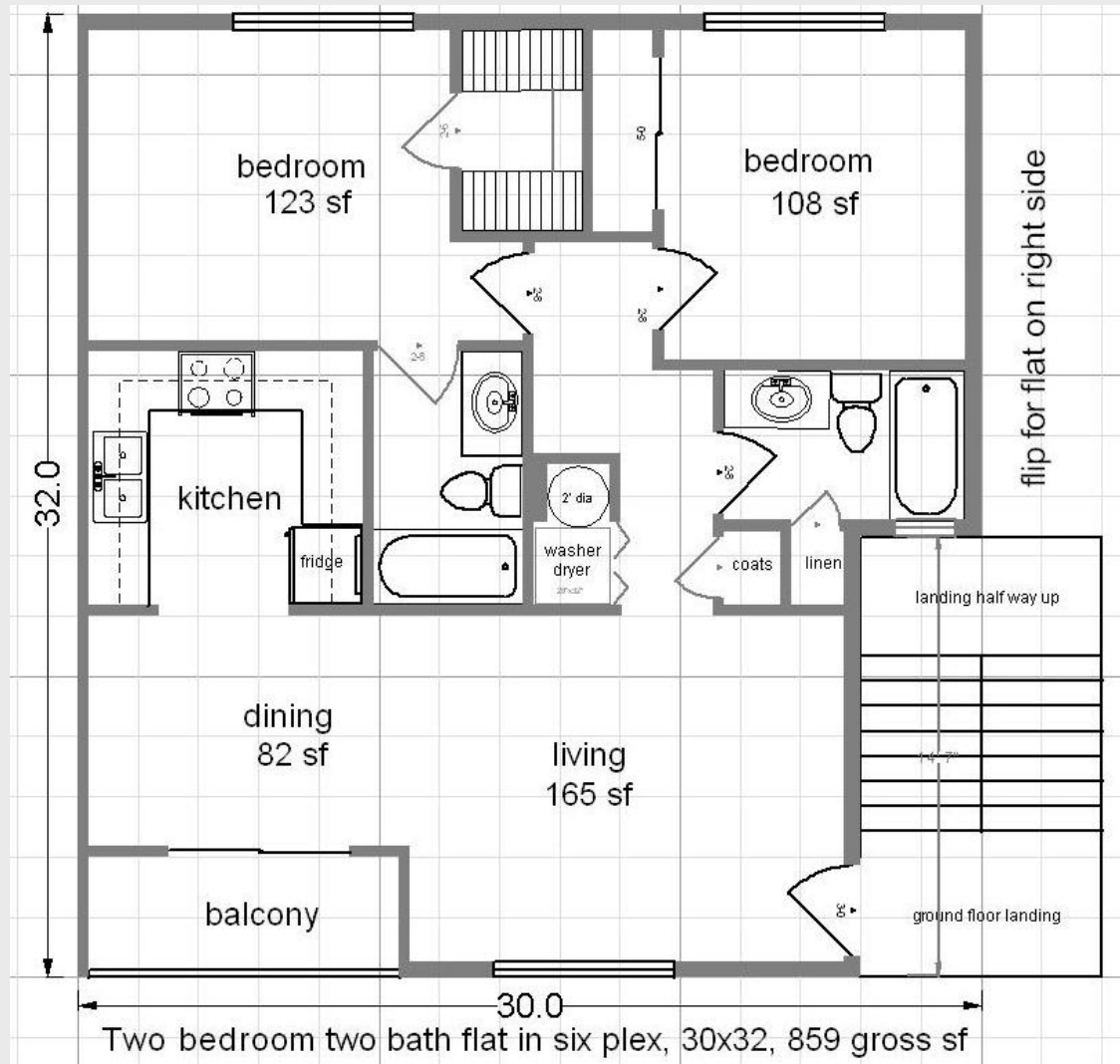
Floor Plans



Studio and One Bedroom



Two Bedroom two bath in a Sixplex

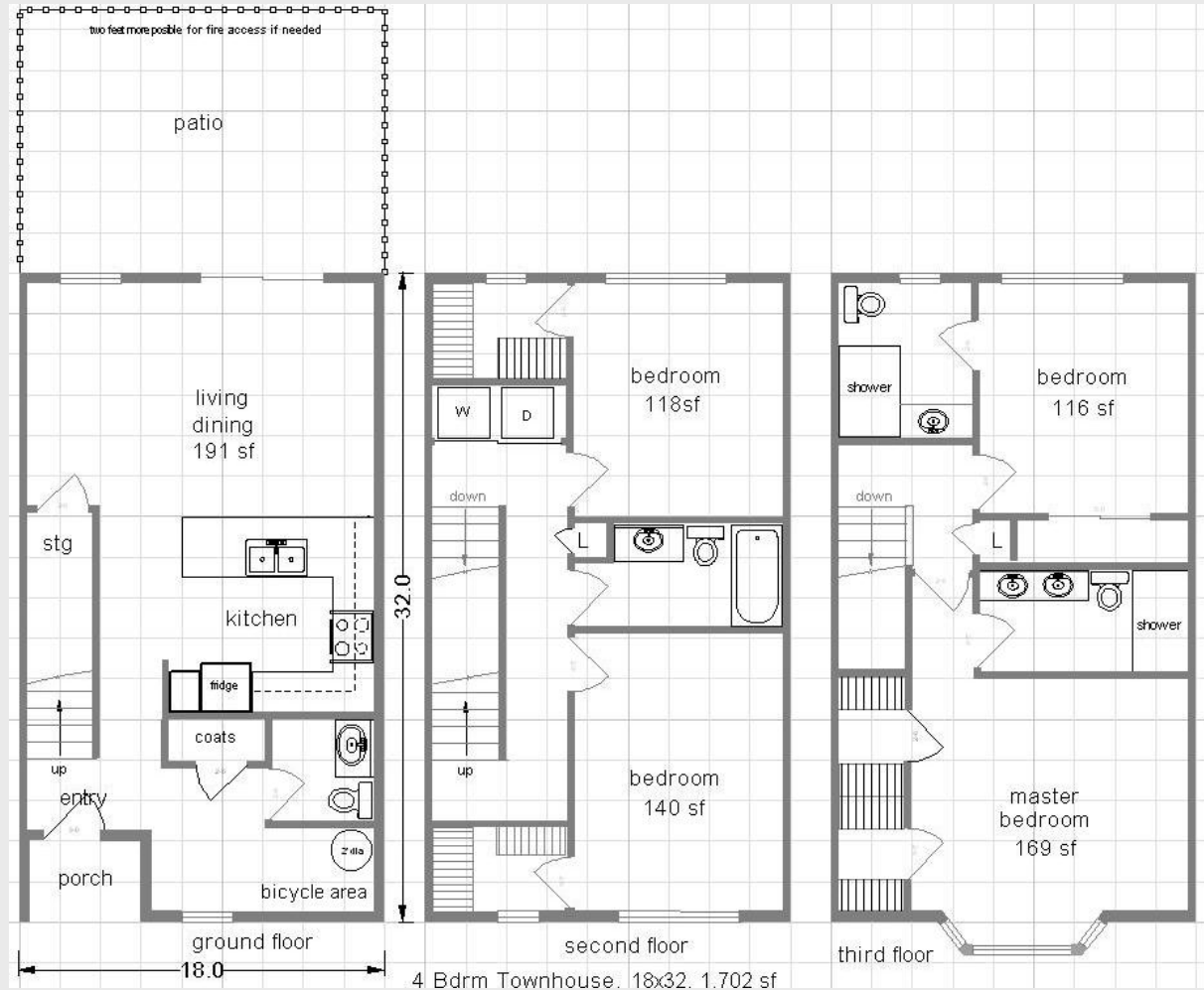


Three Bedroom Townhouse with flex space living and dining on second floor



Four Bedroom Townhouse

living dining on first floor



Five Bedroom Townhouse is bigger but similar

Affordability

- No expense for paving or vehicle parking; parking pays its own way
 - More units per acre by using narrow walkways, row housing, minimal setbacks
 - Four square building foundations
 - Efficient floor plans
 - Maximize units per acre and per mile of walkway
utilities lowers cost per unit
 - Construction efficiencies with three-story row housing
-

Affordability: College Heights and HUD limits, 2023

Moderate income limit is 120% of median income

unit type	Monthly mortgage	All three monthly	Housing cost	Household size	Income limit	Qualifies at 7.61%	Qualifies at 5.00%
studio	\$ 2,104	\$ 613	\$ 2,717	1	\$ 3,437	yes	yes
1 bed	\$ 2,821	\$ 774	\$ 3,595	2	\$ 3,927	yes	yes
2 bed 1 bath	\$ 3,635	\$ 958	\$ 4,592	3	\$ 4,417	no	yes
2 bed 2 bath	\$ 4,111	\$ 1,065	\$ 5,176	3	\$ 4,907	no	yes
3 bed flat	\$ 4,973	\$ 1,260	\$ 6,233	4	\$ 5,300	no	yes
3 bed TH	\$ 5,471	\$ 1,374	\$ 6,845	4	\$ 5,692	no	yes
4 bed TH	\$ 5,978	\$ 1,489	\$ 7,467	5	\$ 6,086	no	yes
5 bed TH	\$ 6,872	\$ 1,695	\$ 8,567	6	\$ 6,477	no	No

Many units under 110% of HUD median income

Mortgage interest rates make a big difference in ability to qualify to meet HUD limits

HOA provides operational and maintenance services a homeowner would otherwise have to pay for

Sustainability: Construction

- Green buildings:
 - ❑ Sustainable lumber (certified by the Forest Stewardship Council or similar certifier)
 - ❑ Healthy paints and finishes
 - ❑ Latest, highest efficiency building techniques and materials
 - ❑ Rain screen siding against mold

Sustainability: *Air*

- Global warming: No fossil fuel use in units, less greenhouse gas
 - Sustainable materials – no off gassing
 - Reduced dependency on oil imports and rising fossil fuel costs
 - Parking accommodates electric vehicles
 - Less air pollution from less traffic and congestion
-

Sustainability: Water

- Water efficiency: water-efficient fixtures, reduced water use and sewage
- Rainwater barrels for roofs
- Rainwater retention using large trickle-out pipes under walkways; zero runoff
- Absorption on-site of rainwater and grey water for irrigation
- Landscaping uses drought tolerant, native plants, reducing irrigation needs
- Less water pollution

Sustainability: Land

- More efficient use of land saves farmland and habitat
- Conservation of the Crevice Creek riparian zone
- No heat islands – reduced asphalt areas
- Foothill Trail
- Garden space

Sustainability: Energy

- No net electricity off the grid over the course of a year--“net zero”--with electrical use in winter balanced by electrical generation in summer
- Solar energy provides all domestic hot water, air conditioning, air cleaning, air renewal, and electricity for cooking, appliances, lighting, plugs, and electronics
- Energy system sold separately from housing, reducing housing cost
- Energy paid for by direct purchase or lease
- Energy costs below usual PG&E



Passive Energy

- Built into the development
- Three story row housing optimizes building energy conservation
- 2"x6" studs create space for more wall insulation
- Shades on outside of building optimize heat gain
- Energy conserving doors and windows
- Tight buildings, tested by blower door
- R-26 for walls and R-50 for ceiling exceeds California Title 24 energy regulations

Active Energy: Thermal

- 1. PV thermal modules installed on sloped roof generate electricity topside and heat backside
- 2. Central thermal plant is efficient because of the size of the project
- 3. Large heat pumps in the plant heat the central storage water as needed
- 4. Thermal energy is stored in central thermal storage, a large underground borehole
- 5. A four-pipe distribution system connects the modules to the central plant, the central storage, and the units

More...

- 6. Domestic hot water using a small thermal storage tank in each unit boosting hot water from central thermal storage when needed (showers, laundry, etc.)
 - 7. Unit hydronic air conditioners, a small “fan coil” for space heating and cooling using a fan blowing across pipes with fins
 - 8. Hydronic warm towel rack, dries towels and heats bathroom
-

More...

- Summer Winter balance:
 - ❑ Winter: Hot water from central storage heats units using hydronic air conditioners in units
 - ❑ Central thermal storage cools down
 - ❑ Summer: cool water from thermal storage cools units and the PV thermal modules for highly efficient production of electricity from a cooler module
 - ❑ Electricity and hot water from PV thermal modules and heat pumps recharge the central storage for use in winter
-

Active Energy: Electrical

- Electricity is estimated at \$1.89 per watt, well below the standard cost for smaller projects of \$2.20 to \$2.97
- Bifacial PV modules are mounted on racks to allow bounce light to reach PV on the backside
- Units have
 - LED lighting with occupancy sensors
 - Induction cooktops which are faster, safer, use less energy and lower pollution generation than natural gas or electrical resistance

Active Energy: Designing and managing

- Balanced Design Approach balances all parts of the system for net zero and life cycle cost-effectiveness
 - HOA management operates the system using continuous commissioning for increased productivity
 - Submetering reports unit use, helping residents monitor and manage energy use
 - Smart Thermostats have occupancy sensors to adjust the temperature before people get home
-

Mobility

- Transportation Demand Management (TDM) provides ample mobility alternatives to car dependence for its target markets
 - Personal cars
 - Leased parking
 - Walking
 - Transit
 - Public cars
 - Bike - ebike



Mobility: Personal cars

- 732 spaces in podium leased at market rate, about \$95 per month
 - No car, no pay
 - Parking is paid for separately from housing
 - Spaces have high-capacity EV chargers
 - Potential leased parking nearby off-site at less cost
-



Mobility: Walking

- The land use plan supports walking for trips usually done by car, such as shopping, meals out, ATM, and recreation
- Walking distances are short and convenient
- Maximum walk time from the most distant unit to Village Center is five minutes
- Many needs are met on-site by the parks, trails, and Community Center with a café, store, meeting room, fitness center, potential childcare, bike shop and HOA services

Mobility: Village Bus

- Village Bus: fast, frequent, free from campus to College Heights to downtown and BART
 - Free: Eco-pass for village residents Homeowner fees support eco-pass
 - Frequent: Every 10 minutes most of the day
 - Fast, frequent service increases ridership
 - Supports transit-oriented development along Mission Blvd and downtown
-

More...

- Fast: Downtown Hayward and BART in six minutes; Cal State in two minutes



Downtown: Buffalo Bill's Brewpub



Cal State East Bay



Hayward BART

More...

- Why the Village Bus is fast:
 - Diesel electric hybrid motor with batteries
 - Nimble, midsize 30-foot 20-to-30-person bus
 - Powerful electric motor for fast hill-climbing
 - Regenerative braking to recover energy
 - Guided docking at door-level bus stops
 - No-step, fast boarding from elevated stops
 - Signal preference at red lights
 - Right lane queue jumping: red light for cars lets bus jump ahead
-



More...

- ❑ Proof of purchasing ticketing– an inspector spot-checks for a pass
- ❑ No on-board fare collection or ticket sales, e-tickets on an app?
- ❑ Drop-off directly at the BART entrance; no time spent hunting for parking and walking into the station
- ❑ A cell phone app for eco-pass, ride-hail, bus schedule and other mobility information

Mobility: Public cars, public parking

- Public cars: car share, car rental, Uber/Lyft, taxis
 - Public car parking at Community Center
 - Vouchers for rides to health care and guaranteed ride home from Village Bus when BART not running
 - Paid public parking south of the Village Center, outside the walking area
-

Mobility: Bikes, e-bikes

- E-bikes at Community Center
 - Bike repair at Community Center
 - E-bike lane to campus
 - Downhill to Mission and Downtown Hayward (you might need the Village Bus to get back up 😊)
-

Health, safety, security

- Parks and trails
- Fitness Center
- Cleaner air, less noise
- Safety: no car traffic
- Security:
 - Defensible space design; long sightlines, good lighting
 - CCTV
 - HOA managers on site
 - In-person social networking

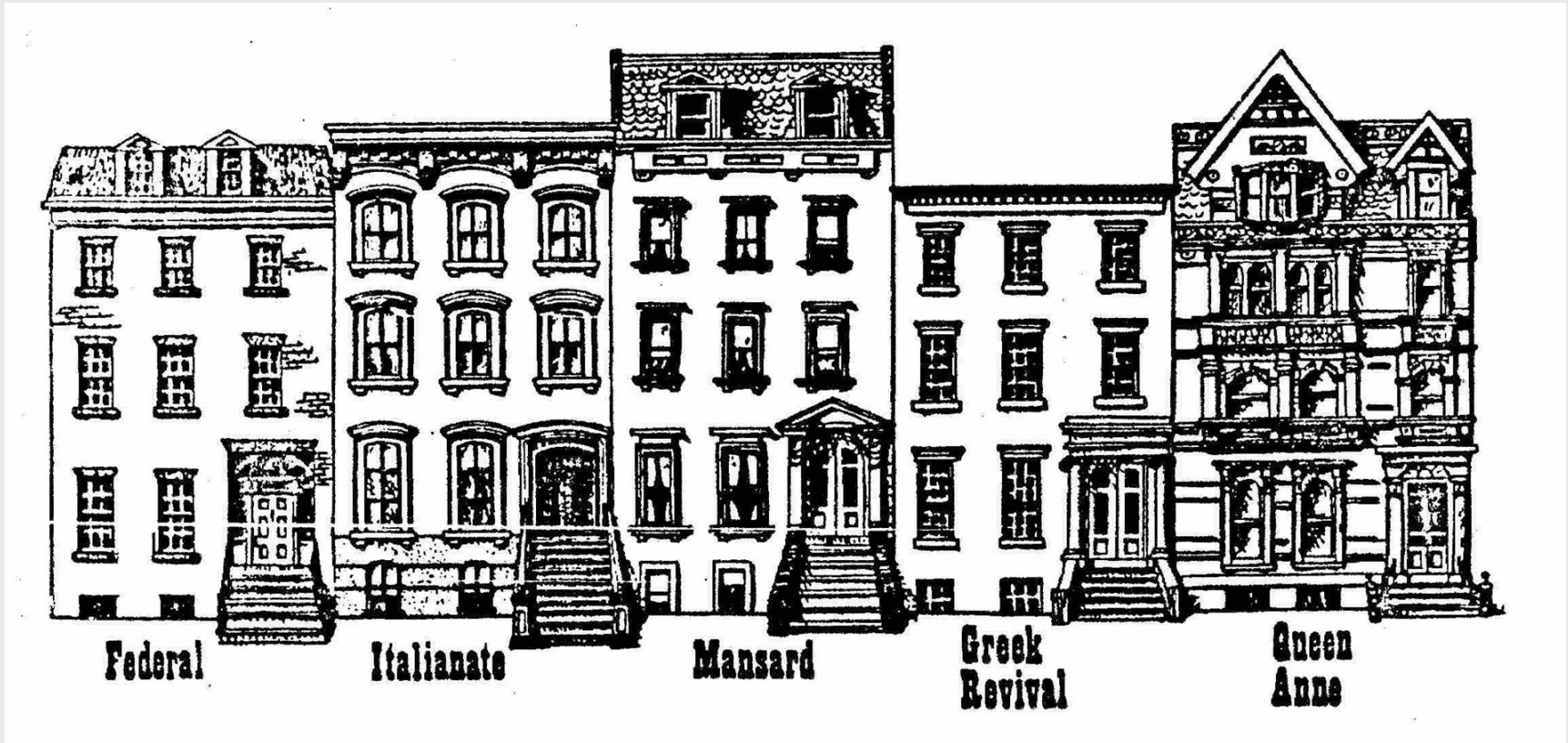


Design

- Designed for pleasant walking; wide walkways with no traffic
- Trees and other landscaping in parks and along walkways
- A variety of views along walkways mixing straight and curved, short and long, lots of views into green spaces, and the city below
- Low rise spaciousness despite density, 15-foot-deep backyards

More...

- Building facades with interesting design, color and ornamentation



The Village Square



View up main walkway





Further north along main walkway

Façades

Inspired by Victorian Era



Three-bedroom townhouse



Two-bedroom condos in sixplex

Visual appeal using familiar and attractive design elements

Community

- Informal interaction along walkways, on Village Bus, in parks, in Village Center around the square, café, store, and HOA service counter
- Village Center with facilities for meetings, fitness, banquets, and events
- HOA sponsored holiday events
- The HOA managers manage the Village Van for school busing and group trips, e.g., to Costco, Trader Joe's, San Francisco culture, and community events.

More...

- People meet face to face instead of bumper to bumper
 - Social relationships increase security
 - HOA managers on duty most of the time
 - The Homeowner Association Board involves all who are interested, oversees managers, and puts on community events
 - The HOA managers assure quiet and privacy
-

More...

- HOA managers take care of
 - ❑ Operating and maintenance
 - ❑ HOA businesses: café, store, parking
 - ❑ Landscaping and common use assets
 - ❑ Village Bus, eco-pass, taxi vouchers, Village Van, use of Community Center
 - ❑ Painting, reroofing, solar panel maintenance
 - ❑ Fire sprinkler inspection and testing
 - ❑ Security
-

Markets

- Cal State University East Bay
 - BART riders, downtown and corridor workers
 - Work from home
 - Retired, Seniors
 - Environmentalists
 - Families
 - Health-seekers
 - Community-seekers
 - Disabled persons
-

Cal State University East Bay

Faculty, staff, administrators, students

- Campus is two minutes away by Village Bus
- Campus is within walking distance
- E-bike lane to campus
- Prices are affordable
- Bus also serves visitors





BART riders, local workers

- Easy access to work in the Mission Corridor and downtown Hayward
- Easy access to locations throughout the Bay Area by BART
- BART access to Amtrak and airports for farther trips



Work from Home

- Three-bedroom unit designed with a large flex space on the ground floor
 - Flex space can have a kitchen, office, and other work-related improvements as an upgrade
 - Flex space has a bathroom and access to patio
 - Small offices in Village Center equipped for teleconferencing
 - Village Center has mailing and copying services, ATM, and other support for home office
-

Seniors, Retired

- Home ownership free of responsibility for painting, plumbing, repairs, termites, yard duty, taking care of a car
- HOA fee pays for professional operation and long-term maintenance
- Good mobility if you can't drive, shouldn't drive, or don't want to drive
- Take a trip with no worries about the house--lock the door and go
- Good value for funds from sale of a larger home



Buyer choices

- Flexibility of interior space
 - Fixed in place: outside walls and windows, front door, utility core
 - Flexible: inside walls to change floor plan
 - Choices of outside colors and wall ornamentation (sunbursts, etc.)
 - Popular upgrades available.
 - Sales agent and buyer use a computer program for visualizing choices and pricing of upgrades
-

Family friendly

- Many suburbs, supposedly ideal for raising children, have dangerous streets, and lack adequate transport for chauffeuring kids to school and activities. Car-free projects in Europe are havens for many families with children
- A safe place for kids to play & grow up:
 - No traffic
 - Village Van for trips to school and activities
 - A fenced tot lot play area
 - Childcare possible in the Village Center

Health seekers

- Pedestrian-friendly design supports walking for health and weight loss without loss of convenience and mobility
 - Less traffic means cleaner air, more safety, and less noise
 - Fitness center, access to the Foothill Trail, a view picnic spot, and Memorial Park, Garin Park, and Dry Creek Park support an active lifestyle
 - A tennis swim club is close, by City View apartments
-

Disabled persons

College Heights is designed for people who can't or shouldn't drive (car driving-impaired)

- No-step entry for 170 ground floor units
- No curbs from the front door to the Village Center
- No-step entry onto the Village Bus
- “Universal design” for users of wheelchairs and the visually impaired



Market Research

A market study found that the unique vision of College Heights could appeal to “green-living” celebrity endorsers, leading to “a tremendous amount of public relations articles reaching a broad range of potential buyers/renters”



Bayview Village – Hayward, Executive Summary Market Study, Presented To HAPA
by S L State & Associates, July 2011

Special Market Research

- Affordability incentive and buyer education
 - Travel diaries by members of target markets
 - Discussion of the diaries with an expert on alternative mobility
 - Focus groups to discuss College Heights
 - Help buyers think about a new and better style of life
-

Financial Analysis

The Hayward Area Planning Association has pro formas for

- The Project
 - Shows an internal rate of return using goal seek of 21.3% over seven years
 - HUD housing affordability
-

Financial Highlights

Gross costs	\$493,057,523
Net operating income	\$ 29,852,980
Net operating margin	6.1%
Equity investment	\$21,213,747
Maximum Debt Exposure	\$ 45,249,344
Asset cost: Equity plus loan	\$66,463,091
Gross Margin: revenues over asset cost	44.9%
Leverage (LTV)	68%
Equity IRR, (goal seek)	21.3%
Asset IRR	15.2%
First Payout to equity	Yr. 6 Qtr 4
Last Payout to equity	Yr. 7 Qtr 4
Positive Cash Flow starts	Yr. 4 Qtr 1
years of sales	4
Sales per week	3.5

Investor Judgment Call

- Can College Heights can sell enough units fast enough at a given price to provide an acceptable return?
- Most investors are risk-averse and avoid green projects for an untested market.
- Green projects need “patient, green investors” to grow the market for environmental sustainability
- College Heights may sell faster than planned.

Risk Reduction

- An interest list and conversations to gauge interest
 - Market research to assess the market and improve the project and how to present it
 - After the Dept of Real Estate approves preliminary report, take a down payment to reserve a unit; abort project if too few reservations
 - Use Model Homes to estimate early marketability
 - Have a fallback plan with more assured profitability if the absorption rate is too slow
-

Next Steps

- A credible developer first does due diligence and negotiates a letter of intent with the City
- The City and developer announce a forthcoming application and hold a work session
- The developer starts an interested parties list
- City Council approves a pre-entitlement project, leaving technical reports for entitlement.
- After entitlement, begin taking reservations
- Build model homes and start site improvements

Conclusion

College Heights: the most environmentally sustainable community ever built in California, qualifying for LEED platinum, forging new ground in economies of scale, affordability, sustainability, mobility, health, design, and community

Documentation

- City: <https://www.hayward-ca.gov/content/california-state-route-238-corridor-lands>
- Website: <https://collegehts.org/>
- Design CAD (.dcd) drawings for site plans and floor plans
- SketchUp drawings of facades, walkways, Community Building, and Village Center
- Financial analyses for College Heights, HOA, Bus, parking, affordability, Café, Corner Store, parking lease rate
- Project and building parameters
- Aerial survey; geotechnical report; engineers report
- Market study

Sherman Lewis, President

Hayward Area Planning Association

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