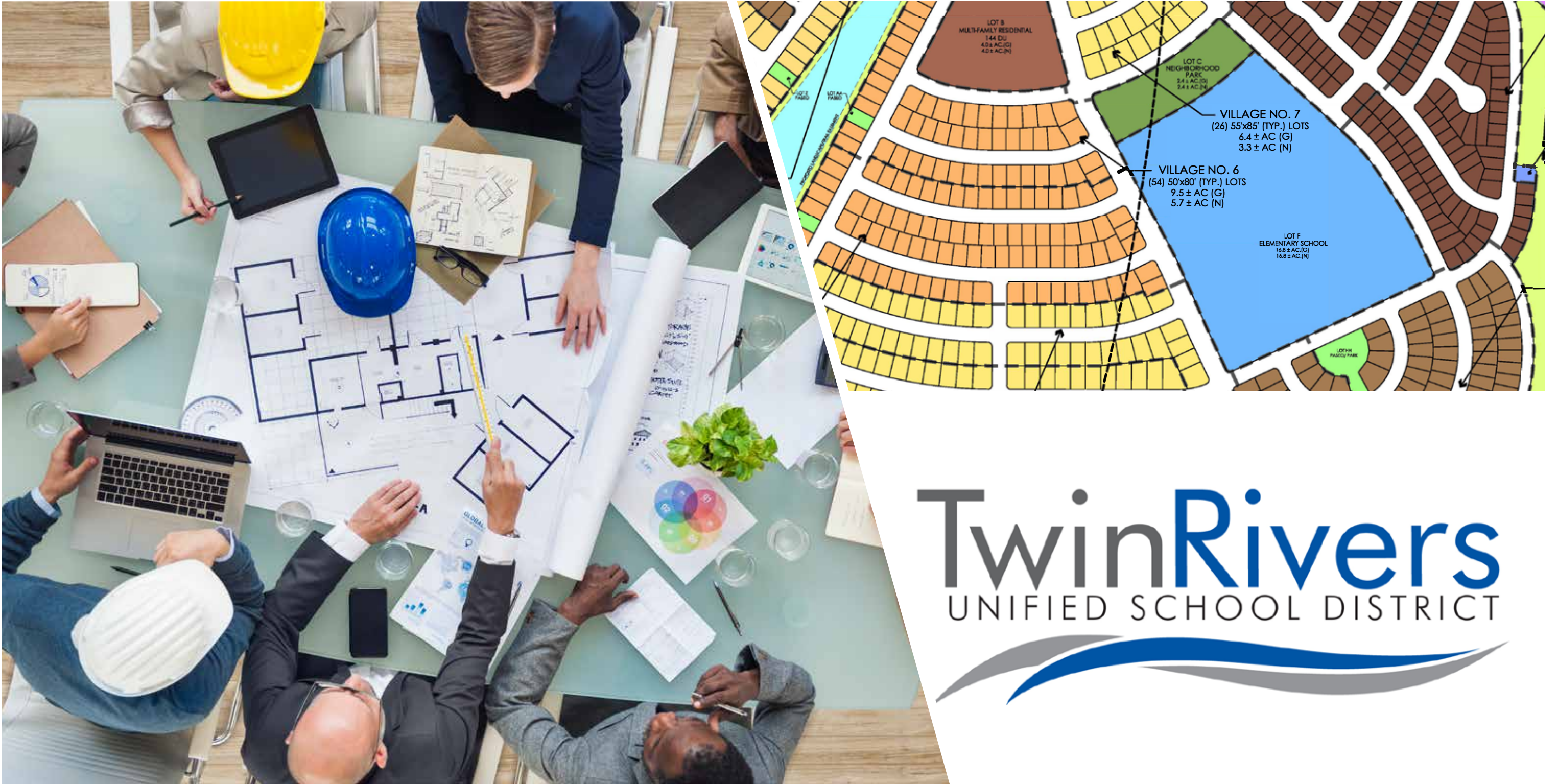


PBK K-12

Greenbriar Site Feasibility Study

Twin Rivers Unified School District \ McClellan, California \ September 20, 2019



TwinRivers
UNIFIED SCHOOL DISTRICT



GREENBRIAR SITE FEASIBILITY STUDY

Twin Rivers Unified School District

Feasibility Study Booklet

September 20, 2019



PBK Architects

2520 Venture Oaks Way, Suite 440

Sacramento, California 95833

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PBK Project No. 19269





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EXECUTIVE SUMMARY





EXECUTIVE SUMMARY

Twin Rivers Unified's mission to inspire its students through powerful engaging learning experiences that prepare them for success is reflected in the richness and diversity of their school campuses. The proposed Greenbriar Site provides the opportunity for Twin Rivers Unified to expand their TK-6 or TK-8 schools and provide a new school for this new development.

The Greenbriar Feasibility Study examines an approximate 20 acre site which is located between Elkhorn Blvd, Highway 99 and Interstate 5 as part of a master planned residential development and includes a site study which illustrates the options for a TK-8 school campus serving the Rio Linda and North Natomas area. The proposed school site is located adjacent to a neighborhood park which could invite potential joint use opportunities. Both the proposed school site and neighborhood park are contained within the Greenbriar planned residential development. The future TK-8 school campus include a Multi-Purpose/Administration/Gymnasium Building, Classroom Buildings, Library, and ancillary support spaces is based on the Educational Specifications established in the Twin Rivers USD 2015 Long Range Facility Master Plan. The area would initially generate approximately 551 students by 2024, with construction beginning in 2023 for the first phase of the project to serve Grades 5-8. Ultimately, the complete TK-8 buildout will house 963 students.

This feasibility study explores the potential site modifications to mitigate the proximity to the two freeways (Interstate 5 and Hwy 99) and the Sacramento International Airport as to accommodate requirements and obtain CDE (California Department of Education) site approval. Additionally, this study offers the program, anticipated project budget and schedule as it relates to Twin Rivers USD delivering the educational program standards in order to provide a safe, healthy and quality educational learning environment for its students, faculty, administration members and surrounding community members.



**SITE ANALYSIS
& SITE PLAN DIAGRAMS**



GREENBRIAR SITE

Site Analysis & Site Plan Diagrams

SITE ANALYSIS

The proposed Greenbriar School site is located along the western boundary of the Twin Rivers Unified School District and the Natomas Unified School District boundary. The site is framed by Elkhorn Boulevard and both Highway 99 and Interstate 5 Freeway. Nestled within the Greenbriar Planned Residential Development, the site with School and a neighborhood park is on approximately 20 acres and is located close to Highway 99 and Interstate 5 junction. The proposed property location poses conditions that will need to be mitigated in design and construction.

Since the property is located near two major roadways, site conditions will require a minimum setback of 1,500 feet to meet Title 5 requirements for traffic safety and noise levels generated by vehicular traffic. Additionally, being located near the Sacramento International Airport requires a setback from existing and potential airport runways of two nautical miles. As currently presented by the developer, the site is a little less than 600 linear feet from the highway and interstate. One potential element to explore includes exchanging the portion of the site earmarked for the neighborhood park and the portion reserved for the elementary school so the school site is set back further from the highway and interstate. The practicality of this proposed change will be determined once the grade alignment (programming) is determined. An additional and more pragmatic option to explore is adjusting the school site closer to Elkhorn Boulevard and to the upper middle border of the planned residential development. In addition to addressing the setback requirement for the interstate and highway, this would reduce the volume of traffic transversing the residential area from students and parents residing outside the proposed community development. In its current anticipated location, the school site is outside of the two nautical mile setback for the airport runways.



Aerial Photo of the Greenbriar Site and Surrounding Area

SITE PHOTOS

Site Analysis & Site Plan Diagrams

Looking south along west property line



Images along Elkhorn Avenue looking west



Park-n-Ride



Sacramento International Airport (off in the distance)

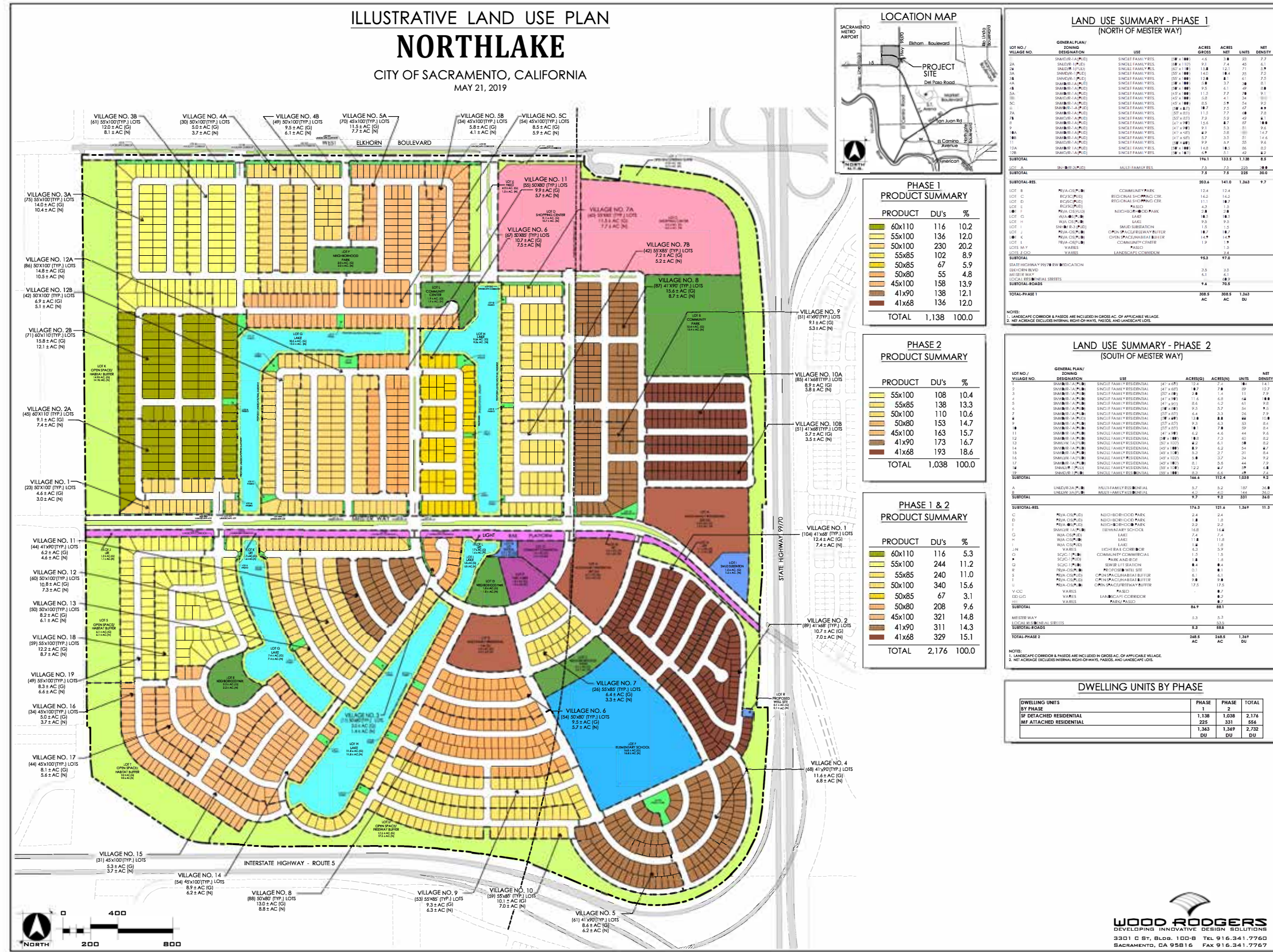


Residential across Highway 99



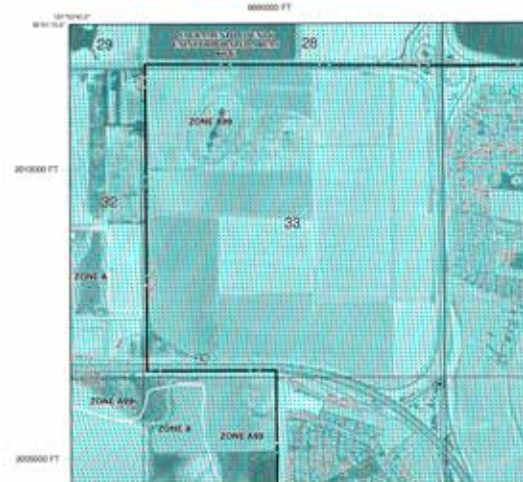
SITE ANALYSIS

Site Analysis & Site Plan Diagrams



SITE PLAN

Site Analysis & Site Plan Diagrams



Site is in a flood plain.

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, AV, V and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of allowed fish flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently abandoned. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE AV Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

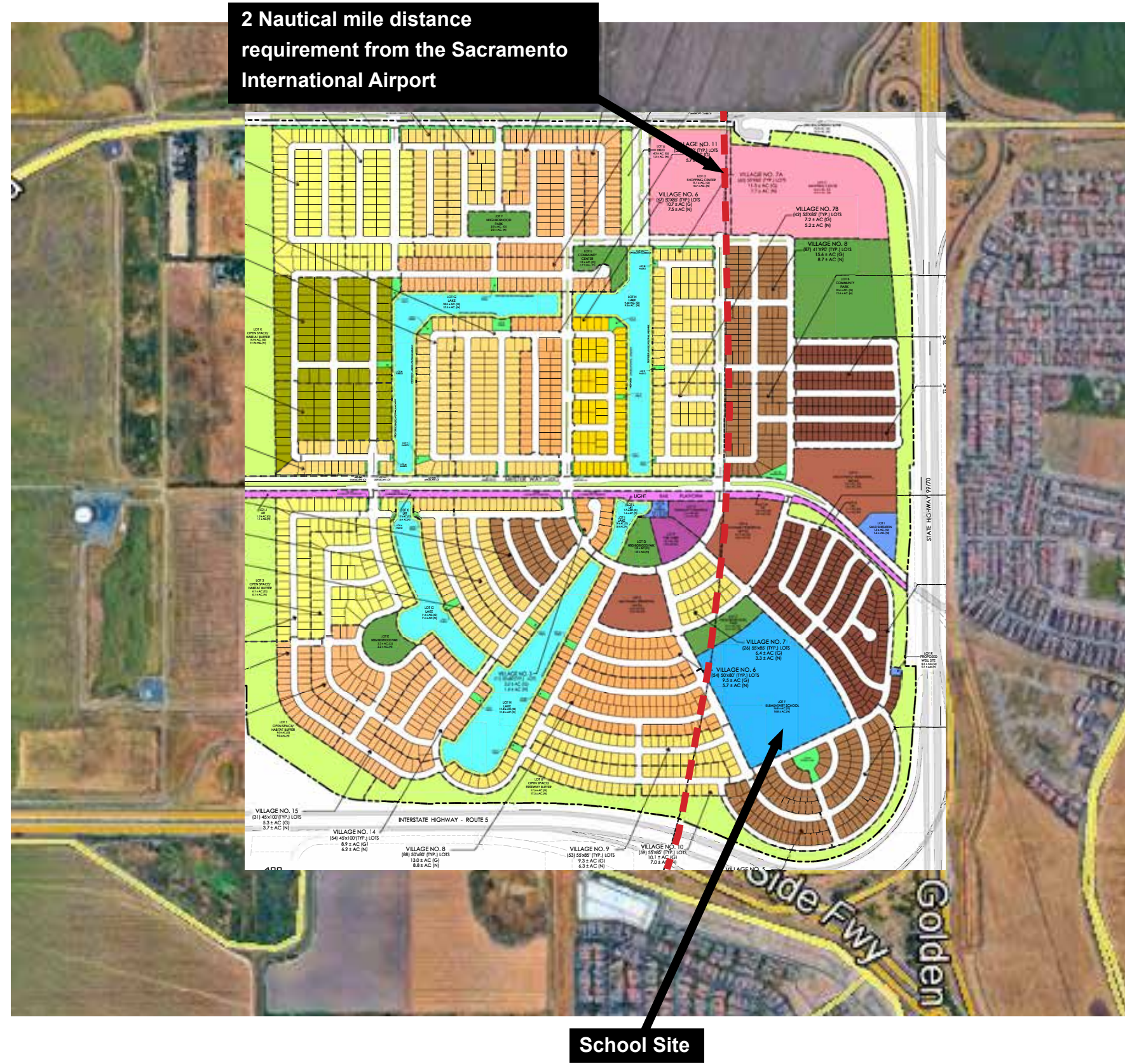
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities
- Base Flood Elevation line and value; elevation in feet*
- Base Flood Elevation value where uniform within zone; elevation in feet**
- * Referenced to the North American Vertical Datum of 1988 (NAVD 88)
- ** Referenced to the North American Vertical Datum of 1983 (NAVD 83)
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 3000-meter Universal Transverse Mercator grid (UTM), zone 10
- 5000-foot grid ticks: California State Plane coordinate system, 3 zone (TPSZONE 0402), Lambert Conformal Conic
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- Blue Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

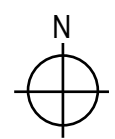
EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP: August 16, 2012

EFFECTIVE DATES OF REVISIONS TO THIS PANEL: June 16, 2015 - to change zone designations and to incorporate previously issued Letters of Map Revision.



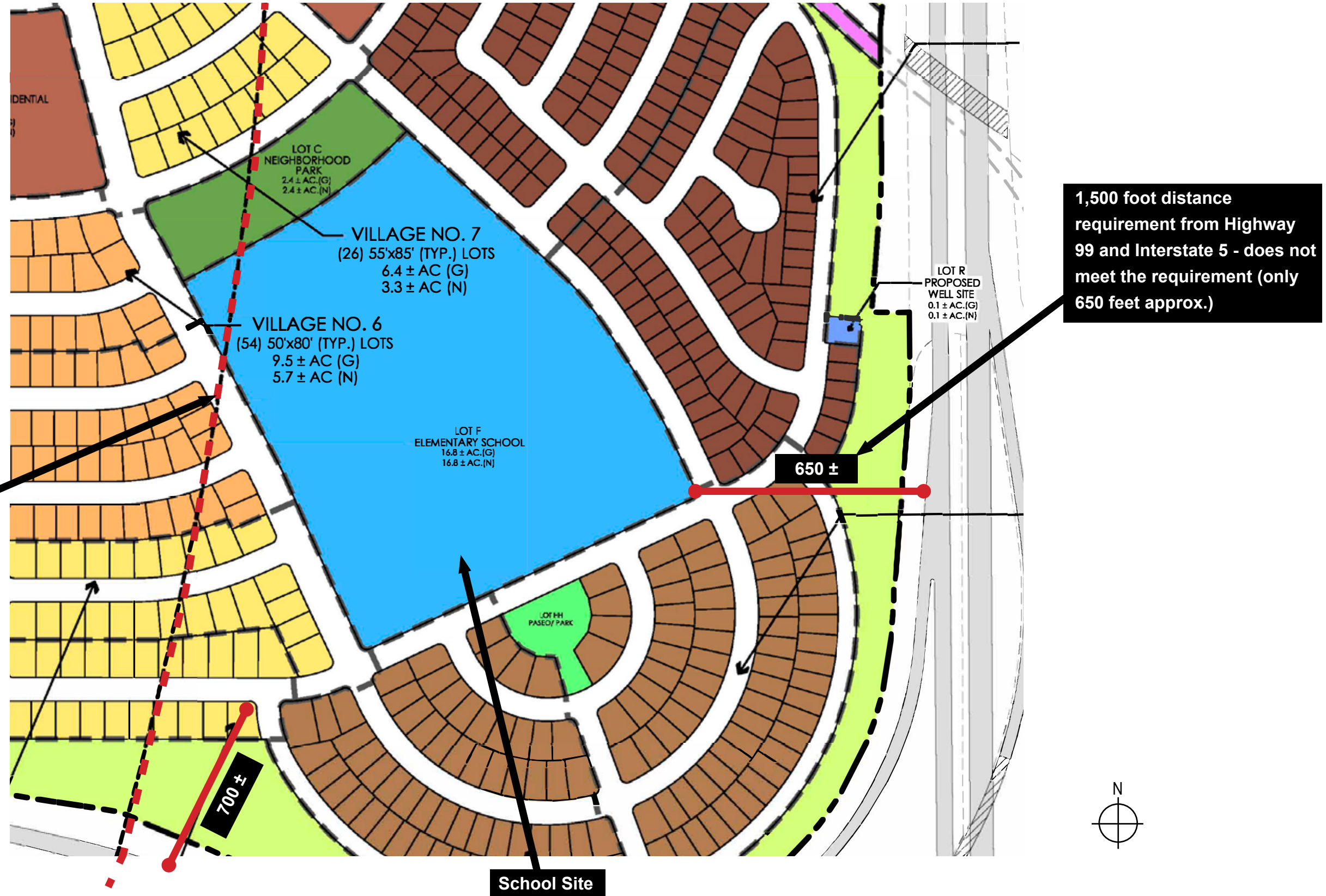
2 Nautical mile distance requirement from the Sacramento International Airport

School Site



SITE PLAN

Site Analysis & Site Plan Diagrams



PROPOSED
DESIGN CONCEPTS & OPTIONS



CONCEPTUAL STUDIES

Proposed Design Concepts & Options

PROPOSED DESIGN

Numerous design options for the Site and School layout were explored. The proposed overall school design direction selected includes a radial finger design footprint with each wing dedicated to independent grade levels and outdoor learning areas between each wing. The site shall feature standard amenities of student drop-off with separate Kindergarten drop-off, staff and visitor parking, library, administration and multi-purpose area. In addition to outdoor learning spaces, the grounds will feature play fields and an amphitheater. This layout is similar to the District's newest school design at Regency Park. As the radial plan was further developed, the program was further refined to eliminate the dedicated STEAM space. Additionally, site layout developments are shown on the next page followed by the Regency Park plan.



Several conceptual studies were developed throughout the feasibility study as shown above.

CONCEPTUAL STUDIES

Proposed Design Concepts & Options

RADIAL PLAN (CONCEPT A)



RADIAL PLAN (CONCEPT B)



REGENCY PARK SITE OVERLAY

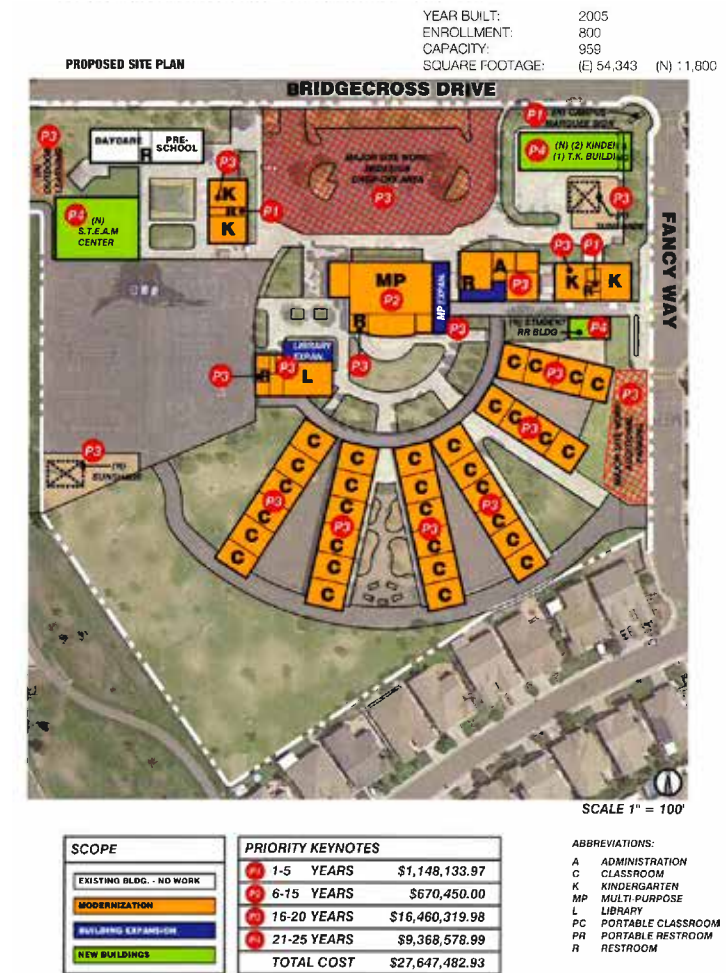
Proposed Design Concepts & Options



This site diagram shows the overlay of the Regency Park campus on the Greenbriar proposed site.

REGENCY PARK ELEMENTARY SCHOOL

The Regency Park Elementary School campus is the newest of the Twin Rivers USD campuses. It was built in 2005 and has an enrollment of 800 students with a capacity of 959 students. The existing square footage is 54,343 square feet. As part of the Twin Rivers USD 2015 Long Range Facilities Master Plan it was determined that additional programs would be required to ensure the best education for the TRUSD students. A new S.T.E.A.M. Center and additional T.K and Kindergarten classrooms encompassing approximately 11,800 SF is master planned as future additions.

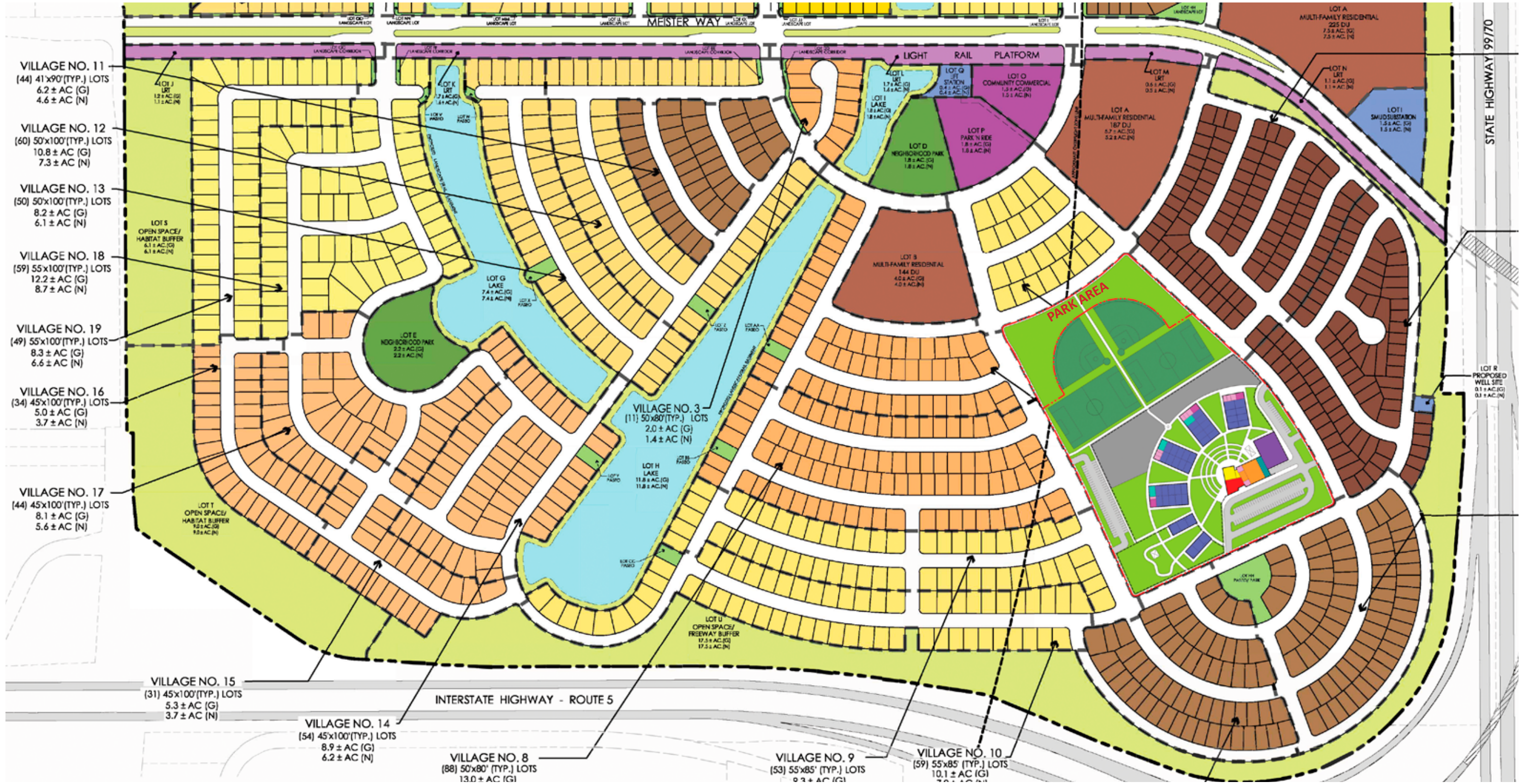


OVERALL SITE PLAN: SELECTED CONCEPT

TK-8 SCHOOL

16.8 ACRES

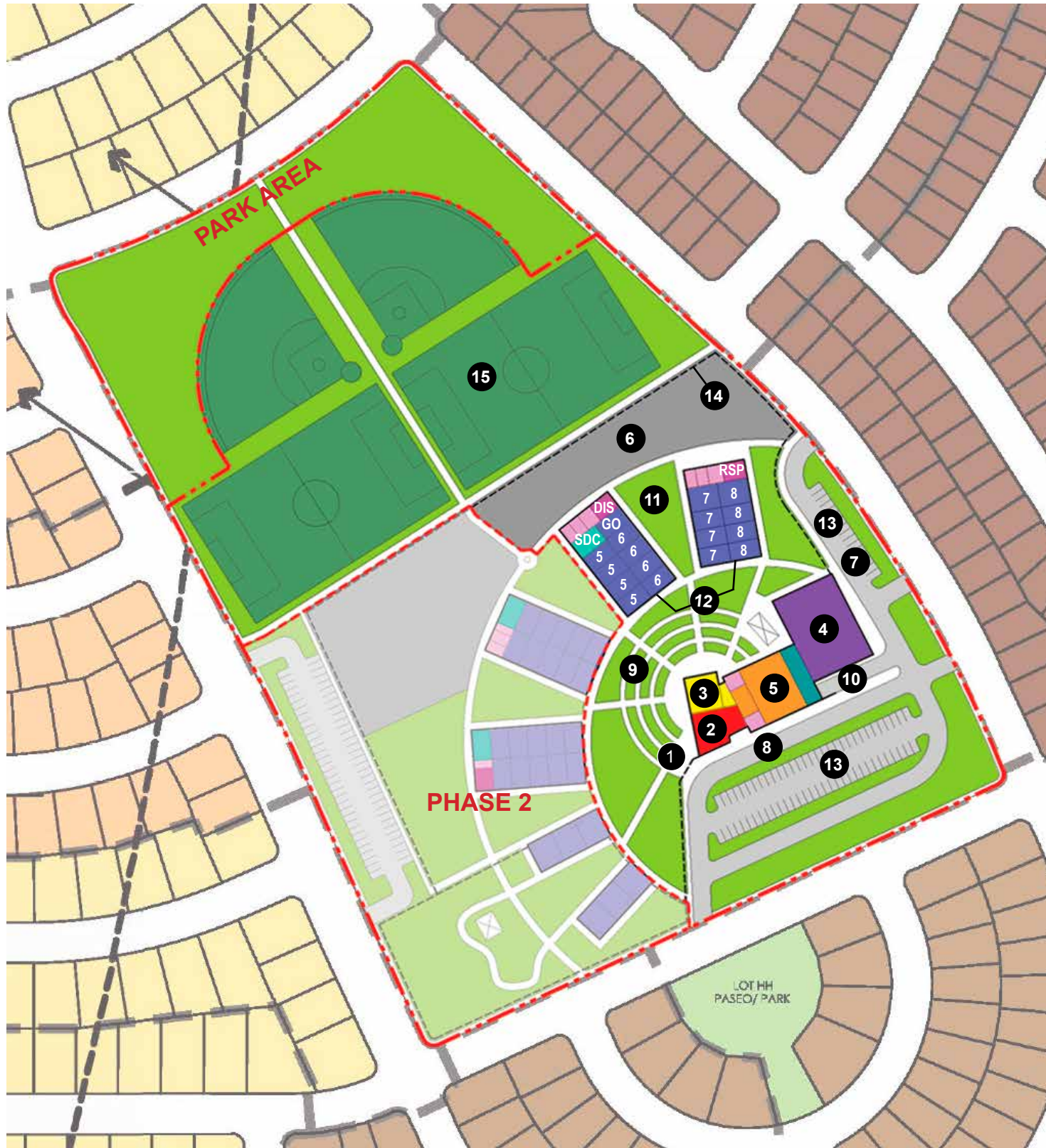
Proposed Design Concepts & Options



ENLARGED SITE PLAN: PHASE 1

5-8 SCHOOL ON 10 ACRES

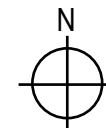
Proposed Design Concepts & Options



PHASE 1: GRADES 5-8 10 ACRES (13ACRES WITH PARK)

Phase 1 of the campus features a 5-8 school design with the major core components as outlined below. This phase expands the proposed 10 acre site to approximately 13 acres for expanded play fields where shared with the park.

- | | |
|------------------|---------------------|
| 1 Main Entry | 11 Outdoor Learning |
| 2 Administration | 12 Classrooms |
| 3 Library | 13 Parking |
| 4 Gymnasium | 14 Fencing |
| 5 Multi-Purpose | 15 Playfields |
| 6 Hardcourts | |
| 7 Bus Drop-Off | |
| 8 Auto Drop-Off | |
| 9 Ampitheater | |
| 10 Service Yard | |



ENLARGED SITE PLAN: PHASE 2 - FULL BUILD-OUT

TK-8 SCHOOL

16.8 ACRES

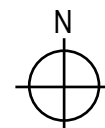
Proposed Design Concepts & Options



PHASE 2: TK-8 16.8 ACRES (20 ACRES TOTAL WITH PARK)

The Second Phase increases the programming to a full TK-8 school design on approximately 16.8 acres of the total 20 acre site. The TK-4 Classroom wings, Hardcourts, Play Areas and additional Parking are included in this final buildout.

- | | |
|------------------|---------------------------|
| 1 Main Entry | 11 Outdoor Learning |
| 2 Administration | 12 Classrooms |
| 3 Library | 13 Staff Parking |
| 4 Gymnasium | 14 Kindergarten Drop-Off |
| 5 Multi-Purpose | 15 Visitor Parking |
| 6 Hardcourts | 16 Additional Parking |
| 7 Bus Drop-Off | 17 Kindergarten Play Area |
| 8 Auto Drop-Off | 18 Fencing |
| 9 Ampitheater | 19 Playfields |
| 10 Service Yard | |



**PROGRAM
EDUCATIONAL SPECIFICATIONS**



STUDENT LOADING

TK-8 SCHOOL - FULL BUILD-OUT

Program Educational Specifications

CLASSROOM FACILITIES	EST. # OF STUDENTS	STUDENTS PER ROOM	QTY.	AREA PER ROOM	TOTAL AREA
TK Classroom	24	24	1	1,320	1,320
K Classrooms	100	20	5	1,320	6,600
1st Grade Classrooms	100	24	5	960	4,800
2nd Grade Classrooms	100	24	5	960	4,800
3rd Grade Classrooms	100	24	5	960	4,800
4th Grade Classrooms	100	28	4	960	3,840
5th Grade Classrooms	100	28	4	960	3,840
6th Grade Classrooms	100	28	4	960	3,840
7th Grade Classrooms (1 Room for Science)	100	28	4	960	3,840
8th Grade Classrooms (1 Room for Science)	100	28	4	960	3,840
SDC	39	13	3	960	2,880
RSP and DIS			3	700	2,100
Grade Overflow			2	960	1,920
Sub-Total Classrooms	963		49		48,420

CORE FACILITIES	QTY.	AREA PER ROOM	TOTAL AREA
Administration			
Reception / Waiting	1	200	200
Principal	1	200	200
Assistant Principal	1	200	200
Secretary	1	200	200
Counselor/Psych	1	200	200
Conference Room	1	250	250
Registrar	1	200	200
Lounge	1	500	500
Work Room	1	208	208
Nurse	1	250	250
<i>Total Administration</i>			2,408

Library			
<i>Total Library</i>			1,926

Multi-Purpose / Food Services			
MPR	1	4500	4,500
Storage / Dressing Rooms	2	400	800
Kitchen / Serving	1	1800	1,800
Stage	1	900	900
<i>Total Multi-Purpose / Food Services</i>			8,000

Gymnasium			
Gym	1	8,000	8,000
Storage	1	200	200
Lockers	2	900	1,800
<i>Total Multi-Purpose</i>			10,000

Ancillary			
Restrooms / Mechanical Rooms / Etc.			7,075
<i>Total Ancillary</i>			7,075
Sub-Total Core Facilities			29,409

Total Gross Area (Enclosed)			77,829
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STUDENT LOADING

TK-8 SCHOOL - PHASE 1 (GRADES 5 to 8)



Program Educational Specifications

CLASSROOM FACILITIES	EST. # OF STUDENTS	STUDENTS PER ROOM	QTY.	AREA PER ROOM	TOTAL AREA
TK Classroom					
K Classrooms					
1st Grade Classrooms					
2nd Grade Classrooms					
3rd Grade Classrooms					
4th Grade Classrooms					
5th Grade Classrooms	100	28	4	960	3,840
6th Grade Classrooms	100	28	4	960	3,840
7th Grade Classrooms (1 Room for Science)	100	28	4	960	3,840
8th Grade Classrooms (1 Room for Science)	100	28	4	960	3,840
SDC	13	13	1	960	960
RSP and DIS			2	700	1,400
Grade Overflow			1	960	960
Sub-Total Classrooms	413		20		18,680

CORE FACILITIES	QTY.	AREA PER ROOM	TOTAL AREA
Administration			
Reception / Waiting	1	200	200
Principal	1	200	200
Assistant Principal	1	200	200
Secretary	1	200	200
Counselor/Psych	1	200	200
Conference Room	1	250	250
Registrar	1	200	200
Lounge	1	500	500
Work Room	1	208	208
Nurse	1	250	250
<i>Total Administration</i>			2,408

Library			
<i>Total Library</i>			1,926

Multi-Purpose / Food Services			
MPR	1	4500	4,500
Storage / Dressing Rooms	2	400	800
Kitchen / Serving	1	1800	1,800
Stage	1	900	900
<i>Total Multi-Purpose / Food Services</i>			8,000

Gymnasium			
Gym	1	8,000	8,000
Storage	1	200	200
Lockers	2	900	1,800
<i>Total Multi-Purpose</i>			10,000

Ancillary			
Restrooms / Mechanical Rooms / Etc.			5,075
<i>Total Ancillary</i>			5,075
Sub-Total Core Facilities			27,409

Total Gross Area (Enclosed)			46,089
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STUDENT LOADING

TK-8 SCHOOL - PHASE 2 (GRADES TK to 4)

Program Educational Specifications

CLASSROOM FACILITIES	EST. # OF STUDENTS	STUDENTS PER ROOM	QTY.	AREA PER ROOM	TOTAL AREA
TK Classroom	24	24	1	1,320	1,320
K Classrooms	100	20	5	1,320	6,600
1st Grade Classrooms	100	24	5	960	4,800
2nd Grade Classrooms	100	24	5	960	4,800
3rd Grade Classrooms	100	24	5	960	4,800
4th Grade Classrooms	100	28	4	960	3,840
5th Grade Classrooms					
6th Grade Classrooms					
7th Grade Classrooms (1 Room for Science)					
8th Grade Classrooms (1 Room for Science)					
SDC	26	13	2	960	1,920
RSP and DIS			1	700	700
Grade Overflow			1	960	960
Sub-Total Classrooms	550		29		29,740

CORE FACILITIES	QTY.	AREA PER ROOM	TOTAL AREA
Administration			
Reception / Waiting			
Principal			
Assistant Principal			
Secretary			
Counselor/Psych			
Conference Room			
Registrar			
Lounge			
Work Room			
Nurse			
<i>Total Administration</i>			<i>0</i>

Library			
<i>Total Library</i>			<i>0</i>

Multi-Purpose / Food Services			
MPR			
Storage / Dressing Rooms			
Kitchen / Serving			
Stage			
<i>Total Multi-Purpose / Food Services</i>			<i>0</i>

Gymnasium			
Gym			
Storage			
Lockers			
<i>Total Multi-Purpose</i>			<i>0</i>

Ancillary			
Restrooms / Mechanical Rooms / Etc.			2,000
<i>Total Ancillary</i>			<i>2,000</i>
Sub-Total Core Facilities			2,000

Total Gross Area (Enclosed)			31,740
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BUDGET & SCHEDULE **PROJECT** 

PROJECT BUDGET ESTIMATE: FINAL BUILD-OUT (TK-8 SCHOOL)

Project Budget & Schedule

PRELIMINARY COST ESTIMATES TK-8 SCHOOL

Below represents the Preliminary Cost Estimates for the future Greenbriar Site based on Option A2 – TK-8 school design and approximately 16.8 acre site. There are elements that are assumed in the development of this estimate and should be further evaluated to mitigate costs including Project Delivery Method, Construction Management and Off-Site Utilities, to which this specifically should be negotiated with the developer to cover the costs of off-site utilities.

Preliminary Construction Cost Estimate: TK-8 School

of Students: 963

CLASSROOM FACILITIES	Qty.	Area / Unit	Total Area	Cost /Sq.Ft.	Total
TK Classroom	1	1,320	1,320	379.00	500,280
K Classrooms	5	1,320	6,600	379.00	2,501,400
1st Grade Classrooms	5	960	4,800	379.00	1,819,200
2nd Grade Classrooms	5	960	4,800	379.00	1,819,200
3rd Grade Classrooms	5	960	4,800	379.00	1,819,200
4th Grade Classrooms	4	960	3,840	379.00	1,455,360
5th Grade Classrooms	4	960	3,840	379.00	1,455,360
6th Grade Classrooms	4	960	3,840	379.00	1,455,360
7th Grade Classrooms	4	960	3,840	379.00	1,455,360
8th Grade Classrooms	4	960	3,840	379.00	1,455,360
SDC	3	960	2,880	379.00	1,091,520
RSP and DIS	3	700	2,100	379.00	795,900
Grade Overflow	2	960	1,920	379.00	727,680
Sub-Total Classrooms	49		48,420		18,351,180

CORE FACILITIES					
Administration			2,408	589.00	1,418,312
Library			1,926	589.00	1,134,414
Multi-Purpose / Food Services			8,000	589.00	4,712,000
Gymnasium			10,000	589.00	5,890,000
Ancillary			7,075	505.00	3,572,875
Sub-Total Classrooms and Core			77,829		35,078,781

SITE IMPROVEMENTS	Acres	Cost / Acre	Total
Site Improvements Costs	16.80	294,482.00	4,947,298
Sub-Total Classrooms, Core, and Site			40,026,079

SOFT COSTS		
Architect and Engineering Fees	10.00%	4,002,608.00
Plan Check Fees (CDE, DSA, DTSC, Other)	2.50%	1,000,652.00
Testing and Inspection	2.50%	1,000,652.00
Furniture and Equipment		333,835.00
Construction Contingency / Cost	10.00%	4,002,608.00
Total Soft Costs		10,340,355

Total Cost per Sq.Ft. 647.14
 Total Cost per Student 52,301.59

LAND ACQUISITION	Acres	Cost per Acre	Total
Total Land Acquisition	16.8	600,000.00	10,080,000

GRAND TOTAL OVERALL PROJECT 60,446,434

Qualifications:
 Project costs represented above are 2019 dollars. An inflationary factor of 4% should be applied and compounded annually through 2023, the anticipated year of when the project will be constructed.

PROJECT BUDGET ESTIMATE: PHASE 1 (5-8 GRADE SCHOOL)



Project Budget & Schedule

PRELIMINARY COST ESTIMATES 5-8 SCHOOL

Below represents the Preliminary Cost Estimates for the future Greenbriar Site for the Phase 1 5th through 8th grade school with core facilities. There are elements that are assumed in the development of this estimate and should be further evaluated to mitigate costs including Project Delivery Method, Construction Management and Off-Site Utilities, to which this specifically should be negotiated with the developer to cover the costs of off-site utilities.

Preliminary Construction Cost Estimate: TK-8 School # of Students: 413

CLASSROOM FACILITIES	Qty.	Area / Unit	Total Area	Cost /Sq.Ft.	Total
TK Classroom					
K Classrooms					
1st Grade Classrooms					
2nd Grade Classrooms					
3rd Grade Classrooms					
4th Grade Classrooms					
5th Grade Classrooms	4	960	3,840	379.00	1,455,360
6th Grade Classrooms	4	960	3,840	379.00	1,455,360
7th Grade Classrooms	4	960	3,840	379.00	1,455,360
8th Grade Classrooms	4	960	3,840	379.00	1,455,360
SDC	1	960	960	379.00	363,840
RSP and DIS	2	700	1,400	379.00	530,600
Grade Overflow	1	960	960	379.00	363,840
Sub-Total Classrooms	20		18,680		7,079,720

CORE FACILITIES					
Administration			2,408	589.00	1,418,312
Library			1,926	589.00	1,134,414
Multi-Purpose / Food Services			8,000	589.00	4,712,000
Gymnasium			10,000	589.00	5,890,000
Ancillary			5,075	505.00	2,562,875
Sub-Total Classrooms and Core			46,089		22,797,321

SITE IMPROVEMENTS	Acres	Cost / Acre	Total
Site Improvements Costs	16.80	294,482.00	4,947,298
Sub-Total Classrooms, Core, and Site			27,744,619

SOFT COSTS		
Architect and Engineering Fees	10.00%	2,774,462
Plan Check Fees (CDE, DSA, DTSC, Other)	2.50%	693,615
Testing and Inspection	2.50%	693,615
Furniture and Equipment		333,835
Construction Contingency / Cost	10.00%	2,774,462
Total Soft Costs		7,269,989

Total Cost per Sq.Ft. 759.71
 Total Cost per Student 84,781.13

LAND ACQUISITION	Acres	Cost per Acre	Total
Total Land Acquisition	16.8	600,000.00	10,080,000

GRAND TOTAL PHASE 1 45,094,608

Qualifications:
 Project costs represented above are 2019 dollars. An inflationary factor of 4% should be applied and compounded annually through 2023, the anticipated year of when the project will be constructed.

PROJECT BUDGET ESTIMATE: PHASE 2 (TK-8 SCHOOL)

Project Budget & Schedule

PRELIMINARY COST ESTIMATES TK-8 SCHOOL

Below represents the Preliminary Cost Estimates for the future Greenbriar Site based on Option A2 – K-8 school design and approximately 20 acre site. There are elements that are assumed in the development of this estimate and should be further evaluated to mitigate costs including Project Delivery Method, Construction Management and Off-Site Utilities, to which this specifically should be negotiated with the developer to cover the costs of off-site utilities.

Preliminary Construction Cost Estimate: TK-4 School # of Students: 551

CLASSROOM FACILITIES	Qty.	Area / Unit	Total Area	Cost /Sq.Ft.	Total
TK Classroom	1	1,320	1,320	379.00	500,280
K Classrooms	5	1,320	6,600	379.00	2,501,400
1st Grade Classrooms	5	960	4,800	379.00	1,819,200
2nd Grade Classrooms	5	960	4,800	379.00	1,819,200
3rd Grade Classrooms	5	960	4,800	379.00	1,819,200
4th Grade Classrooms	4	960	3,840	379.00	1,455,360
5th Grade Classrooms					
6th Grade Classrooms					
7th Grade Classrooms					
8th Grade Classrooms					
SDC	2	960	1,920	379.00	727,680
RSP and DIS	1	700	700	379.00	265,300
Grade Overflow	1	960	960	379.00	363,840
Sub-Total Classrooms	29		29,740		11,271,460

CORE FACILITIES					
Administration					
Library					
Multi-Purpose / Food Services					
Gymnasium					
Ancillary			2,000	505.00	1,010,000
Sub-Total Classrooms and Core			31,740		12,281,460

SITE IMPROVEMENTS	Acres	Cost / Acre	Total
Site Improvements Costs			
Sub-Total Classrooms, Core, and Site			12,281,460

SOFT COSTS		
Architect and Engineering Fees	10.00%	1,228,146
Plan Check Fees (CDE, DSA, DTSC, Other)	2.50%	307,037
Testing and Inspection	2.50%	307,037
Furniture and Equipment		333,835
Construction Contingency / Cost	10.00%	1,228,146
Total Soft Costs		3,404,201

Total Cost per Sq.Ft. 494.19
 Total Cost per Student 28,468.62

LAND ACQUISITION	Acres	Cost per Acre
Total Land Acquisition		

GRAND TOTAL PHASE 2 15,685,661

Qualifications:
 Project costs represented above are 2019 dollars. An inflationary factor of 4% should be applied and compounded annually through 2023, the anticipated year of when the project will be constructed.

PROJECT SCHEDULE

Project Budget & Schedule



PROPOSED SCHEDULE

Based on the need presented by the anticipated student population, the following schedule is suggested:

Schematic Design Phase	March 2021 - May 2021
Design Development Phase	June 2021 - August 2021
Construction Documents Phase	September 2021 - January 2022
Permitting Phase - DSA Review	February 2022 - November 2022
Bidding Phase	December 2022 - January 2023
Construction Phase.....	February 1, 2023 - July 30, 2024
Substantial Completion Date - School Opening.....	August, 2024
Warranty Phase	August 1, 2024 - August 1, 2025



SUMMARY / CONCLUSIONS



GREENBRIAR FEASIBILITY STUDY TWIN RIVERS USD

SUMMARY / CONCLUSIONS

The Site Feasibility Study for the Greenbriar Development was conducted to examine the feasibility of the tentative School Site location as a viable site for the Twin Rivers USD. The proposed development property is located at the northwest quadrant of the Interstate 5 freeway and highway 99. It is bordered to the north by Elkhorn Boulevard is located along the north side of the property and to the west by and existing farmland and a small portion of residential area borders the property to the west.

The study commenced with a site visit, photo documentation, and general assessment of the development property. The developer's Tentative Track Site Plan includes the typical residential housing lots, streets, man-made lakes and water features, open space, parks, and a proposed school site location.

The PBK team utilized the Twin Rivers program and loading criteria from the Twin Rivers 2015 Long Range Facilities Master Plan, updated in 2017, for a typical K-8 Elementary School to develop a base campus layout design. The goal was to determine the fit of campus charge was to develop a site study (test fit) on the proposed 20 acre site that would accommodate an elementary school in accordance to Twin Rivers USD program requirements.

- Site Plan Option A - The base Elementary School design test fit on a small 10 acre site, however it was determined there was not sufficient acreage to accommodate the required hard-courts and playfields.
- Site Plan Option A1 – Illustrates the test fit of for the base Elementary plan School on the site with needing to utilize which requires an additional 4 to 6 acres from the park to properly fit in order to accommodate the necessary hard-courts and playfields, while utilizing the Regency Park radial plan.
- Site Plan Option B – Illustrates the test fit of for a K-8 School in a different finger plan layout. However, similar to Option A1, the acreage from remaining additional 10 acres of the park was needed to meet the site conditions requirements from required by the State for grass play fields, ball fields and hard-courts.

In looking at Reviewing the property and an analysis of the site in respect to the California Department of Educations (CDE) Site Selection Criteria, it was found a few areas/categories posed some potential challenges to the site conditions (see in appendix).

- Final Concept Plan – Illustrates ta two-phased development of the school starting with grades 5th through 8th and the Core Facilities. Core Facilities included Administration, Library, Multi-Purpose, and Gymnasium with shared development onto the park. Phase 2 provides TK-4th grade, Fields, Courts, and additional Parking.

In review, the potential challenges are as follows:

- Safety, Environment, Size and Shape, and Cost:
 - o School site does not meet the CDE distance criteria from highways and freeways
 - o School site is located in a Flood Plain
 - o School Site is on an Agricultural Site
 - o Costs Premium Cost Implications

The proposed school site does not meet the minimum distance criteria of 1,500 foot from adjacent freeways and highways. The site is approximately 650± feet from Highway 99 and 700± feet from the 5 Interstate 5 Freeway. The site does meet the 2 nautical mile distance criteria for the Sacramento International Airport, but additional information on flight paths and other criteria will need to be examined more closely.

The proposed school site is located in a Flood Plain as determined by the 2017 FEMA Flood Plain Mapping. It is located in a Special Flood Hazard Area subject to inundations by the 1% annual chance flood. Property The property is located in a Zone A99 – area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

The proposed school and overall development is located on an existing Agricultural Site. The presumed use of pesticides and/or fertilizers, etc. on this site requires that a Phase 1 Environmental Site assessment be completed per CDE requirements for approval.

The costs concerning for the anticipated infrastructure and utilities should be negotiated with the developer. The various costs associated with any potential mitigation measures regarding the above referenced site challenges shall need require to be fully determined to establish an overall cost required for this property and its overall viability as a public school site.

APPENDIX



CDE SITE SELECTION CRITERIA

Appendix

California Department of Education Site Selection Criteria

Part 1

Site Identification GREENBRIAR SITE	Grade Level K-6/K-8
Location SACRAMENTO	Gross Acres
	Estimated Value ?

Safety (These factors must be avoided.)	OK	Potential Problem	Topography	OK	Potential Problem	Availability	OK	Potential Problem
Adjacent to or near roadways with a high volume of traffic		X	Feasibility of mitigating steep grades	X		On the market for sale	X	
Within 1,500 feet of railroad tracks	X		Rock ledges or outcroppings	X		Title clearance	X	
Within two miles of an airport runway	X		Surface and subsurface drainage	X		Condemnation of buildings and relocation of residents	X	
Close to high-voltage power lines	X			X				
Close to high-pressure lines, for example natural gas, gasoline sewer or water lines			Size and Shape			Public Acceptance		
Contaminants/toxics in the soil or groundwater, such as from landfills, dumps, chemical plants, refineries, fuel tanks, nuclear plants, or agricultural use of pesticides or fertilizer, etc.*		X	Net acreage consistent with standards of California Department of Education as noted in "School Site Analysis and Development"	X		Public acceptance of the proposed site	X	
Close to high decibel noise sources		X	Length-to-width ratio does not exceed 2:1	X		Receptivity of city or county planning commission	X	
Close to open-pit mining	X		Sufficient open play area and open space		X	Zoned for prime agriculture or industrial use		X
On or near a fault zone or active fault	X		Potential for expansion for future needs		X	Negative environmental impact report		X
In a dam inundation area or 100- year flood plain		X	Area for adequate and separate bus loading and parking	X	X	Coordination of proposed school with future community plans	X	
Social hazards in the neighborhood, such as high incidence of crime and drug or alcohol abuse	X					Comments:		
<i>*Note: A Phase I Environmental Site Assessment must be conducted for the selected site.</i>			Accessibility			• TOO CLOSE TO FREEWAY		
			Obstacles such as crossings on major streets and intersections, narrow or winding streets, heavy traffic patterns	X		• FLOOD PLAIN		
Location			Access and dispersal roads	X		• AGRICULTURAL		
Safe walking areas	X		Natural obstacles such as grades or gullies	X				
Centrally located to avoid extensive transporting and to minimize student travel distance	X		Freeway access for bus transportation	X				
Compatible with current and probable future zoning regulations	X		Routing patterns for foot traffic	X				
Close to libraries, parks, museums, and other community services	X		Remote areas (with no sidewalks) where students walk to and from school	X				
Favorable orientation to wind and natural light	X		Easily reachable by emergency response vehicles	X				
Environment			Public Services					
Free from sources of noise that may impede the instructional process		X	Fire and police protection, including firelines	X				
Free from air, water and soil pollution		X	Available public transportation		X			
Free from smoke, dust, odors, and pesticide spray		X	Trash and garbage disposal	X				
Provides aesthetic view from and of the site	X							
Compatible with the educational program	X		Utilities					
			Availability of water, electricity, gas, sewer	X				
Soils			Feasibility of bringing utilities to site at reasonable cost	X				
Proximity to faults or fault traces	X		Restrictions on right of way	X				
Stable subsurface and bearing capacity	X							
Danger of slides or liquefaction	X	?	Cost					
Percolation for septic system and drainage	X		Reasonable costs for purchase of property, severance damages, relocation of residents and businesses, and legal fees	X				
Adequate water table level	X		Reasonable costs for site preparation including, but not limited to, drainage, parking, driveways, removal of existing buildings, and grading	X				
Existing land fill is reasonably well compacted	X		Toxic cleanup beyond the owner's obligation		X			
<i>Note: A geological hazard report must be conducted to determine soil and seismic conditions.</i>			Environmental mitigation		X			
			Reasonable maintenance costs	X				

DEVELOPER CONTRIBUTION

Appendix



Exhibit "B-2"
TK-8 School Financing Plan
Mutual Benefit Agreement - Twin Rivers Unified & The Greenbriar Project Owner

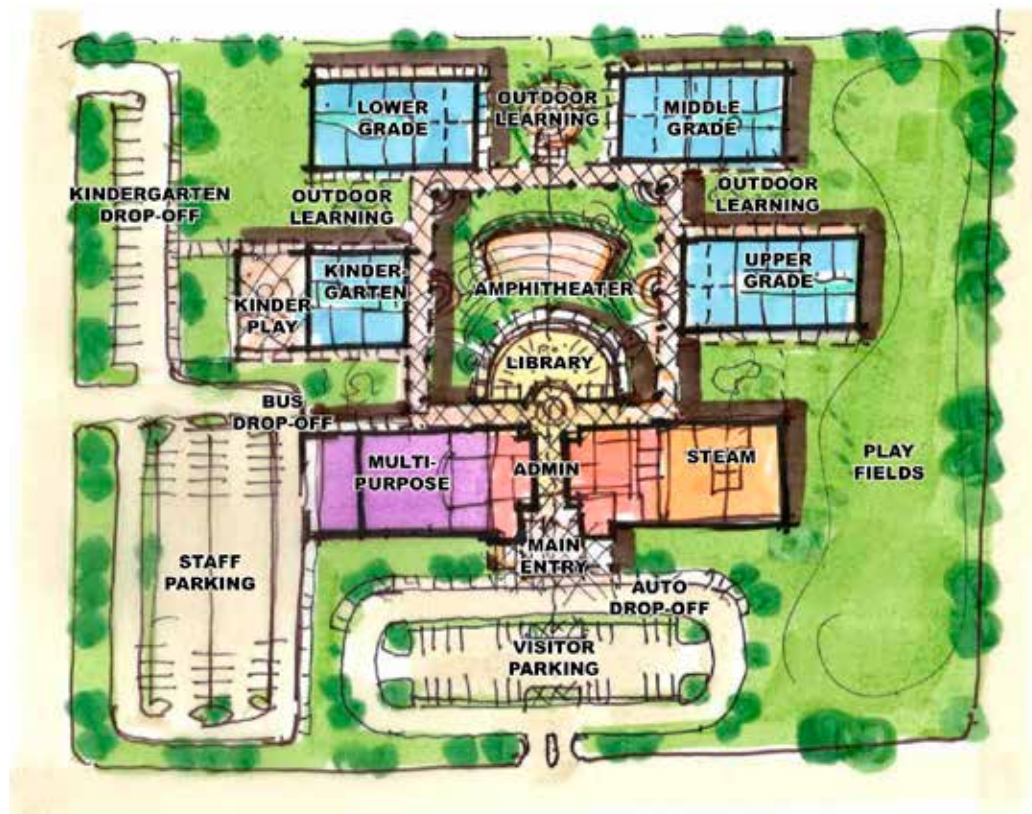
Developer Contribution

Lot Type	Units	Avg. Sq. Ft.	2019 Level 1 Fee	2019 Total Level 1 Fees	Mitigation Payment Per Lot	Total Mitigation Payments
Low Density Residential Units	116	N/A	N/A	N/A	14,250	1,653,000
Medium Density Residential Units	2,060	N/A	N/A	N/A	14,250	29,355,000
High Density Residential Units	352	1,400	3.79	1,867,712	N/A	N/A
Senior Residential Units	225	1,200	0.61	164,700	N/A	N/A
Commercial Development	1	312,543	0.61	190,651	N/A	N/A
Total Developer Contribution	2,754			2,223,063		31,008,000

Prepared by Twin Rivers Unified - Administrative Services - 06-21-2019

16.8 Acres @ \$600,000 / Acre 10,080,000

Total Contribution from Developer **41,088,000**



5.2.2 MASTER SITE PLANNING

ADJACENCY DIAGRAM



SPECIFIC FEATURES/SITE

- The campus should include an amphitheater as a focal point and outdoor learning area. Use concrete steps from stage down to the lawn, with a valley gutter to the storm drain. Develop a gradual slope to ensure proper drainage and lawn care. Provide power, P.A. and lighting at stage area.
- The bus unloading area should be separate from the passenger unloading area. An unloading pattern on site should be established. Consideration also needs to be given to the arrival/departure of kindergarten students. Area for bus, vehicle and students to safely load and unload. Located adjacent to Kindergarten, Administration Office buildings and Athletic fields.
- There should be at least 100 parking stalls on campus.
- Student restrooms should be placed at each classroom wing. Upper Grade wing to include six (6) stalls and three (3) sinks in the Girl's Restroom. Boy's Restroom should include two (2) stalls, four (4) urinals and three (3) sinks. Standard and Lower Grade wings should include three (3) stalls for Girl's Restrooms and two (2) sinks. Boy's restrooms should include one (1) stall, two (2) urinals and two (2) sinks. Adult restrooms located in the Administration building and Multipurpose room. 1 set of Student Restroom shall be near playfields.
- Provide an integrated special educational department within a classroom wing centrally located within the campus. For every 18,000 students build a facility for moderately severe education.
- Academic lockers not required.
- Bicycle racks should be located on campus to accommodate at least 75 bikes, with good visual supervision, and safe keeping. Include skateboard rack for sixteen (16) skateboards.
- An internal communication network should provide for data, voice and video. Every classroom, office area, and meeting area should have the full set



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