

Dinosaur Community Center

Fall 2021



College of Architecture and Planning
UNIVERSITY OF COLORADO DENVER



COLORADO
Department of Local Affairs



Town of
Dinosaur



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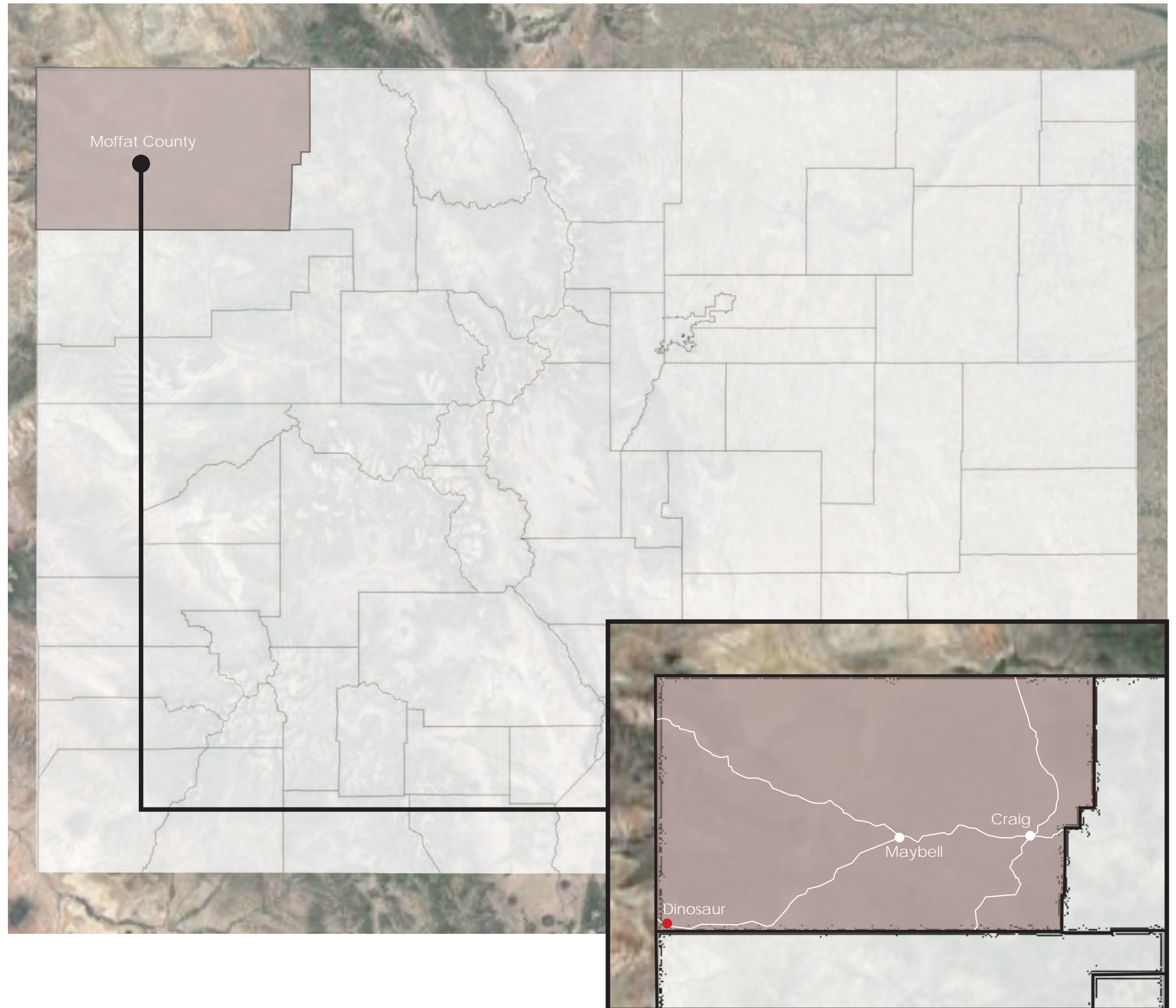
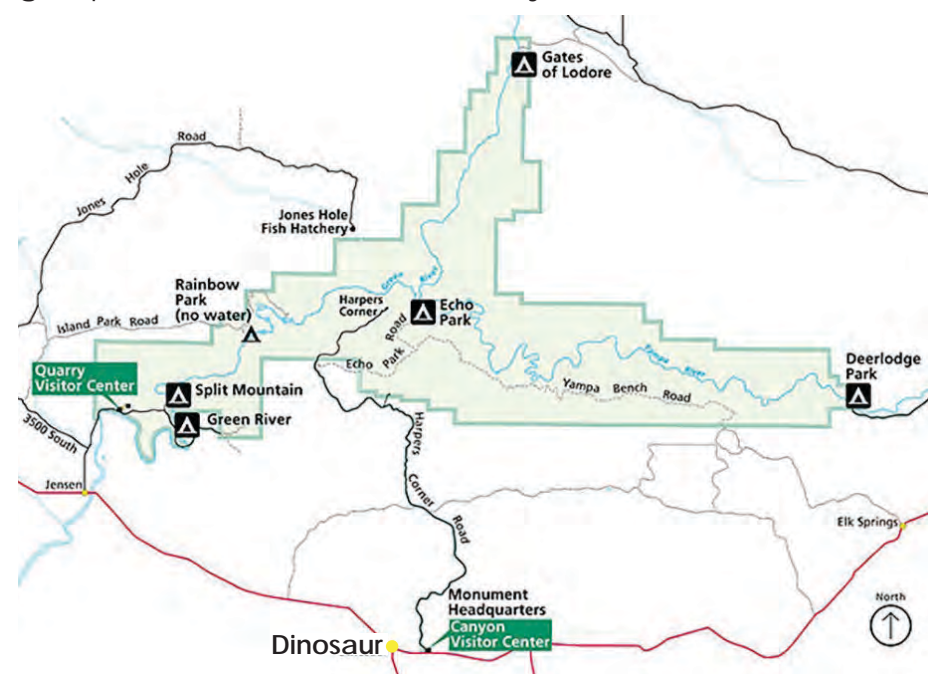
Introduction | Community Background

Dinosaur is a quaint town in the Northwestern region of Colorado in Moffat County. The town was formerly named Artesia and in the 1930s and 40s went through periods of boom and bust due to nearby oil and ranching industries. Artesia was renamed Dinosaur in 1966 due to its proximity to Dinosaur National Monument.

Dinosaur National Monument is a 210,000 acre park with hundreds of dinosaur fossils and Native American pictographs and petroglyphs. Nearly half of the monument's acreage sits within Moffat County, thus the town of Dinosaur affectionately became known as "The Gateway to Dinosaur National Monument". The main entrance and monument headquarters are located less than 2 miles east of Dinosaur, off of U.S. Highway 40.

Today, Dinosaur has a small population of roughly 240 residents and is just under 1 square mile of land at an elevation of 5,922 ft. Despite its small footprint and population, Dinosaur boasts a vibrant history and unique surrounding landscape that attracts visitors from near and far.

Due to decreased numbers of student enrollment, Dinosaur Elementary School was closed in 2007. The elementary school's large site, adjacency to local trails, and existing floor plan provide an excellent opportunity to adapt the building into a Community Center that can serve all age groups in the Dinosaur community.





Introduction | Scope of Work

Work under this scope includes space programming, conceptual design, schematic floor plan layout, technical drawings, and renderings for the adapted community center. The scope also includes master site planning and accompanying rendered images for outdoor recreational areas such as a skate park, amphitheater, future pool, and more.

The building and site are pre-existing and located on the western edge of Dinosaur near Bureau Land Management (BLM) land and trails. The building is 15,346 SF and the parcel is 5.9 acres. The building is accessed off of School Street.

Work tasks include:

- Community center use and function needs
- Space planning and program development
- General building requirements
- Floor plan development
- Interior materiality study and recommendations
- Exterior elevation and materiality recommendations
- Specific building details
- Site plan layout including parking configuration and outdoor activities areas
- Preliminary cost analysis for Architecture and Landscape Architecture work





Existing Conditions

Context & Site Analysis

pg. 12

Building Analysis

pg. 14

Existing Conditions | Context and Site Analysis

The Community Center is located at the western edge of Dinosaur off School Street. It is adjacent to BLM land and trails which provide the opportunity to connect to Dinosaur Community Center's outdoor programming. The north western part of the site has views of Blue Mountain (Cliff Ridge) which can be enjoyed from a future amphitheater. Several sporting grounds including a baseball field, ice rink and basketball courts can be repaired or re-purposed for new recreational activities that fit a wide array of interests. The Dinosaur Library is just a one minute walk away from the community center. In the case of a large community center event, there is an opportunity for overflow parking at the library's parking lot.



Blue Mountain (Cliff Ridge)

Existing Conditions | Context and Site Analysis



Basketball Courts



Baseball Field



Playground



Looking towards the building from the basketball courts



Semi-circle driveway looking towards playground



Gravel parking lot and Basketball Courts

Existing Conditions | Building Analysis

What was formerly the Dinosaur Elementary School and now the proposed Community Center is as 15,346 SF building. The roof was recently replaced. The primary materials are CMU brick walls, various carpet and tile flooring materials, and drop panel ceilings.

The exterior of the building is primarily red brick and should be tuck pointed to fill and support decaying mortar joints between the brickwork.

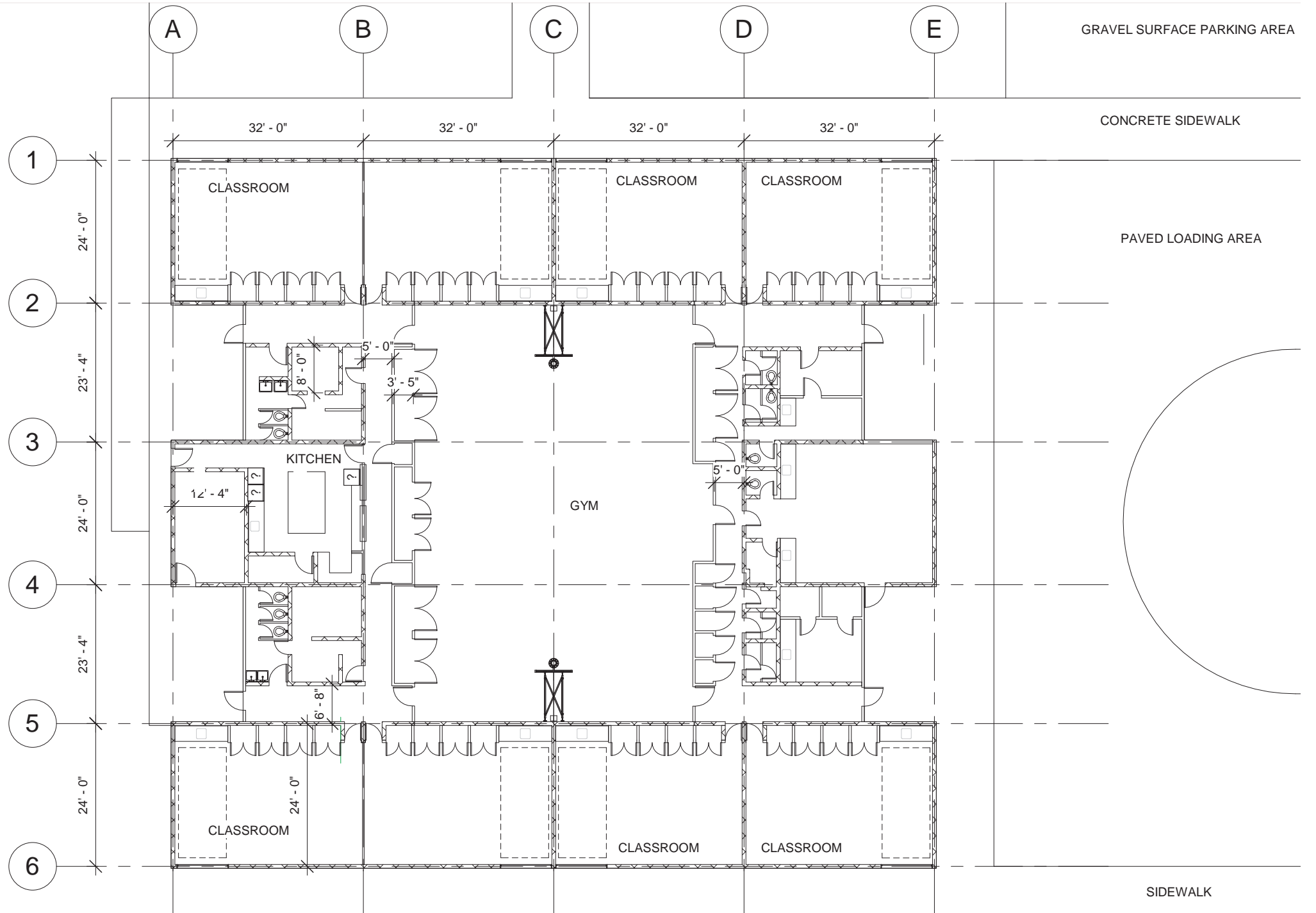


New Roof Structure



New Roof Structure

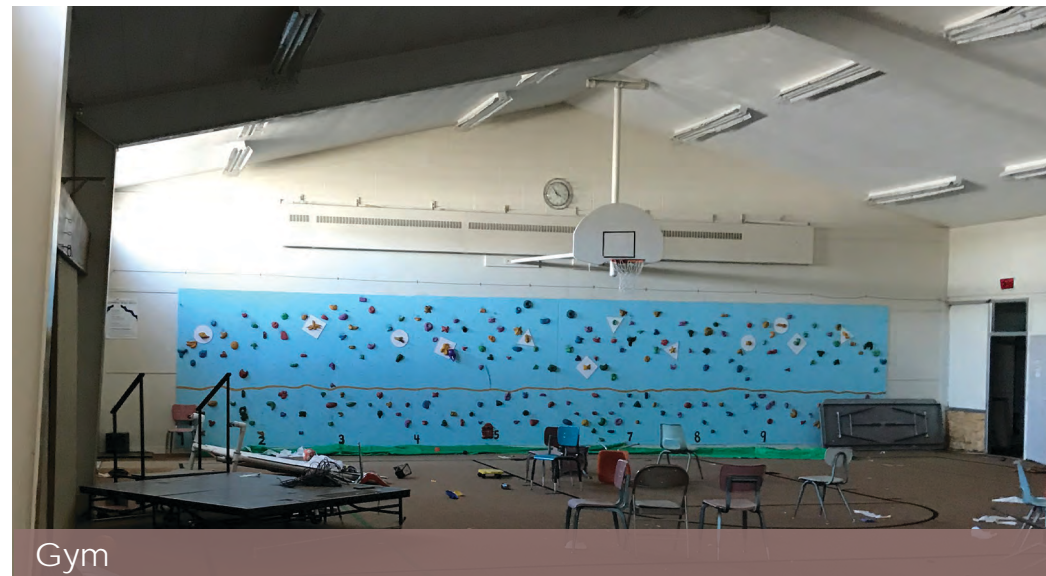
Existing Floor Plan



Not to Scale

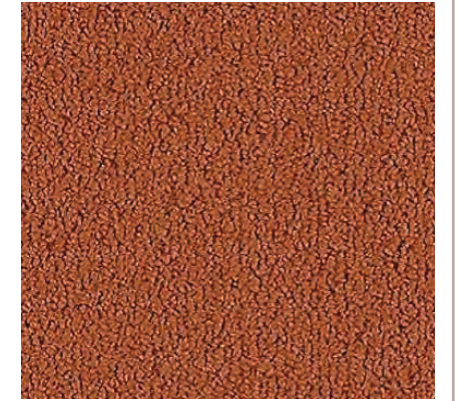


Existing Conditions | Building Analysis



Flooring

Consists of tiling in the kitchen and red/orange carpeting throughout the hallways, gymnasium, and classrooms.



Walls

Painted CMU and Drywall



Ceiling

Drop ceiling, white acoustic paneling



Design

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Design | Landscape Architecture | Goals and Overall Site Plan

The site design for Dinosaur Community Center was guided by four main objectives. The site should foster a sense of community pride, be low maintenance, improve circulation for cars and pedestrians, create opportunities for activities and events that are open to the public. With these objective in mind, the design team created a site plan that will both beautify and help activate the Dinosaur Community Center.

COMMUNITY



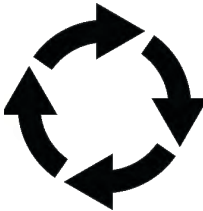
The site design for the community center should help foster a sense of pride within the community of Dinosaur. Dinosaur statues and dinosaur-themed activities are planned throughout the site. The amphitheater, pergolas and shade sails on site provide spaces to hold community events and group gatherings to help bring the community together.

LOW MAINTENANCE



The site features xeriscaping appropriate for Colorado's dry climate and native plantings that will thrive on little water and intense sun exposure. It is also suggested that native tall grass fields be planted around the site for a low maintenance aesthetic.

CIRCULATION



Sidewalks, paths, parking lots and drives have been designed to allow safe and easy access to all amenities and activities on site. Pedestrian activity interfere as little as possible with vehicle activity. Two parking lots were created: one for community center and sports field parking and one for amphitheater and skate park parking. Improvements were made to the existing drop off and the front of the building and a drive was created for access to the dumpsters beside the building.

FUN



The site design features a number of activities that are open to the public and will encourage visitors to have fun. Activities include a nature-themed playground, fossil dig, skate park, pool, sports fields and trails through a native plant garden.



Design | Landscape Architecture | Site Design Precedents



A STARGAZING AMPHITHEATER



B CRUSHER FINE TRAILS THROUGH GARDEN



C SCREENING AROUND TRASH & RECYCLING



D NATURE PLAY FOSSIL DIG



E PICNIC SHELTER (DOUBLES AS OUTDOOR CLASSROOM)



F NATURE PLAY



G STAMPED DINOSAUR PRINTS TO NATURE PLAY



H IDENTITY SCULPTURES THROUGHOUT GARDEN



I COMMUNITY POOL



J ENTRY PLAZA



K ENTRY XERISCAPING



L FRONT ENTRY SCULPTURE



M DIGITAL WELCOME SIGN



N NATIVE PLANT GARDEN



O BENCH SEATING ALONG WALKING TRAILS



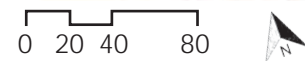
P PERGOLA WITH PICNIC TABLES



Q SPORT STORAGE/CONCESSION SHED

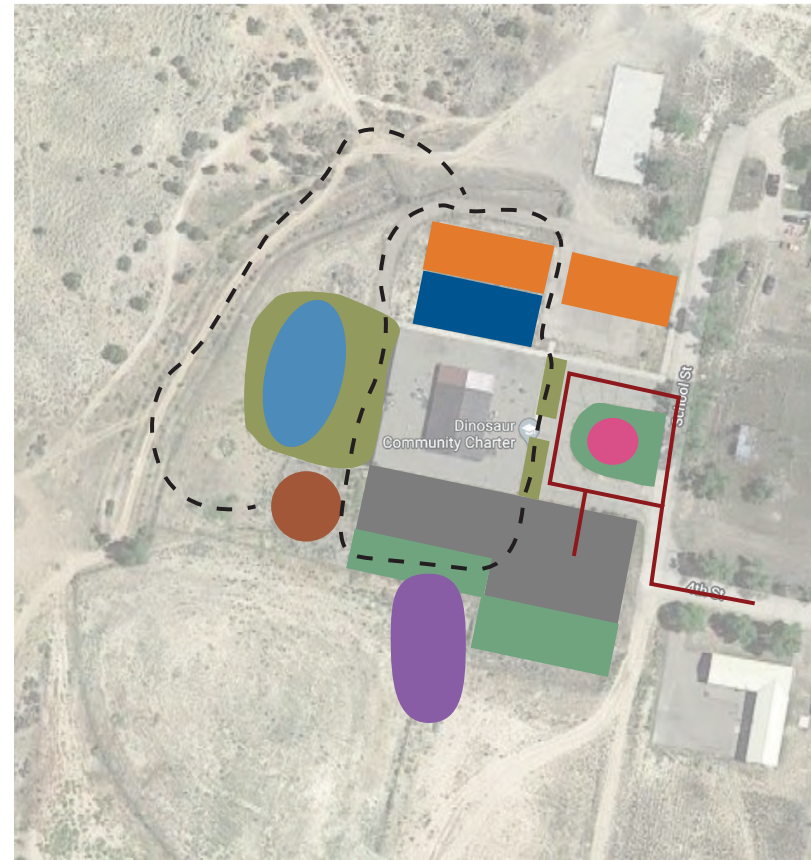


R BASEBALL + SOCCER MULTIPURPOSE FIELD



Design | Landscape Architecture | Process Work

After conducting an analysis of existing site conditions, the landscape architecture interns begin their iterative design process. The process involves collaboration amongst team members and addressing client feedback to arrive at the best solution for the community center's landscape.






LEGEND

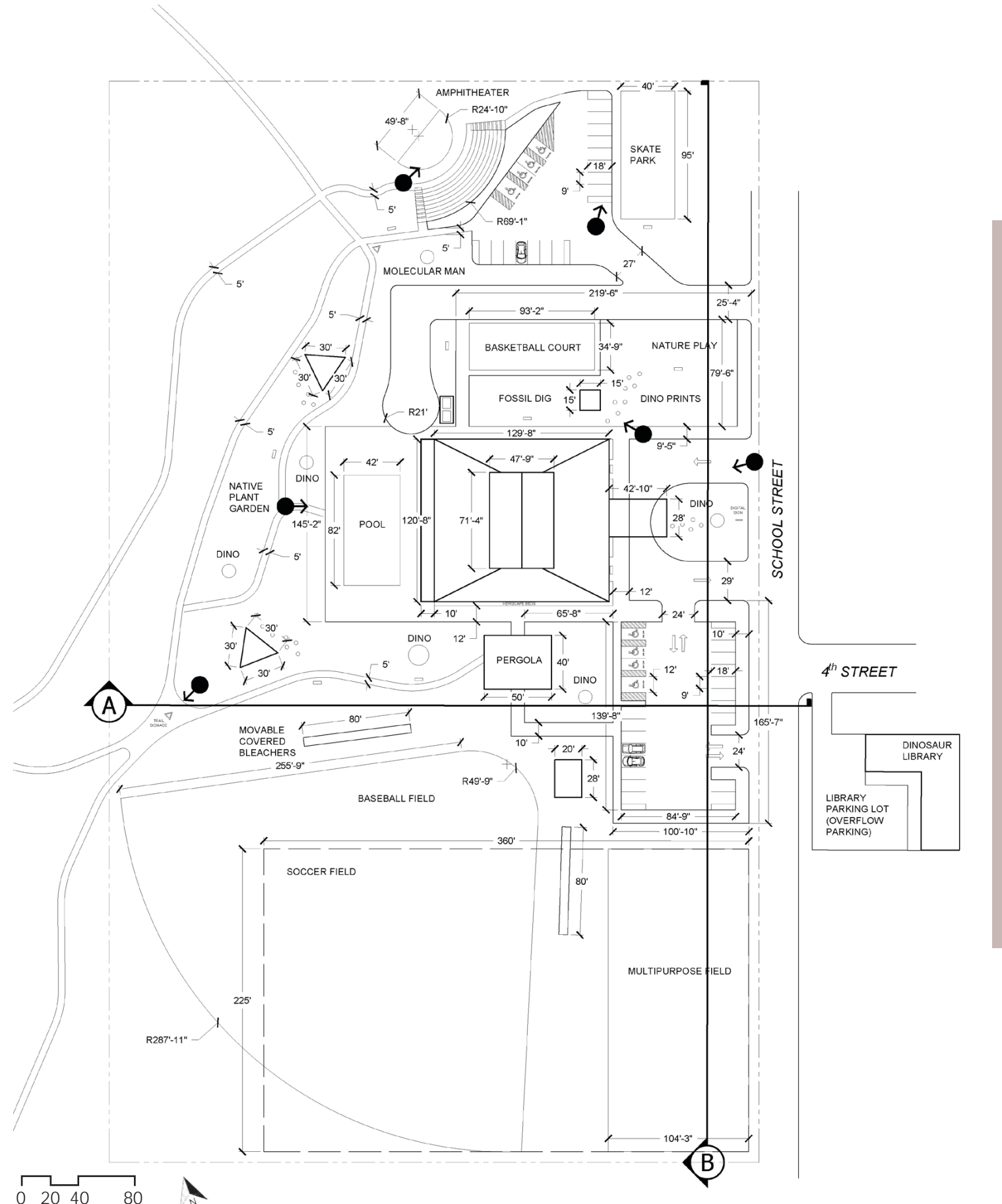
- Outdoor Sports Court
- Xeriscaping/Native Plant
- Trail Access
- Community Pool
- Parking/Utility
- Art Exhibit/Welcome Signage
- Dugout/Shade Structure
- Plaza
- Pedestrian Circulation
- Vehicular Access



Design | Landscape Architecture | Technical Plan

This technical plan shows dimensions for all aspects of the site. Dimensions are rough estimates and can be changed as needed. The plan also displays section cuts for Sections A and B that will be shown later in this packet. Circles with arrows indicate location of perspective views found in the following pages.

-  PERSPECTIVE VIEW LOCATION
-  SECTION LINE
-  SITE BOUNDARY



Design | Landscape Architecture | Parking and Vehicular Circulation

In an effort to improve vehicular circulation and safety, this site design recommends repaving and restoring the existing U-shaped entry drive. Below are four alternatives to traditional asphalt paving, along with a brief description of their benefits. In addition to repaving, two parking lots have been added on site, an upper lot and a lower lot, to accommodate increased traffic at the community center. It should also be noted that Dinosaur's library sits east of the community center and could serve as an overflow parking lot for larger events, busier weekend days, or holidays. A drive lane has been added to the north to allow for a turnaround for trash and recycling trucks, as well as closer access to the utility room for maintenance vehicles.

OPEN CONCRETE GRIDS



This option requires less concrete, and the grid design allows for erosion protection and drainage while still maintaining durability for heavy vehicle traffic. It is most common to fill the grid with soil and plant a durable ground cover or grass in the openings. Gravel or drainage-friendly aggregate could also be utilized in the grid openings.

RECYCLED ASPHALT



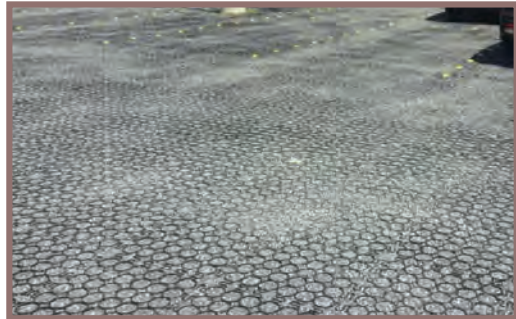
Recycled asphalt and concrete is an eco-friendly way to reuse any demoed concrete or asphalt from the existing sidewalks and roads on site. By mixing in these recycled materials, the overall cost and environmental impact is lowered significantly.

POROUS PAVEMENT & CONCRETE

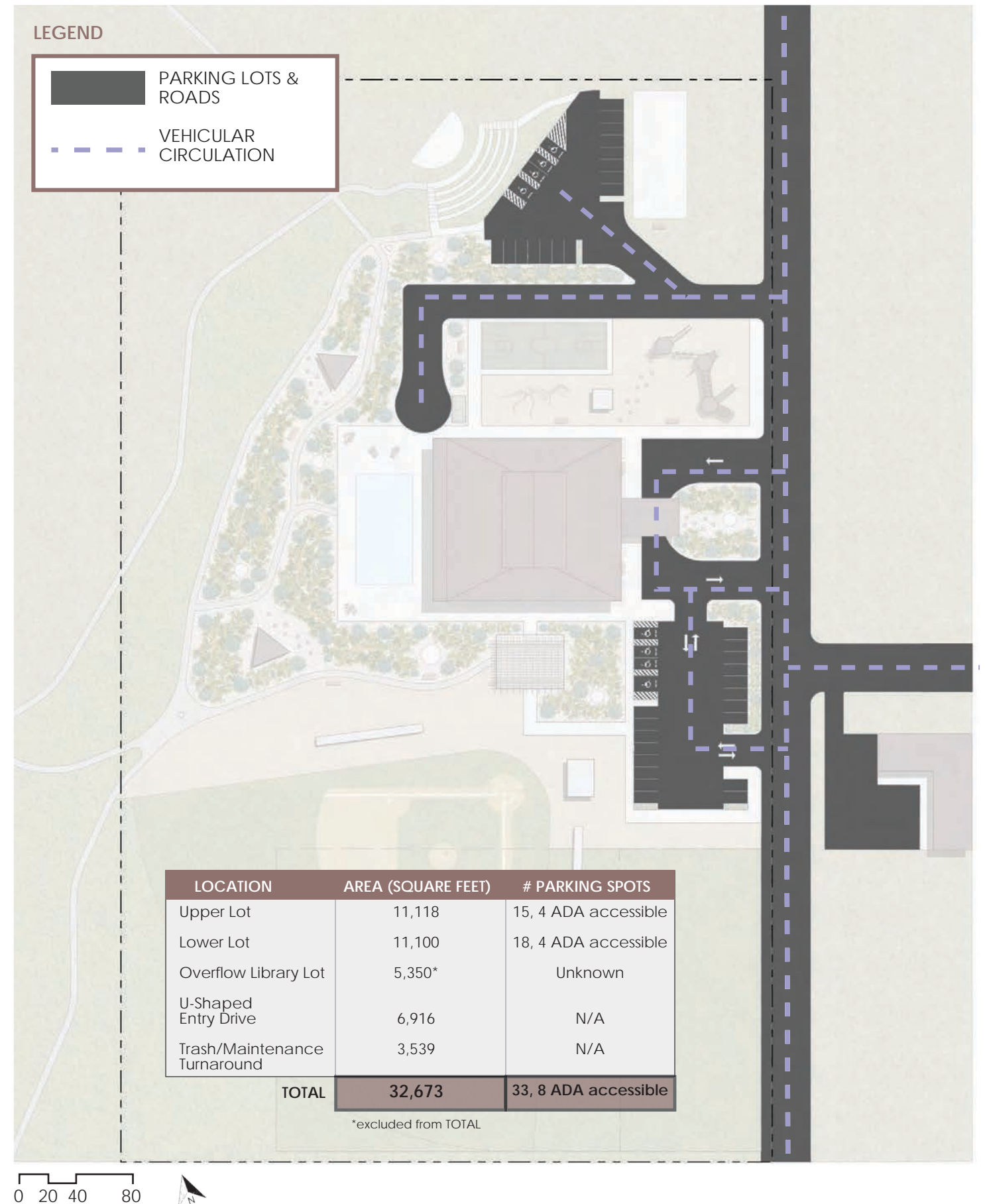


This alternative provides excellent drainage and erosion control, providing long lasting eco-friendly benefits. The porous design is durable enough to handle heavy traffic, yet porous enough to allow water and other liquids to flow through it freely.

TRUEGRID PAVERS



Pavers such as TrueGrid are perhaps the most eco-friendly alternative because they require no concrete or asphalt and use far less equipment. TrueGrid is made of 100% post-consumer recycled materials. Like open concrete grids, these pavers are filled with gravel, dirt, or grass during the installation process.



Design | Landscape Architecture | Pedestrian Circulation and Materiality

The following materials have been selected for pedestrian pathways to increase accessibility, support specific activities, such as hiking and biking, as well as to increase the sense of place.

CRUSHER FINES



Crusher fines can be used on pedestrian only trails as a low-cost and durable solution for decreasing storm water runoff and increasing infiltration to nearby garden beds.

CONCRETE



Concrete should be used on primary walkways to support ADA accessibility and easier seasonal maintenance.

FLAGSTONE



Flagstone pathways provide a unique experience for pedestrians, while also highlighting points of interest on the garden trails.

	LOCATION	LENGTH (LINEAR FEET)	MATERIALITY
Secondary Walkways	Primary Walkways	1,855	concrete
	Pedestrian Only Trails	2,133	crusher fines, flagstone
	Shared Trails (Pedestrian & Bike)	319	gravel/dirt
	Dino Footprint Trails	266	stamped concrete stepping stones
TOTAL		4,573	

GRAVEL / DIRT

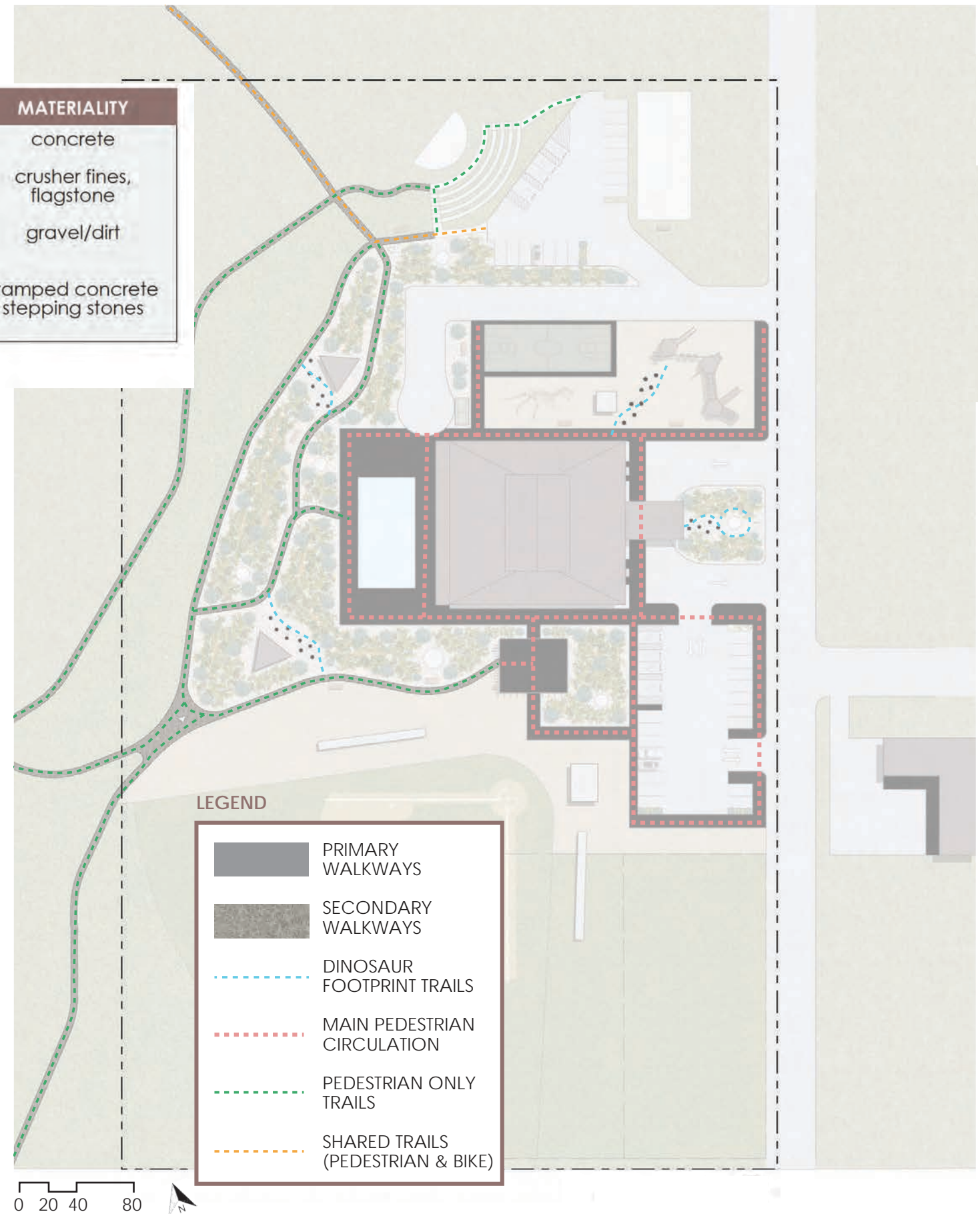


Shared trails that see both pedestrian use and bicyclist use should be gravel or dirt to ensure long term durability.

STAMPED CONCRETE STEPPING STONE



Concrete stepping stones add a playful element to the site, and can be stamped with dinosaur footprints or fossils to celebrate the town's spirit.



Design | Landscape Architecture | Planting Plan & Palette

The following plants have been chosen for their resilience on the Western Slope and are best suited for Dinosaur's Community Center, which sits at an elevation of 5,922 feet. All of these species are low water and require little to no extra maintenance, serving as wonderful examples of xeriscaping for visiting community members. Many of the species below also provide unique winter structure and interest ensuring year-round beauty at the community center's garden.



Eriogonum umbellatum
Sulphurflower Buckwheat



Linum lewisii
Blue Flax



Ratibida columnifera
Prairie Coneflower



Schizachyrium scoparium
Little Bluestem



Agave parryi (cold hardy variety)
Perry's Agave



Bouteloua gracilis
Blue Grama Grass



Sphaeralcea coccinea Scarlet
Globemallow



Stanleya pinnata
Desert Prince's Plume



Fallugia paradoxa
Apache Plume



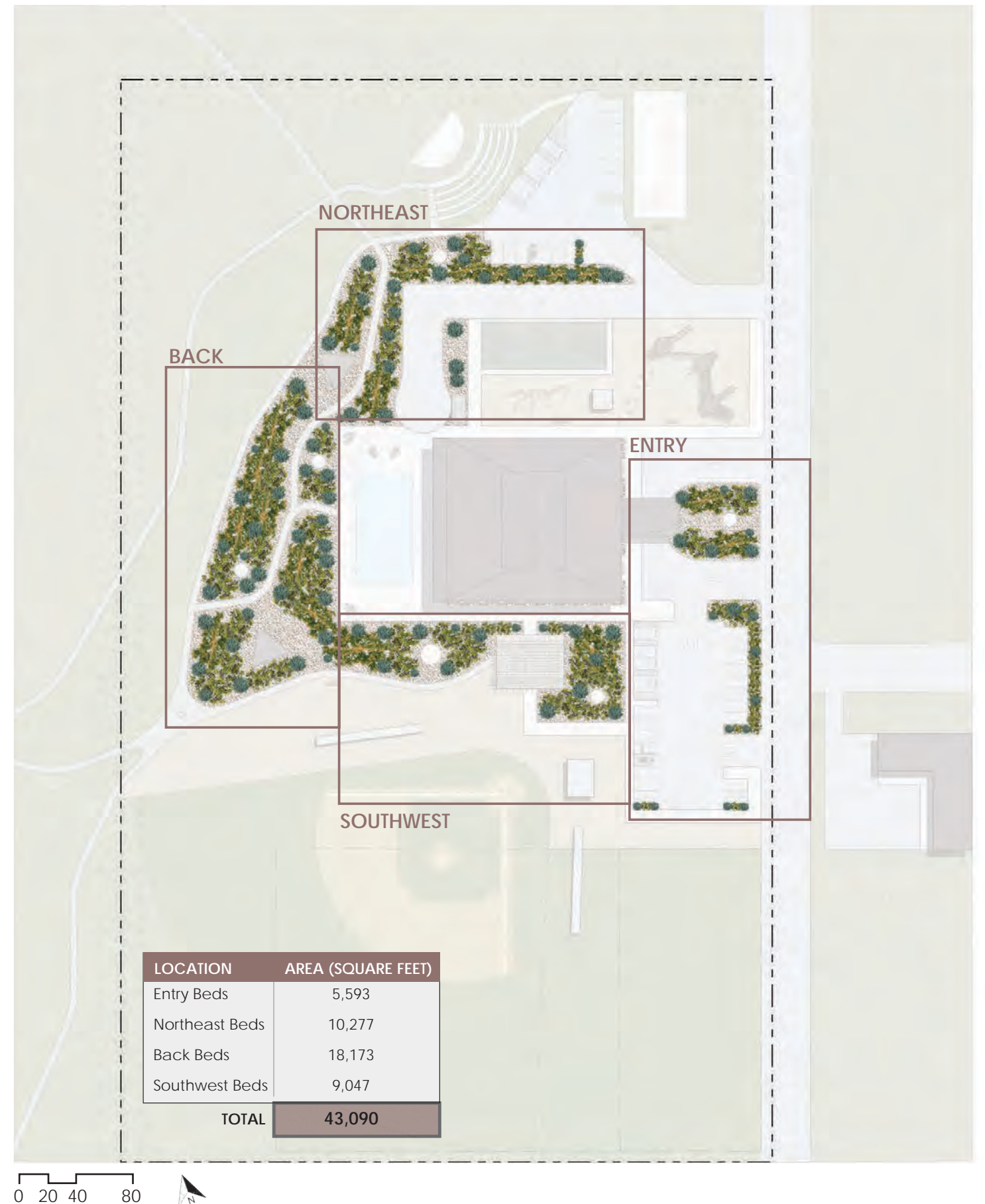
Yucca harrimaniae
Narrowleaf Yucca



Ephedra viridis
Mormon Tea












Arctostaphylos x coloradoensis
Panchito Manzanita

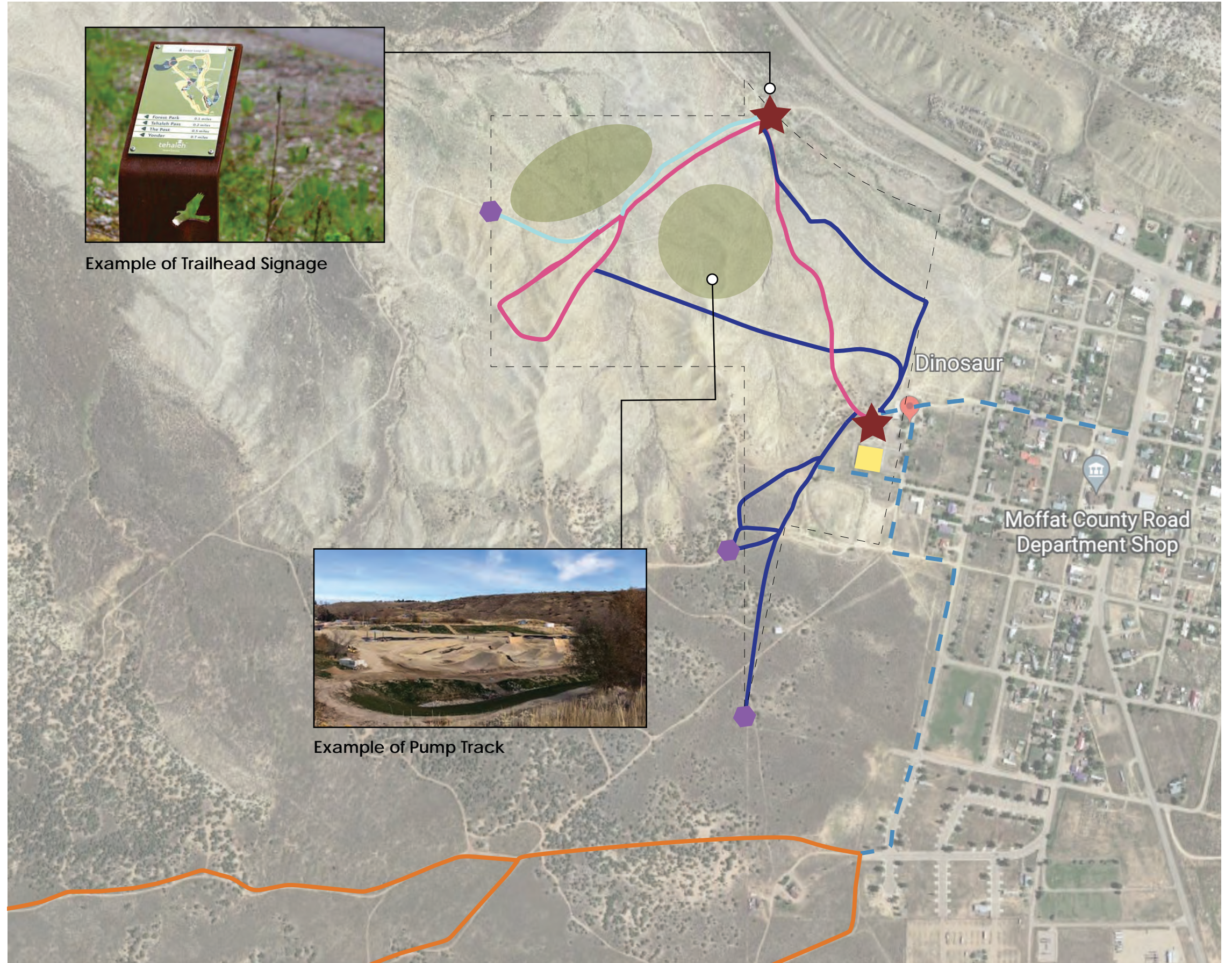


Design | Landscape Architecture | Trail System

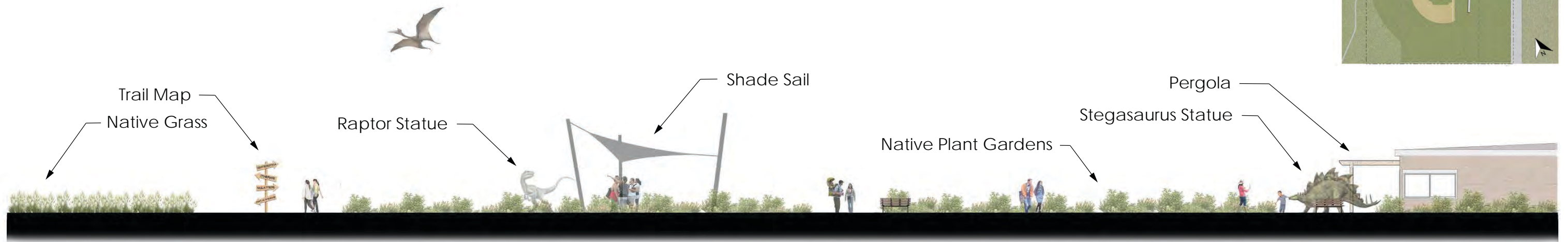
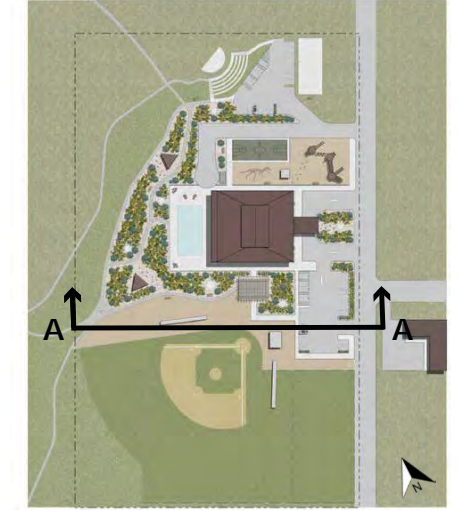
Trails that begin at the Dinosaur Community Center can tie into the larger networks of trails on nearby BLM managed lands. These trails can support a number of different uses including pedestrian-only hiking trails, bicycling loops, and a pump track for both motorized vehicles and mountain bikers. Signage will be an important element to mark trail heads to signal the type of trail usage.

LEGEND

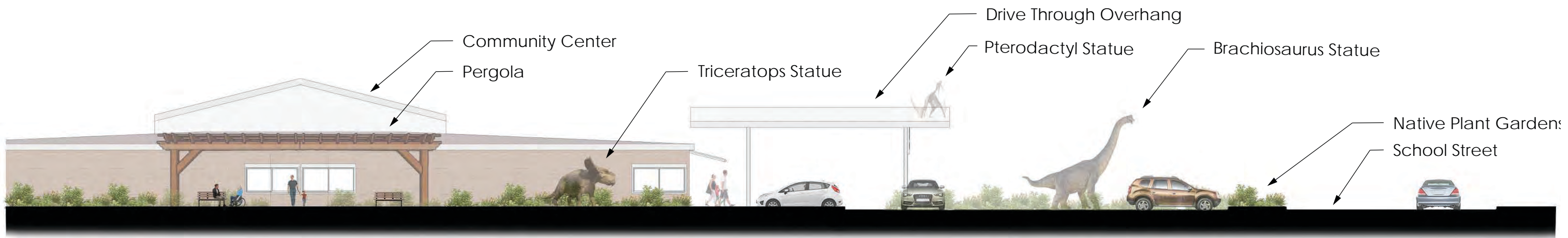
-  Dinosaur Community Center
-  Bike or MV Track
-  Access to BLM Land
-  Trailhead
-  Shared Bike and Pedestrian
-  Pedestrian Only
-  Bike/MV Only
-  Existing MV Trail
-  Pedestrian Access from Town



KEY MAP

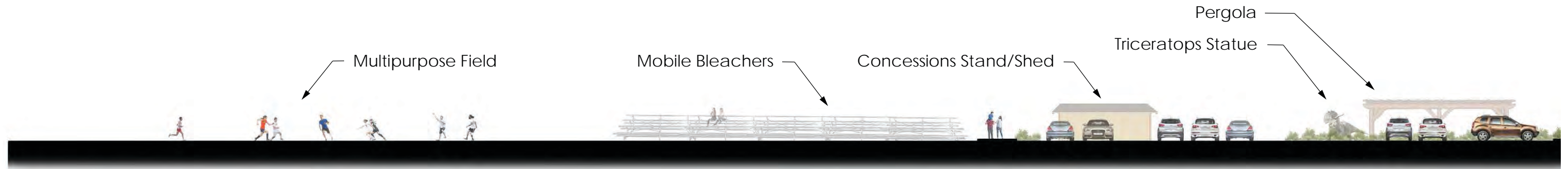
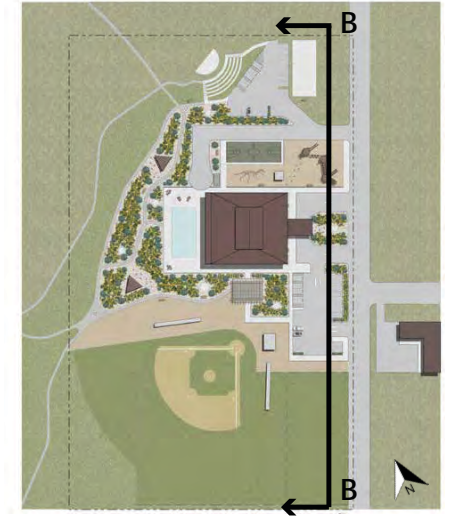


A WEST-EAST
SCALE: 1" = 17'

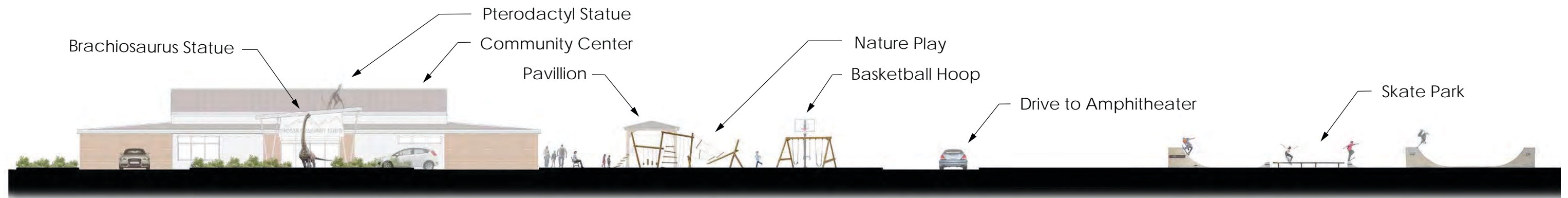


WEST-EAST (cont.)

KEY MAP



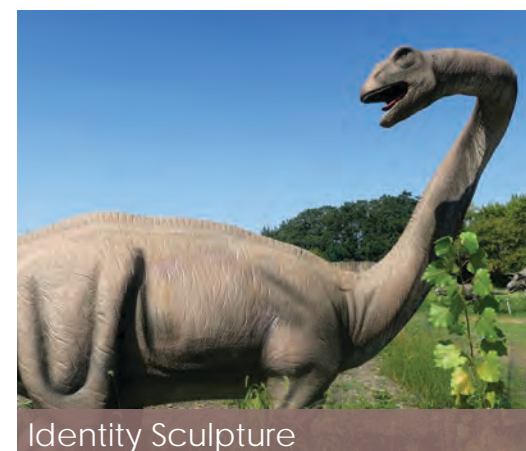
B SOUTH-NORTH
SCALE: 1" = 26'



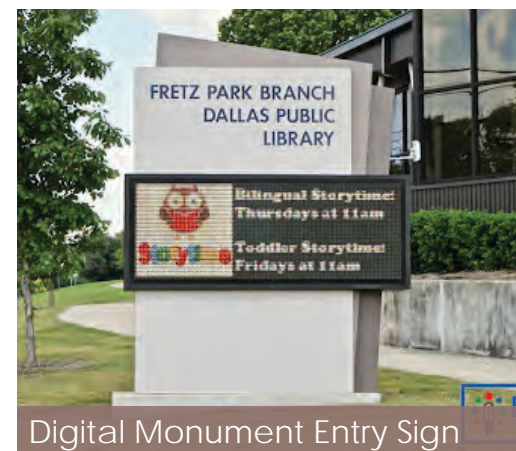
SOUTH-NORTH (cont.)



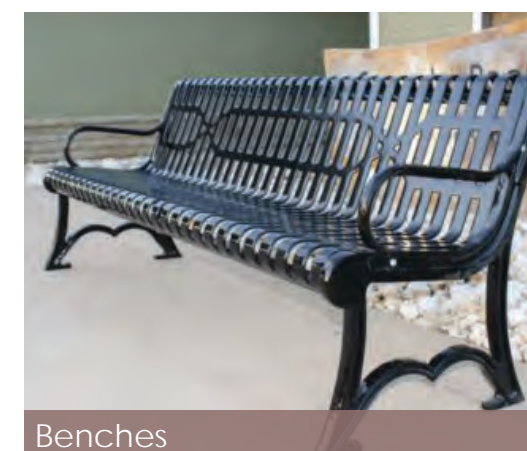
As you pull into the site, an entry dinosaur sculpture welcomes guests and brings a family-friendly, interactive element to the community center's entry. In front of the dinosaur, a digital entry sign displays upcoming events or important community reminders. At the front of the building, benches on both sides of the main entrance provide a place for visitors to wait for rides, chat with neighbors, and meet up with friends before heading inside. A covered drive provides both an architectural feature to attract visitors to the community center as well as a cover to protect patrons from inclement weather as they arrive or depart. Lastly, stamped concrete stepping stones with dinosaur footprints guide visitors to places of interest around the site such as to the dinosaur sculpture or the nature play area to the northeast.



Identity Sculpture



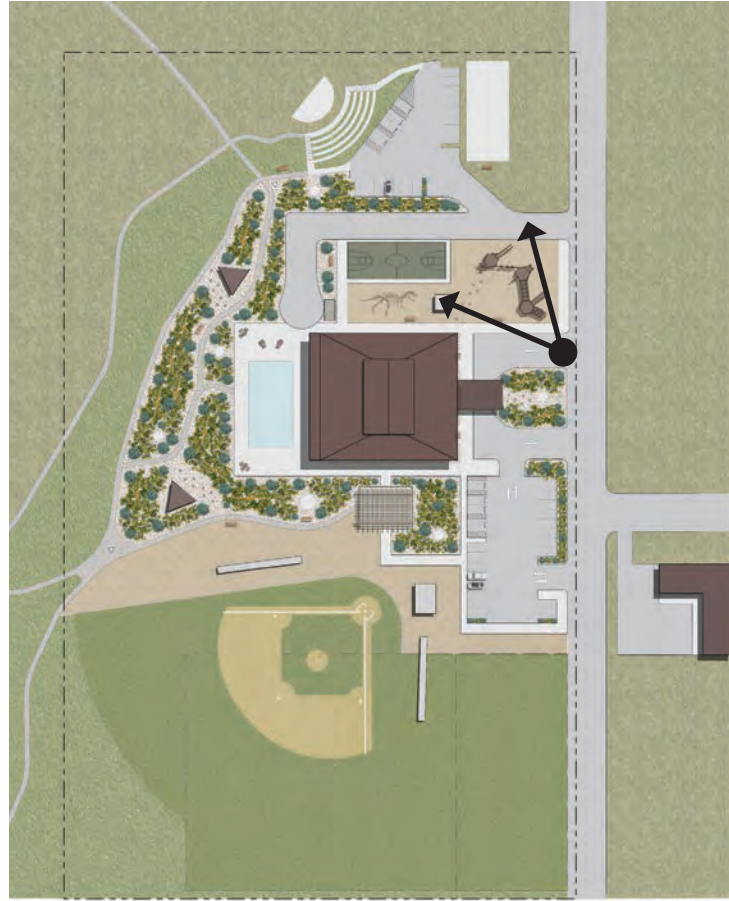
Digital Monument Entry Sign



Benches



Dinosaur Footprint Trails



In keeping with the spirit of Dinosaur, the fossil dig offers an interactive opportunity for kids to learn about paleontology while at play. A small pavilion near the freshly painted basketball court offers shade for adults to sit and watch children at play or to observe a pick up game of basketball. Nearby playground equipment shaped like logs or other natural elements encourage kids to climb, explore and use their creativity while at play.



Fossil Dig



Pavilion



Basketball Court



Nature Play



If the decision was made to construct a pool in phase 3, xeriscape gardens with low-water, native plants could create a peaceful buffer around the pool, and serve as a demonstration garden for community members. To provide a comfortable outdoor experience, movable shade sails and a 10' wide pergola along the NW side of the building would provide ample shade for visitors to mingle and relax. Powder-coated metal seating on the pool patio would be a durable and lightweight outdoor furniture that could be moved to the SW pergola for larger events and gatherings. A steel-frame, composite picket trash enclosure provides screening while also keeping trash and recycling in a close, convenient location.



Xeriscape Gardens



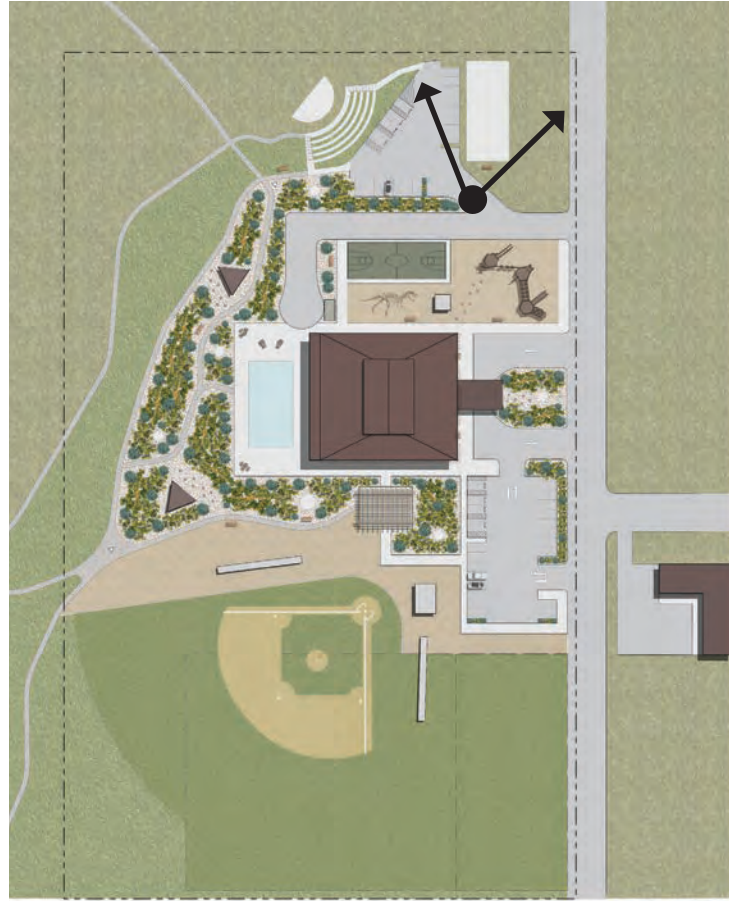
Shade Structures



Poolside Seating



Trash Enclosure



The existing ice rink can be converted into a skate park. Skate parks require little maintenance and will attract young adults to the community center. Signs should be posted at the skate park stating rules to help keep both skateboarders and bystanders safe while using the skatepark. The parking lot north of the community center will accommodate parking for both the amphitheater and the skate park and provide overflow parking. Plants native to Colorado's high elevations create a buffer between parking and the skate park while keeping landscape maintenance low.



Parking Lot



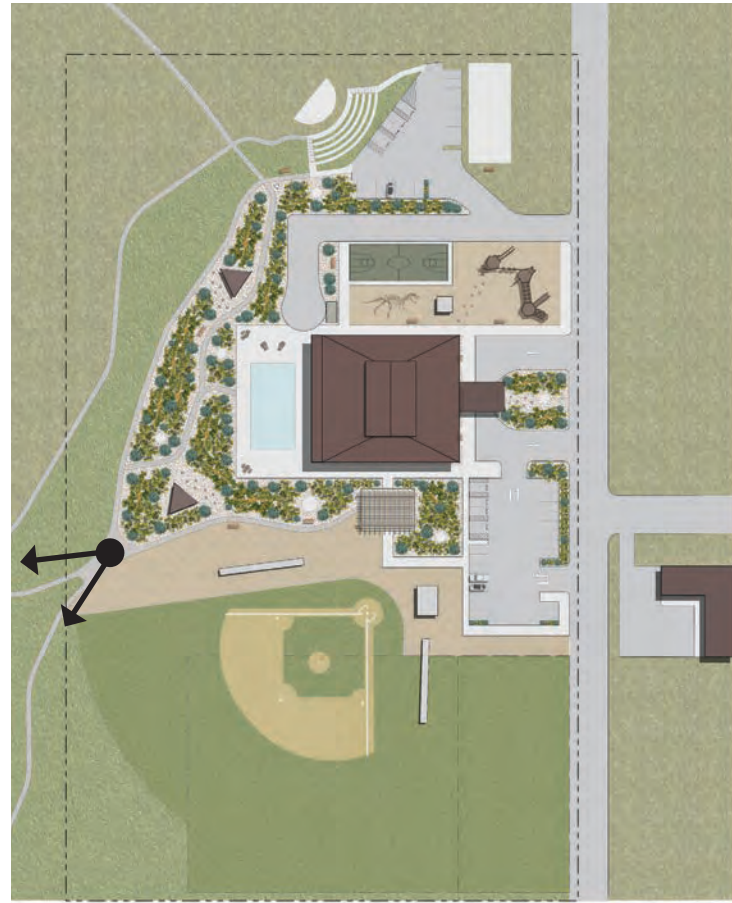
Native Plantings



Skate Park



Safety Signs



New trail amenities and increased maintenance will improve access to nearby BLM land and position the community center as a welcoming gateway to and from these trails. Interpretive signage along trails can feature trail information, maps, mileage, park rules, and information about local flora and fauna. To encourage patrons to pick up after pets while using the trails, pet waste stations will be placed at trail entrances. As trail activity increases, trash cans placed at the trail-head give visitors a place to dispose of waste while keeping BLM land clean and healthy!



BLM Land Access



Interpretive Signage



Dog Waste Stations



Trash Receptacles



The amphitheater is positioned to highlight the beautiful views of Blue Mountain (Cliff Ridge) to the northwest. The amphitheater will have a covered stage to provide protection from the elements while serving as space for concerts, ceremonies, educational classes, and other town events. Tiered seating around the stage allows for increased capacity, while further highlighting the mountain views. Recessed red lights along the tiered seating decrease light pollution and provide an optimal stargazing experience while minimizing wildlife disturbance and keeping insects at bay.



Views of Blue Mountain



Covered Stage



Tiered Amphitheater Seating



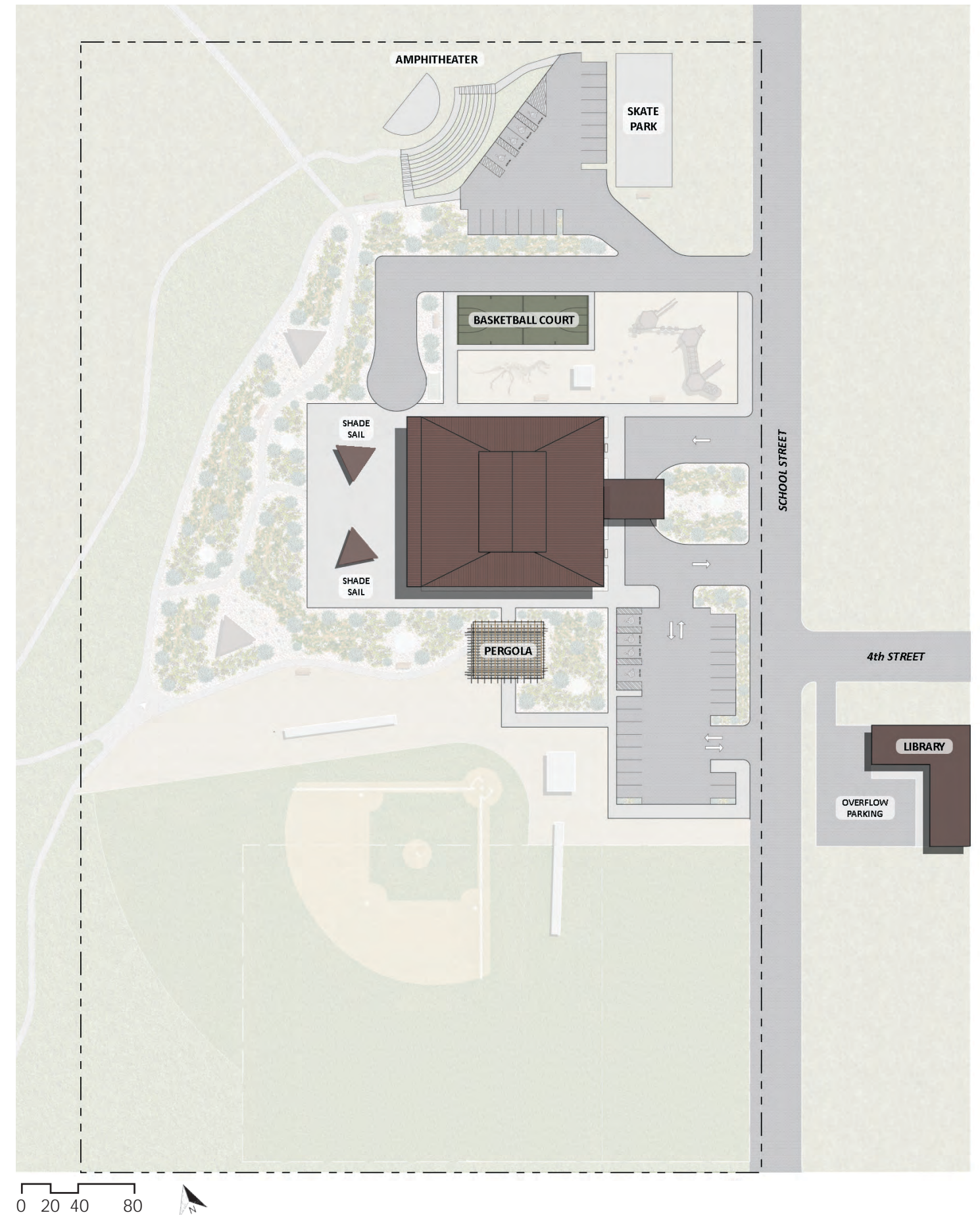
Recessed Red Lighting

Design | Landscape Architecture | Site Construction Phase and Cost

Phase 1

The first phase of construction will include site preparation such as clearing, grading and leveling of the site as well as lighting and electrical work. Once these are completed, paved areas of the site will be constructed including asphalt roadways, concrete sidewalks, concrete for the amphitheater, concrete for the skate park, and asphalt for the basketball court. As need, amenities for these spaces will be put into place, such as railings, pergola and downlighting for the amphitheater, hoops, polypropylene tiles and paint for the basketball court, rails and paint for the skate park, and finally shade sails, the pergola to the south and paint for the parking lots. A cost estimate for phase 1 can be seen in the table below.

ITEM	QTY	UNIT	UNIT PRICE	TOTAL	REMARKS
SITE PREPERATION					
Mobilization	1.00	LS	\$25,000.00	\$25,000.00	delivery costs, other hidden costs
Site Clearing, Grading, and Leveling	9.00	AC	\$500.00	\$4,500.00	
Stormwater Management/Erosion Control	1.00	EA	\$2,500.00	\$2,500.00	
Lighting/Electrical	1.00	LS	\$25,000.00	\$25,000.00	parking and amphitheater downlighting
PAVEMENT					
Concrete	29532.38	SF	\$8.00	\$236,259.04	standard concrete
Asphalt	32673.00	SF	\$5.00	\$163,365.00	includes materials and labor
AMPHITHEATER					
Cut/Fill Construction	8000.00	CY	\$15.00	\$120,000.00	
Concrete	2578.80	SF	\$8.00	\$20,630.40	standard concrete
Stage	968.72	SF	\$8.00	\$7,749.76	standard concrete
Hand Rails	4.00	EA	\$600.00	\$2,400.00	metal
Pergola	500.00	SF	\$75.00	\$37,500.00	average cost
BASKETBALL COURT					
Asphalt slab	4700.00	SF	\$5.00	\$23,500.00	includes materials, painting and labor
Hoops	2.00	EA	\$1,000.00	\$2,000.00	
Polypropylene tile	4700.00	SF	\$3.90	\$18,330.00	
Paint	1.00	EA	\$300.00	\$300.00	
AMENITIES					
Skate Park	3800.00	SF	\$45.00	\$171,000.00	average cost
Shade Sails	2.00	EA	\$5,000.00	\$10,000.00	
Pergola	2000.00	SF	\$75.00	\$150,000.00	average cost
TOTAL BUDGET SUGGESTED FOR PHASE 1				\$1,020,034.20	

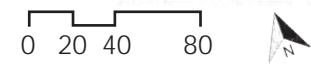


Design | Landscape Architecture | Site Construction Phase and Cost

Phase 2

The second phase of construction includes construction of the playground areas, including nature play, a pavilion and the fossil dig, and of the native plant gardens and trails. If desired, the shade sails that were built on the concrete patio to the west of the building during the first phase can be moved to the native plant gardens. This will open up the patio space for potential future construction of an in ground pool and provide shade for hikers and group gatherings along garden paths. Dinosaur statues, the statue of Molecule Man, trail signs, benches, dinosaur footprint stepping stones and the digital welcome sign outside the front of the building will also be put in during this phase. If desired, Colorado Red Flagstone can be used for pathways in place of crusher fines in some areas of the native plant garden. A cost estimate for phase 2 can be seen in the table below.

ITEM	QTY	UNIT	UNIT PRICE	TOTAL	REMARKS
NATIVE PLANT GARDENS					
Crusher Fines Trail	2133.00	LF	\$5.00	\$10,665.00	
Gravel/Dirt Paths	319.00	LF	\$4.00	\$1,276.00	
Flagstone	1.00	ton	\$309.90	\$309.90	Colorado Red Flagstone (optional)
Xeriscape River Rock	454.00	ton	\$45.00	\$20,430.00	covers about 43,090sqft
Landscape Fabric	43090.00	SF	\$0.47	\$20,252.30	materials and labor
Statues	6.00	EA	\$5,000.00	\$30,000.00	5 dinosaurs and molecule man
Perennials	600.00	EA	\$3.00	\$1,800.00	average: see plant guide for plant types
PLAYGROUND					
Nature Play	1.00	EA	\$35,000.00	\$35,000.00	
Pavillion	225.00	SF	\$75.00	\$16,875.00	
Dinosaur Skeleton	1.00	EA	\$5,000.00	\$5,000.00	
Sand	11772.23	SF	\$1.50	\$17,658.35	beach sand 3" deep
AMENITIES					
Dino Footprint Stepping Stones	40.00	EA	\$10.00	\$400.00	
Benches	12.00	EA	\$600.00	\$7,200.00	6 and 8-foot
Trail Signs	2.00	EA	\$5,000.00	\$10,000.00	
Digital Sign	1.00	EA	\$20,000.00	\$20,000.00	materials and installation
TOTAL BUDGET SUGGESTED FOR PHASE 2				\$196,866.55	



Design | Landscape Architecture | Site Construction Phase and Cost

Phase 3

The third phase of construction includes the athletic fields and native grass areas. The baseball field will include dugouts and fencing for foul ball protection. Irrigation will also be constructed in this phase and is factored into the total cost of each field. Mobile aluminum bleachers have been selected for use in these multi functional field spaces. A concession stand that can also be used for storage should be constructed in this phase. Native grass fields will be sown during this phase using seed from grasses that will thrive in Colorado's climate, such as little blue stem or blue grama grasses. It is evident in this phase that a full size baseball and soccer field cannot coexist in the area provided without some overlap in the baseball infield. A cost estimate for phase 3 can be seen in the table below.

ITEM	QTY	UNIT	UNIT PRICE	TOTAL	REMARKS
FIELDS					
Baseball	1.00	EA	\$175,000.00	\$175,000.00	field, irrigation, fencing, dugouts
Soccer	1.00	EA	\$50,000.00	\$50,000.00	field, irrigation, paint, maintenance equipment
GROUND COVER					
Native Grass	12.00	lb	\$18.75	\$225.00	Little Blue Stem or Blue Grama
Gravel/Dirt	23127.25	SF	\$1.80	\$41,629.05	
AMENITIES					
Concession Stand/Storage Shed	1.00	EA	\$10,000.00	\$10,000.00	12x24
Mobile Bleachers	8.00	EA	\$3,500.00	\$28,000.00	aluminum, 3 rows, 21ft by 7ft, 56 seats
Trash and Recycling Cans	14.00	EA	\$300.00	\$4,200.00	
Dog Bag Stations	2.00	EA	\$230.00	\$460.00	
TOTAL BUDGET SUGGESTED FOR PHASE 3				\$309,514.05	

BUDGET SUGGESTED FOR ALL PHASES \$1,526,414.80

SOFT COSTS TO CONSIDER

Survey	2% of Subtotal	\$30,528.30
Professional Fees	10% of Subtotal	\$152,641.48
Contractor Overhead	10% of Subtotal	\$152,641.48
Contingency	20% of Subtotal	\$305,282.96
Administrative Costs	2% of Subtotal	\$30,528.30

FINAL ESTIMATED PROJECT COST \$2,198,037.30



Design | Landscape Architecture | Site Construction Phase and Cost

Phase 4

If desired, the third phase of construction could also include construction of a pool in addition to the athletic fields and native grass areas. A concrete pool would be the most expensive option and is reflected in the cost estimate below. Other less expensive options for pool materials include fiber glass and vinyl. The size of the pool could also be reduced from 42'x82' (the size portrayed in the plan view to the left) to a standard size of 14'x28' to lower costs. A shallow pool will be less expensive than a pool with depths over 6ft. A cost estimate for phase 3, including construction of a concrete pool with depths over 6ft, can be seen in the table below along with a final project cost for all three phases in the subsequent table.

ITEM	QTY	UNIT	UNIT PRICE	TOTAL	REMARKS
FIELDS					
Baseball	1.00	EA	\$175,000.00	\$175,000.00	field, irrigation, fencing, dugouts
Soccer	1.00	EA	\$50,000.00	\$50,000.00	field, irrigation, paint, maintenance equipment
GROUND COVER					
Native Grass	12.00	lb	\$18.75	\$225.00	Little Blue Stem or Blue Grama
Gravel/Dirt	23127.25	SF	\$1.50	\$34,690.88	
AMENITIES					
Concession Stand/Storage Shed	1.00	EA	\$10,000.00	\$10,000.00	12'x24'
Mobile Bleachers	8.00	EA	\$3,500.00	\$28,000.00	aluminum, 3 rows, 21ft by 7ft, 56 seats
Trash and Recycling Cans	14.00	EA	\$300.00	\$4,200.00	
Dog Bag Stations	2.00	EA	\$230.00	\$460.00	
Pool	3444.00	SF	\$150.00	\$516,600.00	42'x82' concrete, inground, highest price
TOTAL BUDGET SUGGESTED FOR PHASE 3 WITH POOL				\$819,175.88	

BUDGET SUGGESTED FOR ALL PHASES WITH POOL \$2,036,076.62

SOFT COSTS TO CONSIDER

Survey	2% of Subtotal	\$40,721.53
Professional Fees	10% of Subtotal	\$203,607.66
Contractor Overhead	10% of Subtotal	\$203,607.66
Contingency	20% of Subtotal	\$407,215.32
Administrative Costs	2% of Subtotal	\$40,721.53

FINAL ESTIMATED PROJECT COST \$2,931,950.33



Design | Architecture | Goals

In this section of the report, we will review the final concept floor plan of the Dinosaur Community Center, interior and exterior building improvements, design precedents, and technical drawings. The architectural design for the community center focuses on providing large and small gathering spaces, providing ADA compliant restrooms and spaces, enhancing atmosphere of each room for patrons to enjoy, and providing space for guests of all ages with diverse interests. Renders of the interior and exterior of the proposed building will also be featured in this section. These renders are a tool to help better envision the use of each space.



GATHERING SPACES

Multipurpose rooms, senior rooms, meeting rooms and a gymnasium all provide spaces for guests to gather in large or small events. The rooms each have adequate storage and are meant to meet the needs of individuals with diverse interests ranging from board games and crafting hobbies to sports enthusiasts.



ADA COMPLIANT

Unisex restrooms and mens and womens restrooms were enhanced to provide adequate space to meet ADA compliance. It is important that all guests feel welcome and are able to use each space within the community center.



ALL AGE ACCESS TO FUN

The community center is designed to serve all of Dinosaur's residents and visitors who range from young children in daycare to the senior citizens who would like to enjoy a game night with friends.



KITCHEN AND RESTROOMS

STAINLESS STEEL SURFACES



PASS THROUGH TO KITCHEN



ADA BATHROOMS



GYMNASIUM

DINOSAUR MURAL



NEW WOOD FLOORS



PAINTED GYMNASIUM WALLS



LOBBY

CURVED DESK



VINYL FLOOR



DINOSAUR MURAL



SENIOR / MULTIPURPOSE / MTG. ROOM

COMFORTABLE & LIGHT FURNITURE



PARTITION WALL



MAKERSPACE



DAYCARE

NATURAL LIGHT



CUBBIES



COMMERCIAL CARPET TILES



Reconfigure kitchen for more efficient use of equipment (See Floor Plan). Use stainless steel worktables in kitchen. Single use restrooms updated to be ADA compliant.

Update the gymnasium floor to wood. Fresh coat of paint to brighten the space. Optional new dinosaur murals on either end of the gym.

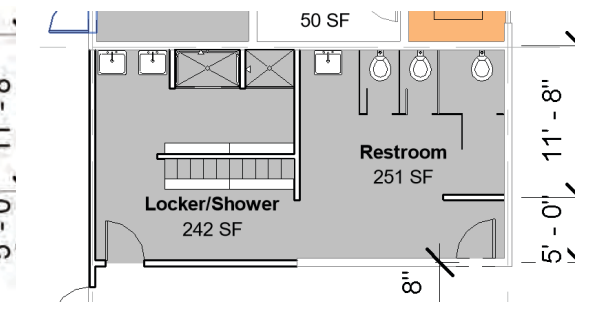
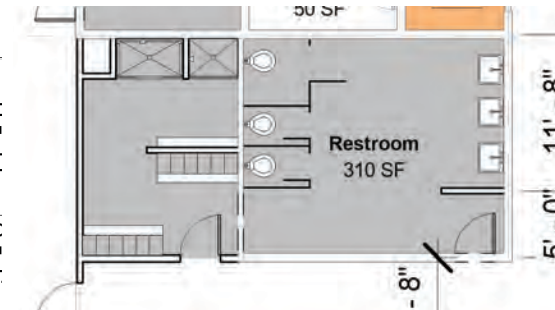
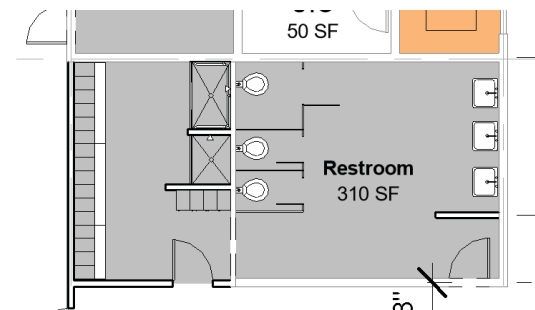
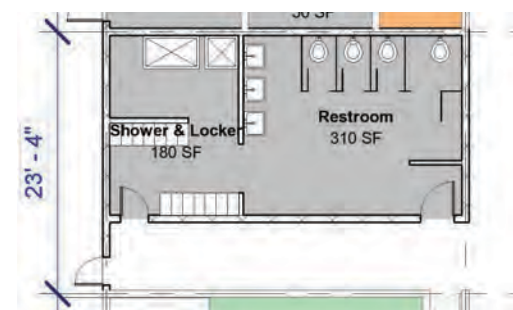
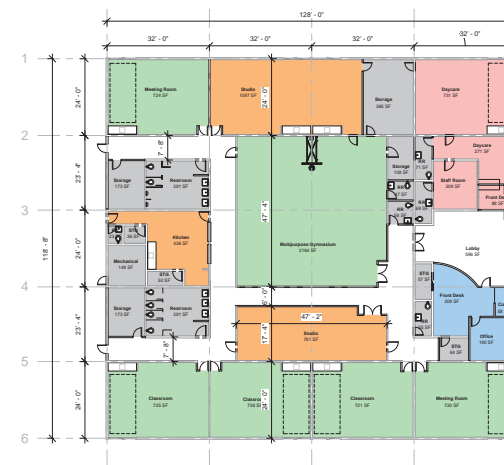
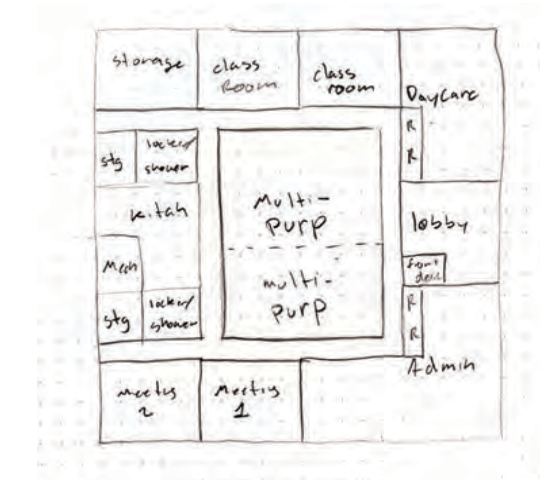
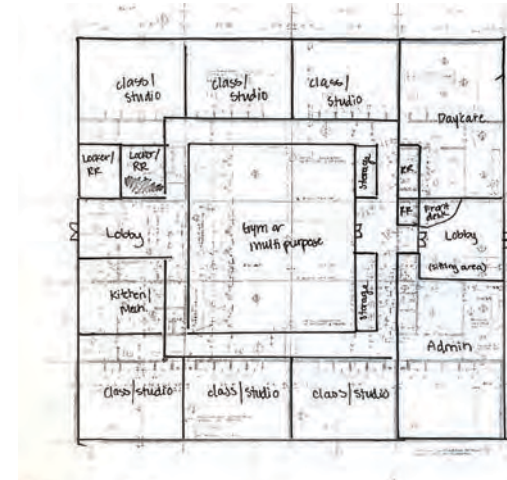
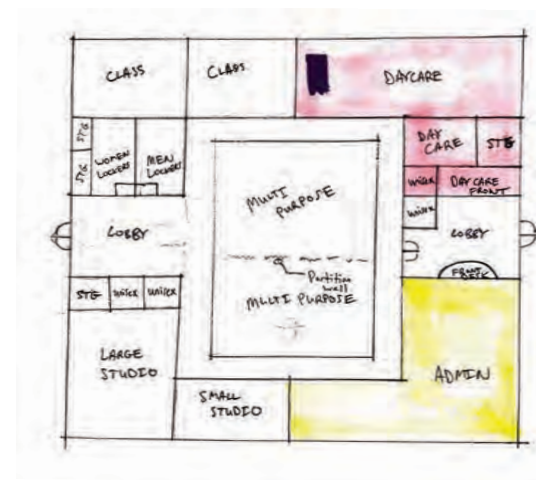
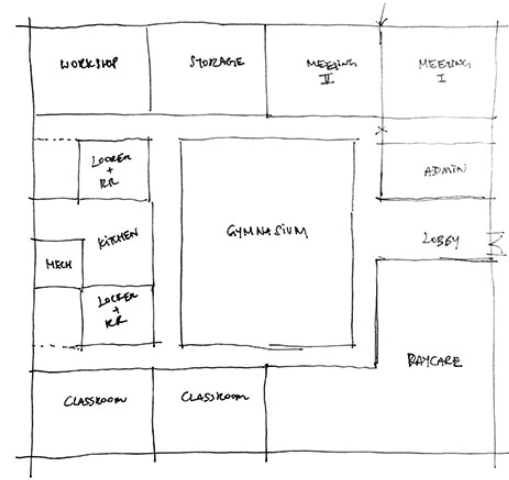
Curved front lobby desk. New vinyl flooring that is durable and easy to maintain. Vinyl also comes in a wide variety of colors to choose from. Dinosaur wall murals to brighten the space and create visual interest.

Partition walls in the senior and multipurpose rooms. Light and comfortable furniture that can easily be moved as needed. Multipurpose room could become a makerspace for crafting or similar activities.

Cubbies or lockers for daycare attendees. New windows added on the exterior to allow more light to enter the space. Acoustic paneling on walls and carpeting cut down on sound transmission to other rooms.

Design | Architecture | Process Work

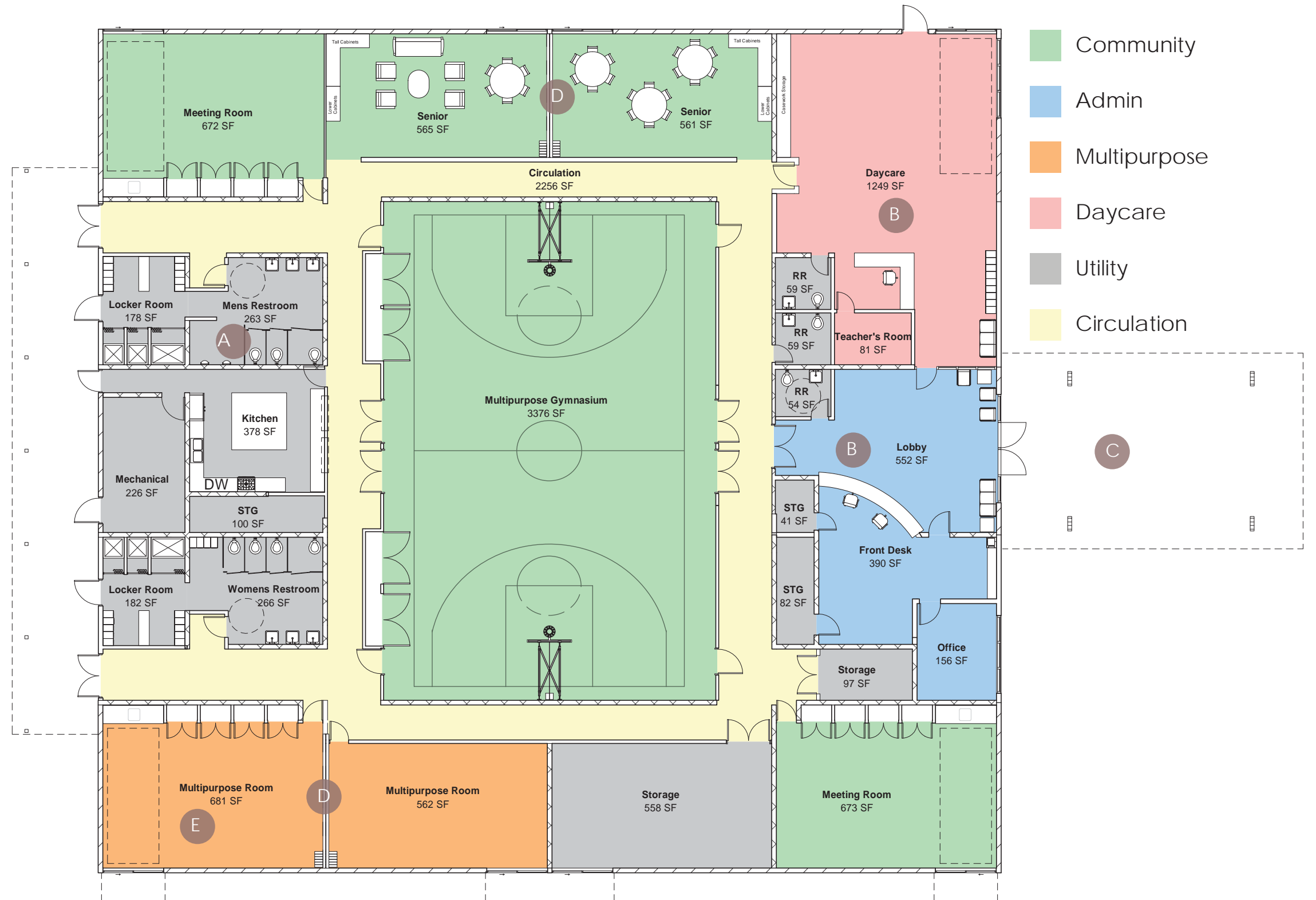
After conducting a preliminary building analysis and learning about the existing site conditions, the architecture interns begin the iterative design process. This is a collaborative process that explores different design solutions, and addresses client feedback. The team continuously refines the Dinosaur Community Center's plan, elevations, and sections until we arrive at the best solution to meet and exceed client expectations.



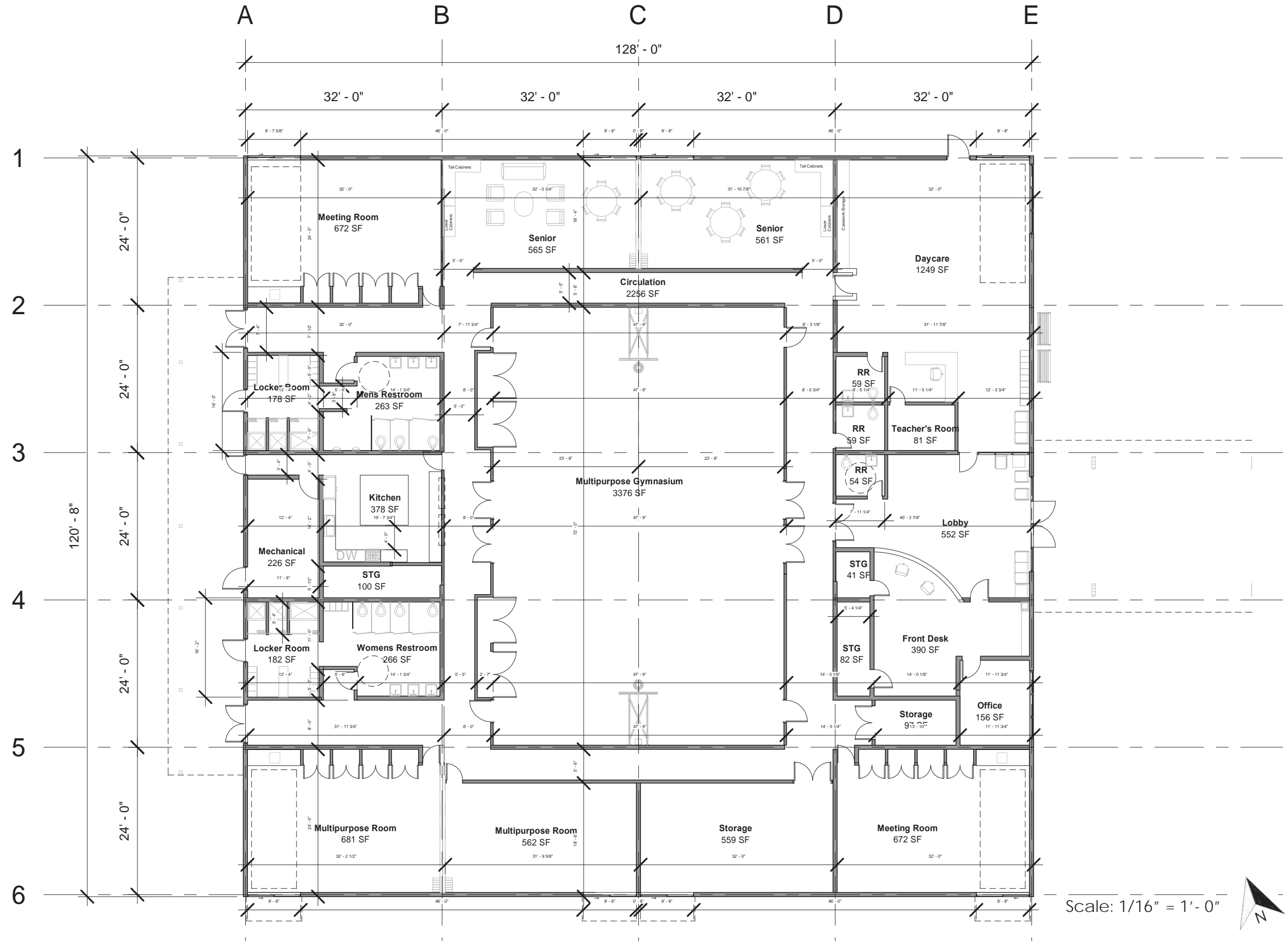
Design | Architecture | Overall Plan


From the previous elementary school floor plan, the architecture team prioritized and reconfigured spaces to accommodate the community center's needs but remained mindful of cost by minimizing demolition of existing walls and structures.

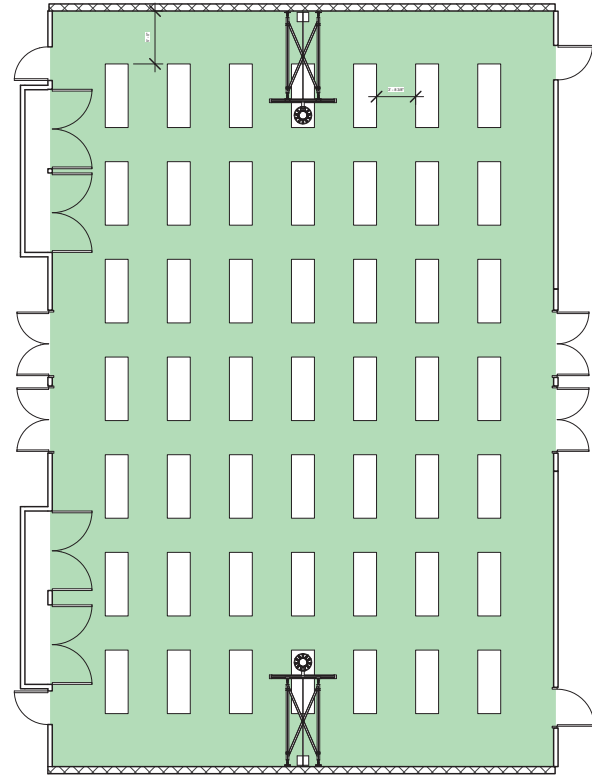
- A** One of the major reconfigurations occurs in the men's and women's restrooms and locker rooms. By expanding the locker rooms into what was once a covered entrance, the community center gains valuable space and is able to create ADA compliant restrooms to serve all patrons. The locker rooms are also strategically located to allow direct access to the future pool.
- B** The lobby and daycare layouts propose infills that expand exterior walls to be flush with the east facade. The lobby is now a spacious area for guests to meet friends and family and get the latest information on upcoming community center events. The daycare is located adjacent to the lobby for convenient drop off and pickup. If the town is not in need of a daycare, this area could be repurposed as a community room or makerspace.
- C** The covered drive protects patrons from inclement weather while they are being dropped off or picked up from the community center
- D** Senior rooms and multipurpose rooms are divided by an operational partition wall so that the rooms can be combined for larger events.
- E** Multipurpose rooms can be used for a variety of activities, including functioning as a makerspace for patrons, or a gathering space for larger functions.



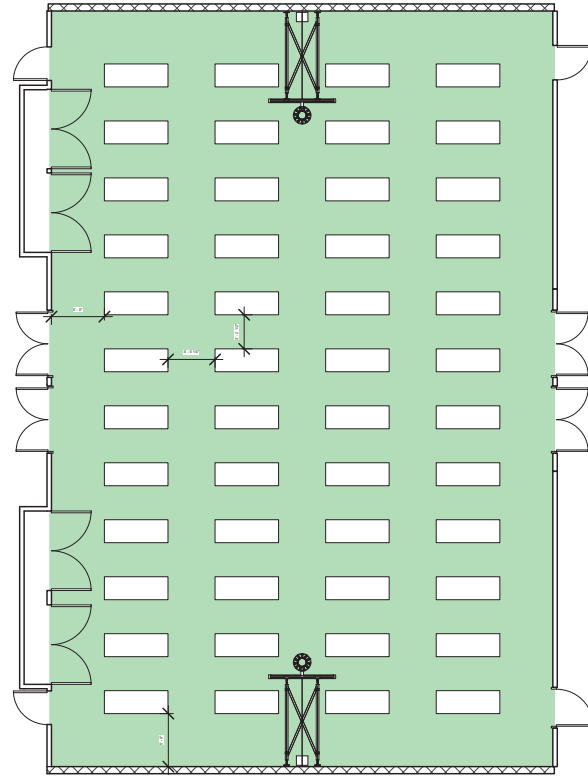
Not to Scale



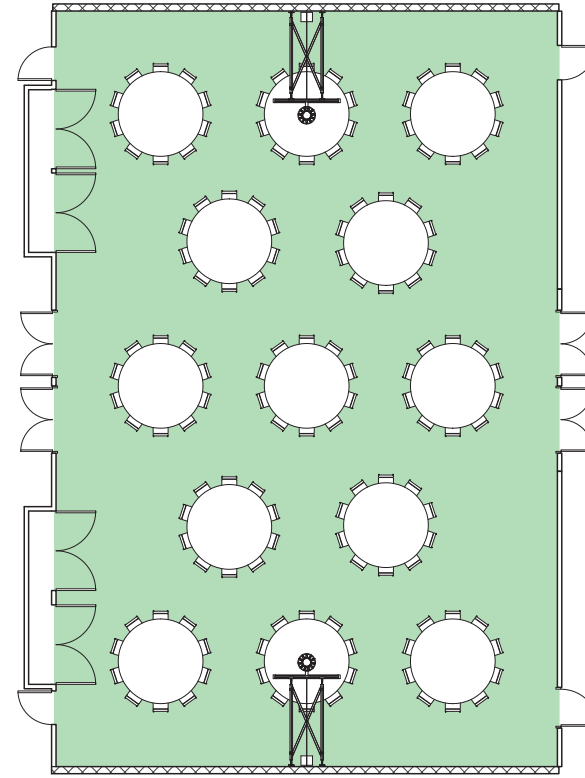
Scale: 1/16" = 1'-0" 



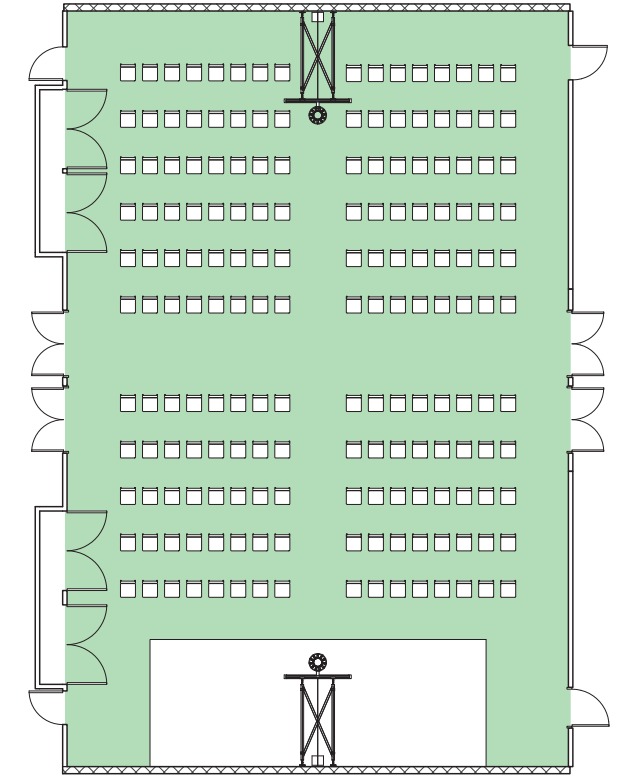
Emergency Shelter Option 1
49 people



Banquet Seating
130 people



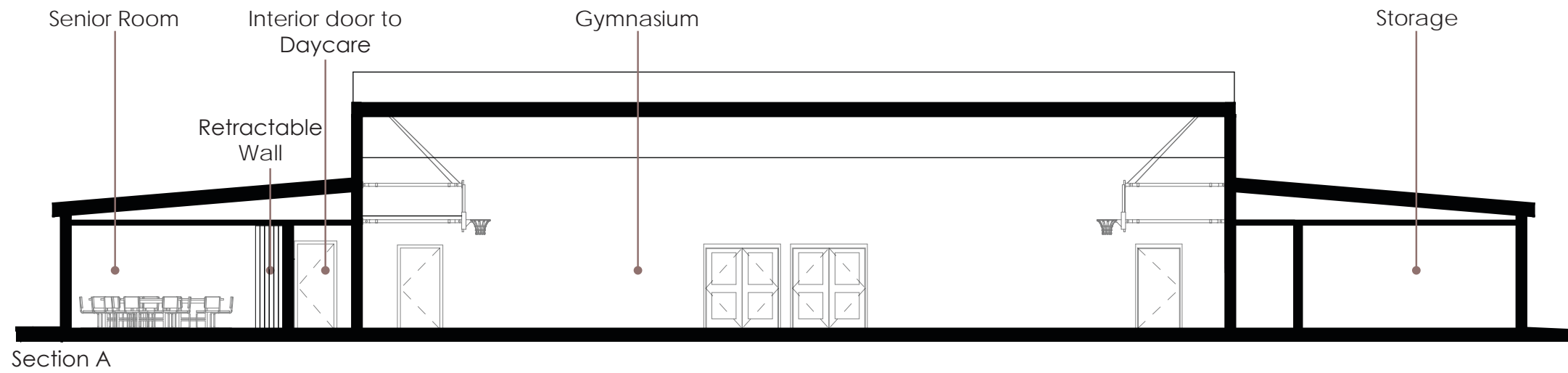
Emergency Shelter Option 2
48 people



Concert Seating
192

The gymnasium can be used for multiple purposes including community center events, sports games, or to provide shelter during a natural disaster.

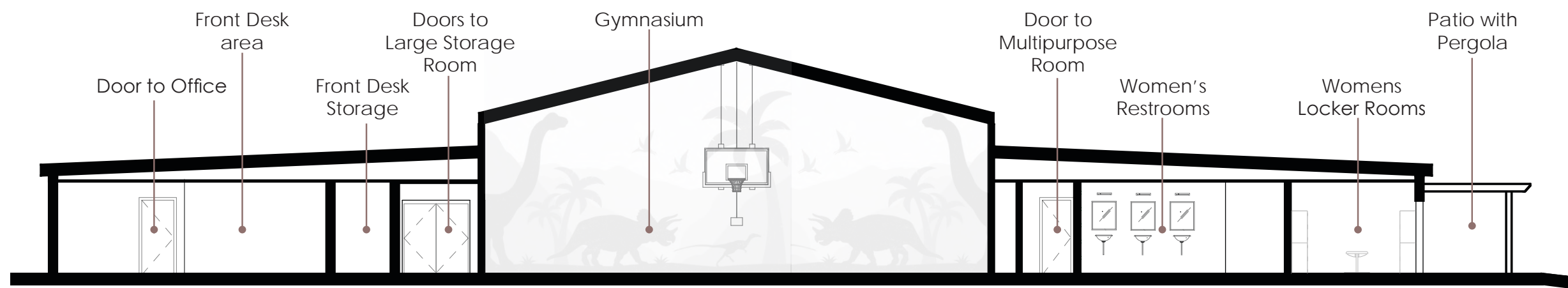
FEMA recommendations for shelter conditions:
5 square feet per person for a very short term stay (a few hours)
10 square feet per person for a short term stay (a few days)
20 square feet per person for a long term stay (days to weeks)



Section A

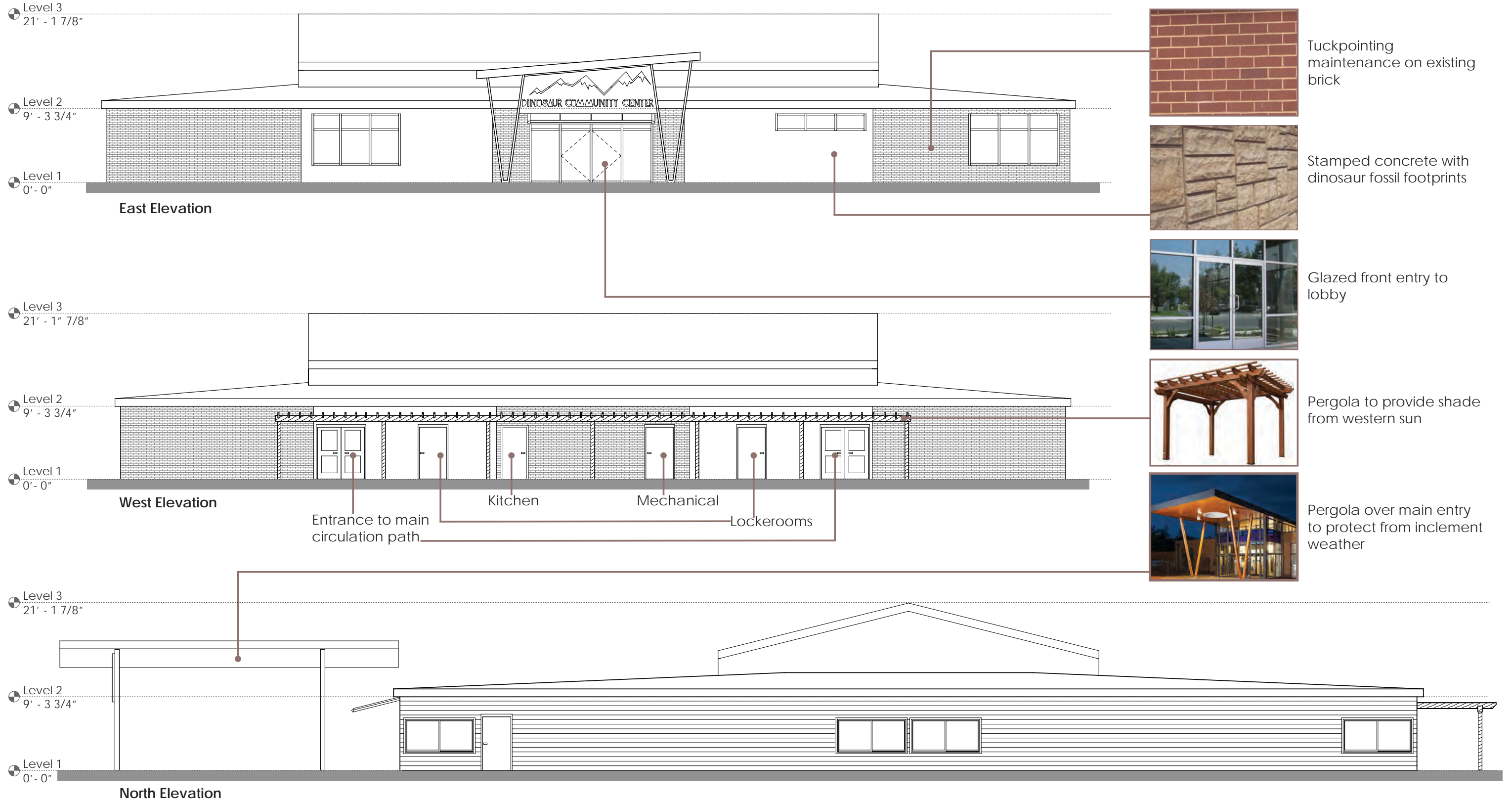


Section B



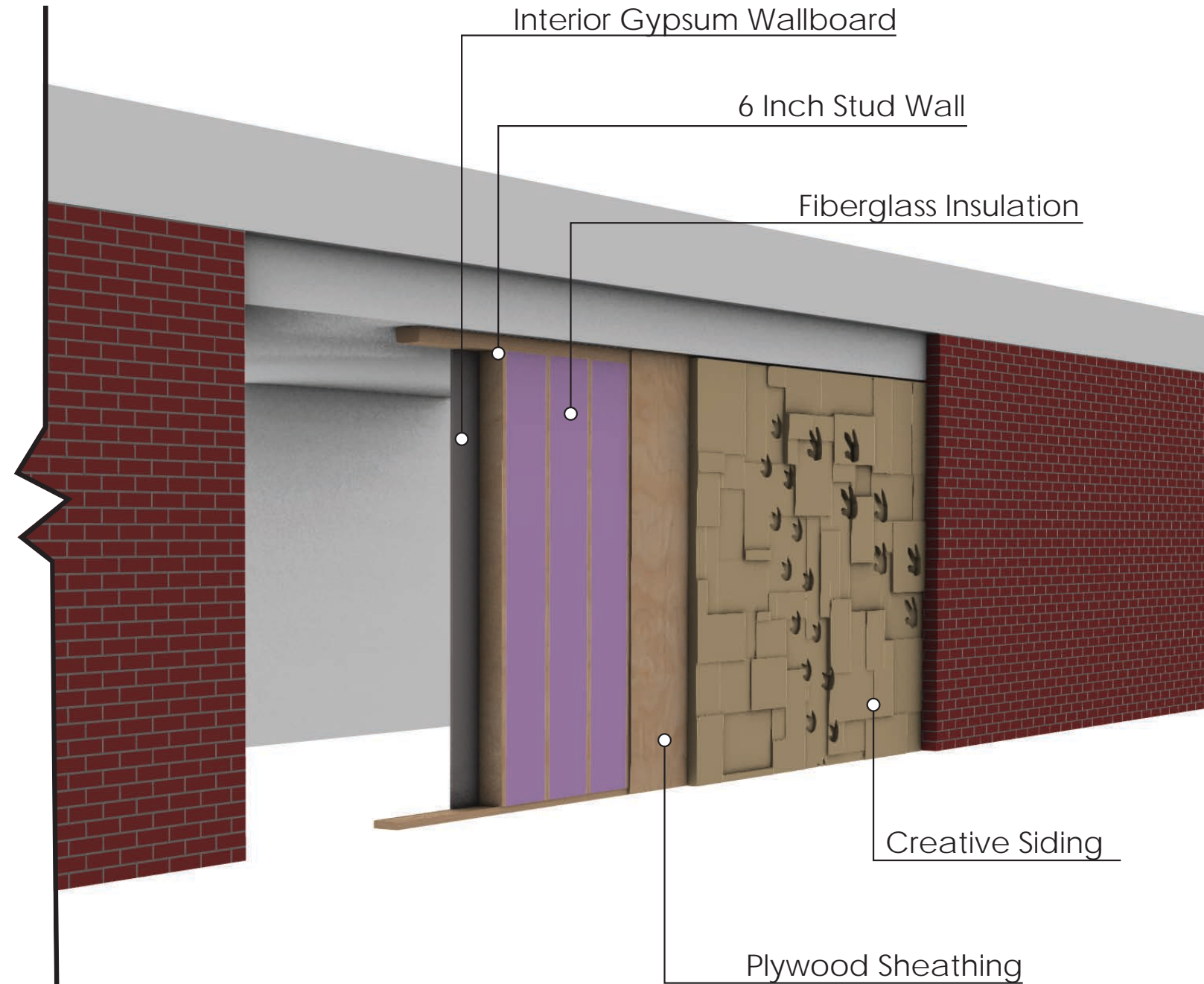
Section C





Design | Architecture | Wall Detail

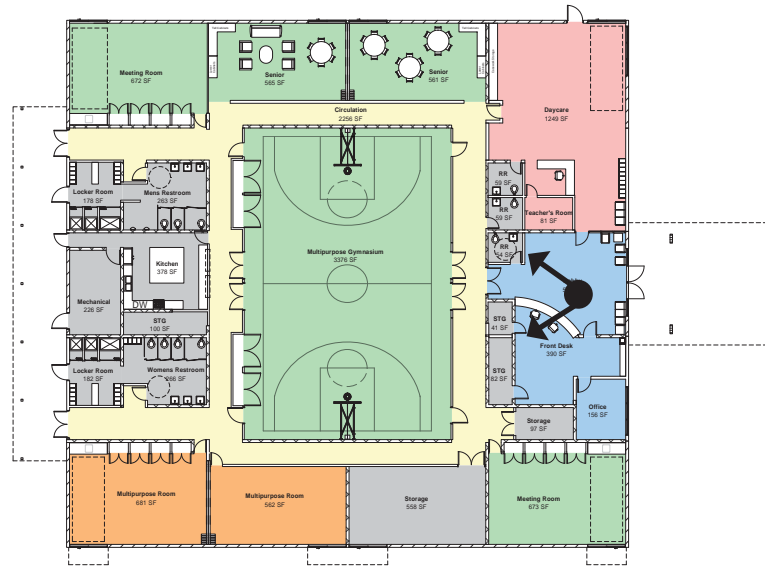
The new exterior walls on the west and east sides of the building can be constructed with decorative details such as stamped concrete to show dinosaur footprints or fossils. This helps to break up the monolithic appearance of brick as well as add visual interest that compliments the dinosaur theme.



Creative Siding Precedents



Design | Architecture | Lobby Information Desk Perspective



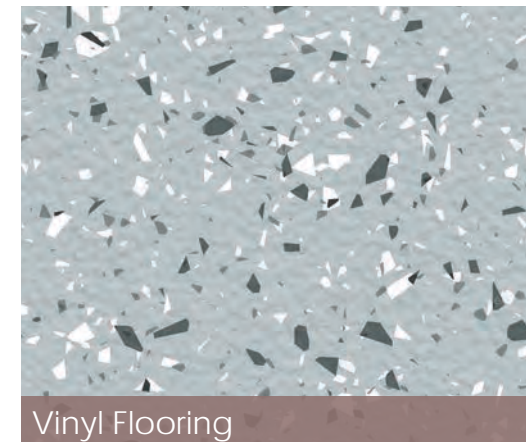
This is an interior render of the lobby and information desk. The lobby features accent colors inspired by the colors of the landscape in Dinosaur National Monument and colors that are often associated with Dinosaurs. These colors provide a consistent palette that can be applied throughout the center's interior. Upon entering the lobby, patrons can get the latest information on events and speak with a staff member regarding room reservations, equipment checkout, and more. The vinyl flooring in the lobby is a durable low maintenance material that is great for high traffic areas. A unisex restroom is also located in the lobby for convenience and utilizes existing plumbing lines.



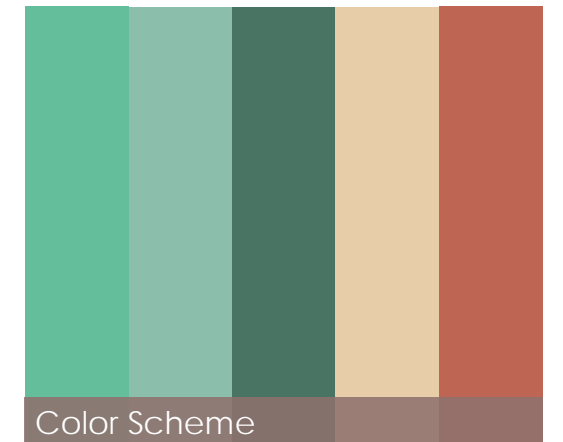
Curved Front Desk



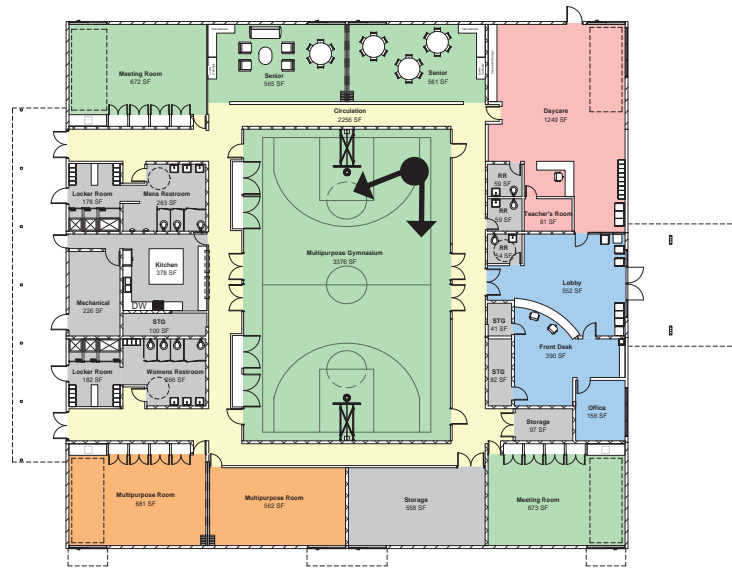
Dinosaur Murals



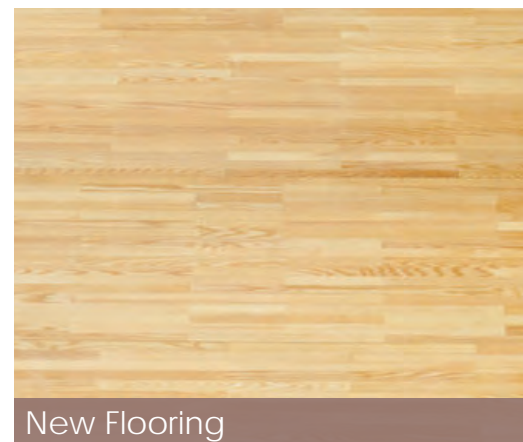
Vinyl Flooring



Color Scheme



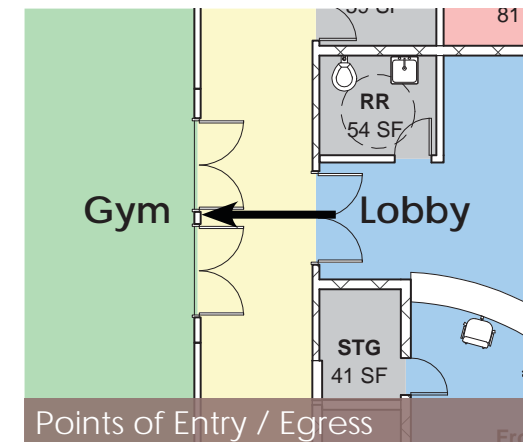
The existing gymnasium flooring should be replaced with new wood flooring or another long lasting alternative to serve sports games and community center events. A new mural honoring the town of Dinosaur can be painted along the gymnasium walls to create a cheerful atmosphere and provide visual interest. Within the gym, two additional sets of double doors were added to the east gym wall to allow for better access to the space next to the lobby as well as better circulation of patrons in and out of the gymnasium. Again, the color palette can be used throughout the gymnasium to create a cohesive look and feel with the rest of the community center.



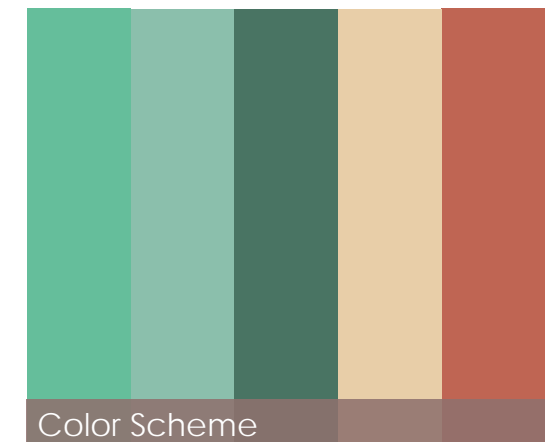
New Flooring



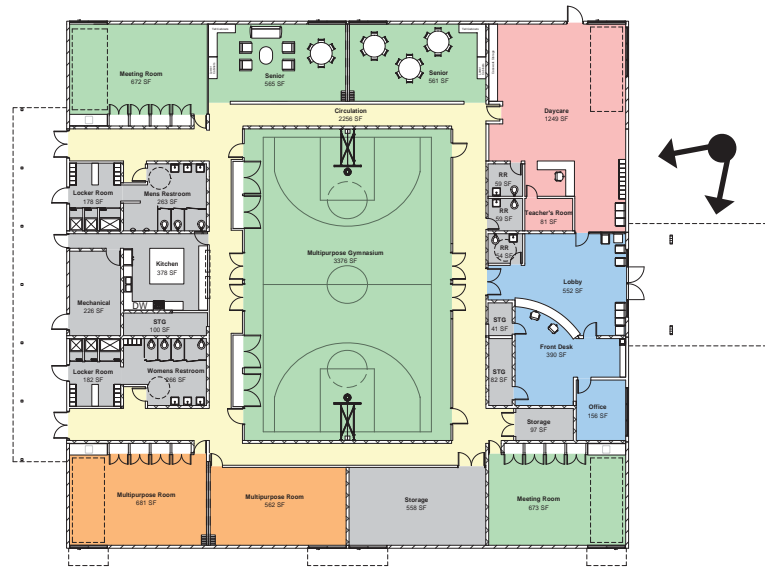
Mural Wall



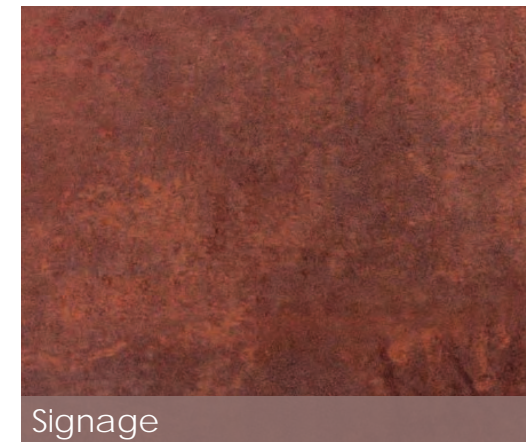
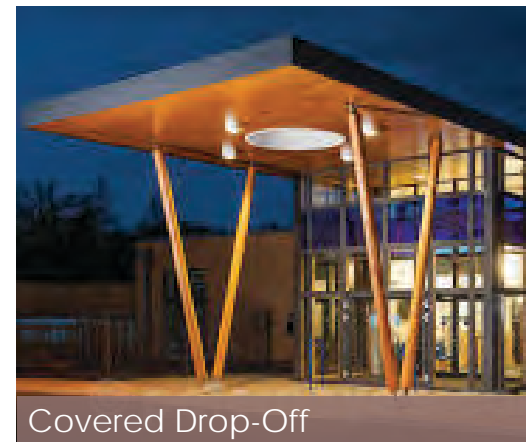
Points of Entry / Egress

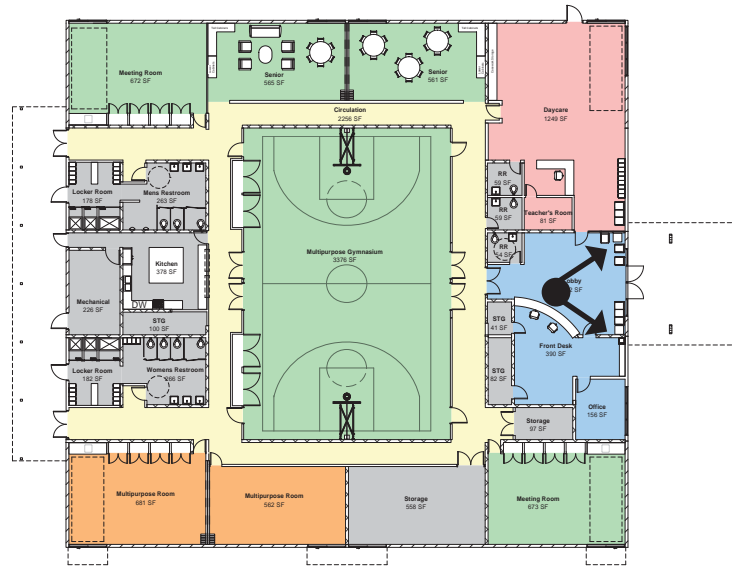


Color Scheme

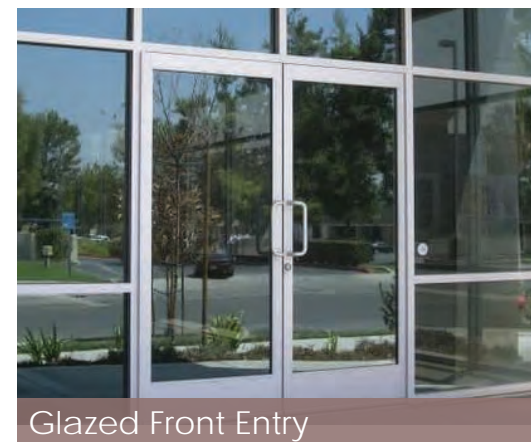


A new pergola on the front entrance protects guests and the front entry from inclement weather and draws attention to the building and attracts users. It also provides an opportunity for overhead lighting for visibility in evenings and early mornings. A large aged bronze sign bearing the community center's name is attached to the pergola. The signage compliments the colors of the natural landscape and proudly draws attention to the community center. Stamped concrete on new exterior walls help to break up the monolithic brick and dinosaur footprint details add an element of fun to the building exterior. Additional windows on the front facade and the glazed main entry will create an inviting lobby experience filled with natural light.

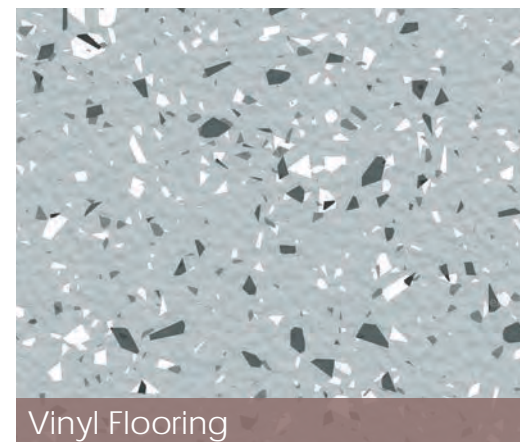




Another view from inside the lobby looks towards the front entrance which is glazed with windows to allow plenty of natural light. The lobby is a spacious 552 SF which provides plenty of room for comfortable seating while guests wait for a ride to pick them up or a friend to join them at the community center. The daycare is accessed from an entry that is located within the lobby right off the main entrance. This adds privacy and security to drop-off and pick-ups.



Glazed Front Entry



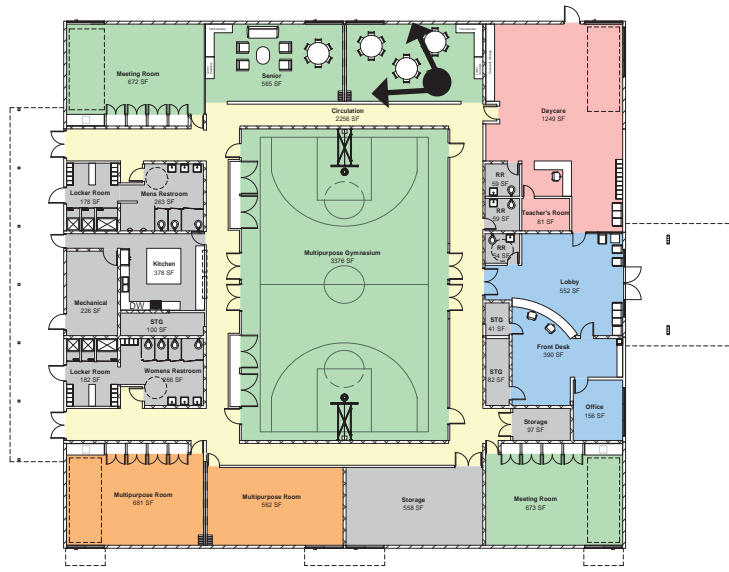
Vinyl Flooring



Seating



Daycare Entry



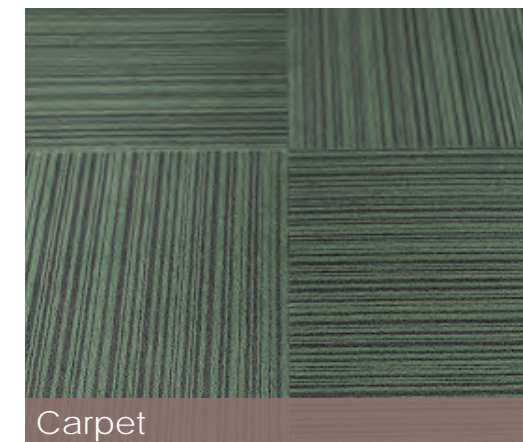
The Senior Rooms are adjoined by a partition wall which can be retracted to create a larger event space or remain closed for smaller functions. Carpeting in the senior room will help to reduce sound transmission between rooms in addition to adding color and comfort. Casework in each senior room provides storage for table top games and other items needed for social events. It also provides an area for preparing refreshments.



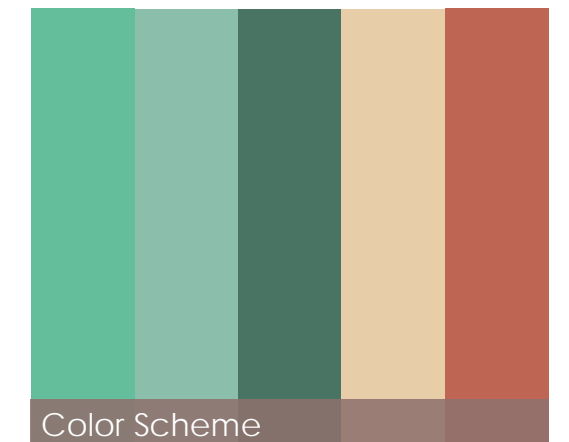
Casework



Partition Wall



Carpet



Color Scheme

Design | Architecture | Cost Estimate

To the right is a summary of the suggested architecture costs for the Dinosaur Community Center. These are estimates that show a low and high range for cost of construction and soft costs.

Preliminary Opinion of Cost / Order of Magnitude Dinosaur Community Center - Renovation of former elementary school

Aug. 2021

Building Area 15,222 Gross Square Feet

1 Dinosaur Community Center (Old Elementary School) 15,222 sf

Assessment of Construction Cost		Low Range		High Range		Notes:
A. Building Cost <i>(All costs of construction within 2 ft of building)</i>						
	Impacted Square Footage	SF Cost		SF Cost		
1 Lobby	1,098 @	\$ 70 = \$	76,860	\$ 100 = \$	109,800	a,b,d
2 Former Classrooms						
Multipurpose Rooms	1,243 @	\$ 30 = \$	37,290	\$ 45 = \$	55,935	d
Senior Rooms	1,126 @	\$ 30 = \$	33,780	\$ 45 = \$	50,670	d
Meeting Rooms	1,344 @	\$ 30 = \$	40,320	\$ 45 = \$	60,480	d
Sub Total:	3,713					
3 Daycare	1,330 @	\$ 70 = \$	93,100	\$ 100 = \$	133,000	a,b,d
4 Gymnasium	3,376 @	\$ 50 = \$	168,800	\$ 70 = \$	236,320	a,d
5 Circulation	2,256 @	\$ 50 = \$	112,800	\$ 70 = \$	157,920	a,d
6 Plumbing and Mechanical						
Mechanical / Support	225 @	\$ 160 = \$	36,000	\$ 190 = \$	42,750	a,c,f
Locker Rooms	360 @	\$ 95 = \$	34,200	\$ 150 = \$	54,000	a,b,c,d,e
Restrooms	701 @	\$ 95 = \$	66,595	\$ 150 = \$	105,150	a,c,d,e
Kitchen	378 @	\$ 95 = \$	35,910	\$ 150 = \$	56,700	a,c,d
Sub Total:	1,664					
7 Storage	879 @	\$ 30 = \$	26,370	\$ 45 = \$	39,555	a
Net Area:	14,316					
8 Exterior Improvements	-	\$ 10,000 = \$	10,000	\$ 20,000 = \$	20,000	b,g
LINE A: Total Cost		= \$	772,025	LINE A: Total Cost	= \$	1,122,280
B. Fixed Equipment <i>(Lockers, fixed seating, casework, etc.)</i>		5% of Line A	\$ 38,601	10% of Line A	\$ 112,228	
C. Site Development <i>(Refer to Landscape Architecture Cost Opinion)</i>						
D. Estimated Total Construction Cost:		(A + B + C)	\$ 810,626	(A + B + C)	\$ 1,234,508	
Soft Costs and Contingencies						
Costs to consider:						
E. Moveable Equipment (FF&E)		10% of Line A	\$ 77,203	10% of Line A	\$ 112,228	
F. Professional Fees		10% of Line D	\$ 81,063	10% of Line A	\$ 123,451	
G. Contingencies		10% of Line D	\$ 81,063	10% of Line A	\$ 123,451	
H. Administrative Costs		2% of Line A	\$ 15,441	2% of Line A	\$ 22,446	
Subtotal of Soft Costs:		(E thru H)	\$ 254,768	(E thru H)	\$ 381,575	
I. Total Budget Suggested		(D + E thru H)	\$ 1,065,395	(D + E thru H)	\$ 1,616,083	
Total Budget Cost per Square Foot			\$69.99		\$106.17	

This cost estimate is based upon preliminary conceptual design and planning and should be used for information only for purposes of determining an order of magnitude. The estimate was completed without actual engineering and is subject to change. The estimate should be refined as more detailed design stages provide accurate quantities. The data used to compile the estimate is derived from industry standard sources such as 2020 RS Means data sets. Prices are subject to change with time and other industry related factors.

Notes:

- a Reconfiguration of interior walls including demolition and/ or addition of walls, demolition or addition of doorways
- b New exterior walls, windows, egress doors
- c Moderate to extensive demo for existing plumbing, reconfiguration and new plumbing work
- d Updates to finishes including paint, new flooring, fixtures, and new operational partition walls
- e Code required ADA updates
- f Includes new mechanical system and all supporting work at corridors, egress doorways and mechanical fixtures in corr.
- g General Maintenance

Design | Cost Analysis Summary | Architecture and Landscape Architecture Cost Analysis

To the right is a summary of the architecture and landscape architecture suggested budget including hard and soft costs for a design that does not include a community pool and one that does include a community pool. The architecture costs have been averaged between the low and high estimates provided on the previous page.

Option 1, No Pool

Architecture Cost of Construction (Average between low and high cost estimate)	\$ 1,022,567.00
Architecture Soft Costs (Avg between low and high cost estimate)	\$ 318,171.50
Landscape Architecture Phase 1 Construction	\$ 1,020,034.20
Landscape Architecture Phase 2 Construction	\$ 196,866.55
Landscape Architecture Phase 3 Construction (no pool)	\$ 309,514.05
Landscape Architecture Soft Costs	\$ 671,622.52
Total Budget Suggested	\$ 3,538,775.82

Option 2, Includes Pool

Architecture Cost of Construction (Average between low and high cost estimate)	\$ 1,022,567.00
Architecture Soft Costs (Avg between low and high cost estimate)	\$ 318,171.50
Landscape Architecture Phase 1 Construction	\$ 1,020,034.20
Landscape Architecture Phase 2 Construction	\$ 196,866.55
Landscape Architecture Phase 3 Construction (with pool)	\$ 819,175.88
Landscape Architecture Soft Costs	\$ 671,622.52
Total Budget Suggested	\$ 4,048,437.65

Acknowledgments

UTA Background pg. 56

Design Team pg. 58

Acknowledgments | UTA Background

What we are...

The University Technical Assistance (UTA) program is a clinical teaching practice of the University of Colorado Denver, College of Architecture and Planning. Our mission is to provide students with real world experiences in design and planning, as they provide communities and neighborhoods with services in these areas.

UTA strives to enhance the quality of community life – through collaboration, applied research and innovative design – for the betterment of all community residents. In the process, student's educational experience is enhanced by taking what is learned in the classroom and enhanced by taking what is learned in the classroom and academic studio and employing it in projects of public and civic interest. Communities benefit through design work that is continuously being improved through research and innovation. Moreover, together we become partners in the design thinking process, thus expanding our mutual and individual capacities to further envision and implement projects of significant public impact. Started in 1967, UTA has worked in partnership with communities and neighborhood to complete over 2000 projects around Colorado. Projects range in size and scope, but have the common element of improving the community as a place to live, work and play.

What we do...

The UTA program provides rural and small communities with assistance on projects that enhance places and spaces. A decades-long partnership between the Colorado Department of Local Affairs (DOLA) and the University of Colorado Denver, the UTA program puts the cost of preliminary design work with financial reach of small communities. Students complete preliminary plans and designs that can be used to inform and engage community members in the projects. These plans are used to apply for grants from DOLA and other funders. This saves the community money in preliminary design and community engagement, and provides students with valuable experience. Once financing is secured, licensed professionals are hired to take preliminary designs to completion.





Acknowledgments | Design Team



Chris Endreson
UTA Field Supervisor

Chris Endreson started working for the UTA program at UCD in October of 2013 after working at a Grand Junction prominent architectural firm for 8 years. There he worked primarily on the technical side of design including managing projects in the construction administration phase. He and his family reside in Fruita, CO and have called the Grand Valley home since 2007. He has other family living on the western slope as well providing for many family get togethers and excursions into the surrounding mountains. He and his wife enjoy 4-wheeling and camping as well as traveling to the pacific coast from time to time to awe at the wonders of the ocean. Both he and his wife are active in their local community as a way to help guide give back to this great place to live.



Alex Hardesty
Architecture Intern

Alex was born and raised in Boise, Idaho and is in their final year of the M.Arch program at CU Denver. Inclusive, accessible, and sustainable design are some of the values that Alex has adopted during graduate school. While not designing, Alex enjoys running, skiing, mountain biking, and playing music.



Paige Johnson
Architecture Intern

Paige Johnson grew up in the Pacific Northwest where she earned her undergraduate degree in business at the University of Washington. After several years working in Seattle, Paige discovered that a career in architecture would give her the opportunity to combine her passions for design and problem solving. Wanting to trade the rain for sunshine, Paige began her Master of Architecture degree at the University of Colorado Denver. As a member of the UTA team, Paige has enjoyed working alongside classmates and with local Colorado communities to develop unique and enriching design solutions. In her spare time Paige enjoys getting active outdoors and enjoying the Colorado sunshine!



Germaine Low
Architecture Intern

Born and raised in Singapore, Germaine is a recent graduate of the M.Arch program at CAP and has been part of the UTA West Team since Fall 2019. She holds a bachelor's degree in Urban Design and Architecture Studies from New York University. She believes that architecture is a conduit for strengthening and improving communities, as well as a means of creating strong cultural identities for places through design. Through the UTA program, Germaine enjoys learning about various local Colorado communities, and researching and developing design solutions for them with her co-workers. In her spare time Germaine enjoys playing video games, making digital illustrations and cooking. She also loves dogs and will give them good pets if allowed! While Germaine does not have a pet (yet), she does have a marimo that lives in a jar named Fuzzwald.



Sylvia Pasquariello
Landscape Architecture Intern

Sylvia Pasquariello is a Master of Landscape Architecture candidate at the University of Colorado Denver. She holds a bachelor's degree in International Business and minor in Sustainability, as well as a certificate in Sustainable Urban Agriculture. Sylvia discovered her love for digging in the dirt, plants, and design while working in the field for a design-build residential landscape company. In her free time she volunteers for the Denver Master Gardener Program and enjoys hiking with her two dogs, Bear and Barley. She calls Colorado home, but loves exploring new places



Lydia Prather
Architecture

As a Colorado native, Lydia grew up right outside of Denver and went on to attain her Bachelor of Science degree in Civil Engineering at the Colorado School of Mines. She is now in her second year of the M.Arch program at UC Denver.



Hannah van der Vorst
Landscape Architecture Intern

Hannah grew up in Denver, Colorado and is a candidate for a dual Master's in Landscape Architecture and Urban Planning. She holds a Bachelor's of Science in Civil and Environmental Engineering and has worked in outdoor education, ski instructing, child welfare and farming. Hannah is interested in using her skills to create sustainable, equitable and productive landscapes that strengthen under-served communities. When not at work or school, Hannah enjoys hiking 14ers, knitting, gardening and playing piano and guitar.



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