



ROANOKE PARKS AND RECREATION  
EUREKA PARK RECREATION CENTER  
**FEASIBILITY STUDY**

REPORT BY:

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# Eureka Recreation Center Feasibility Study

August 4, 2017



**Administered By**

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A handwritten signature in black ink, appearing to read "M. Clark", is written over a horizontal line.

8-29-17

Michael Clark, Director of Parks and Recreation    Date



## EXECUTIVE SUMMARY

### INTRODUCTION

Spectrum Design has been commissioned by the City of Roanoke to provide a Feasibility Study for the recreation center at Eureka Park. The Facility Assessment evaluates the physical condition of the existing recreation center. The feasibility analysis presents concepts for additions or renovations to the facility to meet the indoor recreational space needs of the City.

Roanoke Parks and Recreation Department serves the City of Roanoke by providing recreational activities and managing the City's 70 parks and plazas, greenways, blueways, and seven recreation facilities. Eureka Park, located in the City's northeast quadrant, is one of those recreation centers.

Built in 1965, the Center currently provides community use of a fully size basketball court, one community or group room, a small residential style kitchen, and a computer room.

### OVERVIEW

The Feasibility Study is structured to allow the City of Roanoke to address the needs of their aging facilities and plan for future capital needs to meet the evolving indoor recreational needs of the community.

In order to effectively plan for the future needs of the City, it is important to understand the condition of their current facilities. An existing building and site analysis is provided in Section 2 of this report, and contains an Opinion of Cost of deferred maintenance items. These sections identify the maintenance and repairs that are required to keep the current facility stabilized in its current configuration for the next ten years.

Based on meetings with the staff, a Feasibility Analysis is included in Section 3. This analysis shows the facility requirements for the center to meet the community's program needs.





## EXECUTIVE SUMMARY

Section 3 shows a floor plan incorporating the spaces required and a cost estimate for the cost of renovation and new construction.

### CONCLUSIONS

Extensive repairs and upgrades are required at Eureka Park Recreation Center to replace building systems that are beyond their useful life and upgrade the building for building code requirements and ADA issues. At 11,020 square feet, repairs to keep the building stabilized and functional for the next ten years total over \$1,118,900.

To meet the coming needs of the City in the Eureka neighborhood, a complete renovation of the existing facility and a minimum of 3,548 square feet of additions is required to provide adequate office, multipurpose, gymnasium, and storage spaces. The cost of these renovations and additions is estimated to be \$2,985,020. A second Option is provided to add an additional full size basketball court, for a total of two. The total cost for this second option is \$5,631,100. Within these costs are options and associated costs for replacement of the surface of the outdoor basketball court and replacement of the gymnasium floor with a wood floor.



## FACILITY ASSESSMENT

### BUILDING SUMMARY

Major Use:	Community Recreation Center
Address:	1529 Carroll Avenue NW Roanoke, VA 24017
Date of Construction:	1965
Date of Renovation	NONE
Gross Square Feet:	11,020 SF (Approximate)
Stated Max Occupancy	400 Persons
Site Acreage:	15.13 Acres

### BUILDING DESCRIPTION

Eureka Park is located in northwest Roanoke, in the Melrose Rugby Neighborhood. The park covers over 15 acres and has outdoor amenities including playground and recreation areas, an outdoor basketball court, baseball field, tennis courts, and a picnic pavilion and public restroom.

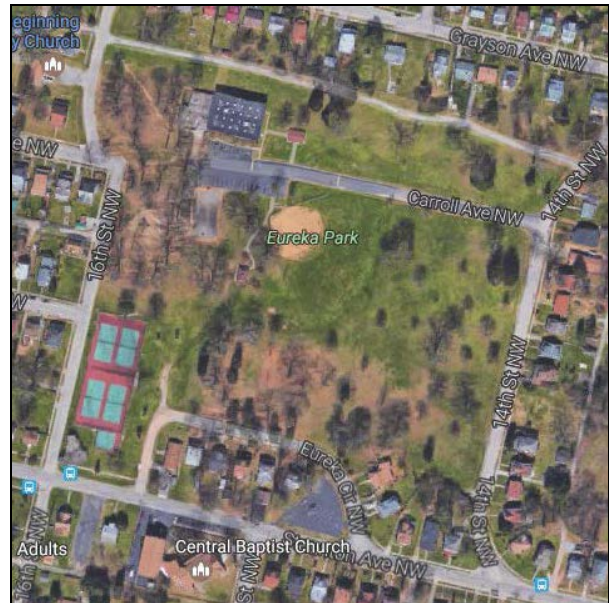
The Eureka Center provides indoor recreation and community space. The center has a gymnasium space at the west side of the building with a high-school size 84-foot long basketball court with standard-height goals. Three rows of fixed bleachers are positioned on the south side of the gym.

The east end of the building houses the community and support spaces. A large meeting area is located directly off the main entrance and has access to a small residential style kitchen. A computer room is also located in this space.

The recreation center is staffed and operated by Roanoke Parks and Recreation and is open to the public only during programmed activities.



Eureka Park Recreation Center



Eureka Park Aerial Photo

## FACILITY ASSESSMENT

### SITE SUMMARY

#### SITE | CIRCULATION

Eureka Park is located at 1529 Carroll Avenue, Northwest Roanoke City. The park is bound by 16<sup>th</sup> Street along the west and 14<sup>th</sup> Street on the east. Neighborhoods fronting Eureka Circle to the south and Grayson Avenue to the north have residential backyards contiguous with Park property. The Grayson neighbors have an existing alley for the length of the northern park property edge. The property is multi-function with amenities for civic playground, tennis, basketball, and baseball uses.

The only entrance to the park is on 14<sup>th</sup> Street (Carroll Avenue). No on-street parking is provided and signs prohibiting street parking are posted.

The park is directly accessible to pedestrians along 14<sup>th</sup> Street and 16<sup>th</sup> Street. Wooden barrier fencing exists along 14<sup>th</sup> Street with gaps for access. A portion of 48" chainlink fencing borders a short section of frontage along the north end of the 14<sup>th</sup> Street frontage and ends at the entrance to the alley. Fencing does not exist along the 16<sup>th</sup> Street frontage except at the tennis courts in the southwest corner of the park.

#### SITE | DRIVEWAYS AND PARKING

The driveway has direct access to 14<sup>th</sup> Street at a posted stop sign at the 3-way intersection. The drive up to the building is asphalt approximately 24 feet in width and controlled by a series of speed bumps and a posted 15 MPH sign. Wooden fence barriers keep vehicles within the lane for the length of the drive. The asphalt condition is in good shape and does not need maintenance up to the parking area proper near the building.

The parking area at the building consists of an oversized lot with parallel spaces on the north and south edges. The shape of the parking lot

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JOB NO. 16100



Carroll Ave Park Entrance Road



14<sup>th</sup> Street- Carroll Ave Park Entrance to Right



Parking Area- View from West



## FACILITY ASSESSMENT

is a parallelogram and is grossly inefficient when compared to standard parking dimensions. This means there is much more asphalt within the lot than is necessary for a double loaded parking lot. Due to the shape of the lot, the current configuration contains the maximum number of spaces to safely design in the lot. As a result of the excess pavement, additional runoff is collecting at the corner where the parking lot intersects the drive aisle. Erosion has begun at the wooden timber edging and a small amount of pavement has begun to deteriorate due to the runoff conditions. There is no storm sewer within this vicinity and the area sheet flows into the fields.

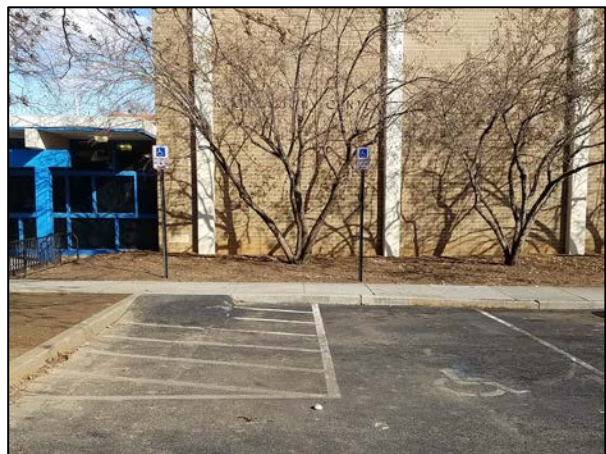
The parking lot provides (25) standard auto parking spaces plus (2) marked handicapped spaces. The number of spaces meets ADA requirements.

**Recommendation:** Starting at the point where the drive aisle intersects the parking lot, design and install a rain garden or small bio-retention basin just behind the wooden fence to capture and dissipate the storm flow coming off the parking lot. Large stones or a row of stones at the receiving side of the measure will act to dissipate the energy and the retention effects will reduce the saturation conditions of the downstream field.

At the building handicapped parking space aisle, remove the asphalt ramp and install a standard curb cut ramp within the sidewalk.



Handicapped Accessible Parking Spot



Asphalt Ramp at Handicapped Parking

## FACILITY ASSESSMENT

### SITE | SIDEWALKS

Site sidewalks appear to be a mix of modern and original concrete, but are in fair condition and do not require maintenance except for specific locations.

The sidewalk at the main entry doors is problematic in that ponding water occurs during rain events. Attempts have been made to drain ponding water to the adjacent landscape bed via a sawn notch in the concrete. It was reported that this attempt does not work and additional effort is needed to prevent water from ponding at the doors.

The front sidewalk at the southeast corner of the building has an unnecessary step either on purpose or due to the walk sinking over time. Accessibility can be easily improved with replacement of this 10 foot segment of walk without exceeding 1:12 or 5% slope by tying the walk surface at the head of the parking spaces to the perpendicular walk connection.

**Recommendation:** Replace the entry sidewalk area and adjust the surface elevation to drain away from the doors at a minimum of ¼" per foot to the parking lot.

Replace a 10 foot segment of concrete sidewalk at the southeast corner of the building.

### SITE | ADA ACCESSIBILITY

The existing built-up asphalt curb ramp for the space nearest the building's main entrance does not meet current code.

**Recommendation:** Remove the built-up asphalt ramp and adjacent sidewalk and replace with a depressed curb cut. Coordinate with any building entrance improvements to ensure proper drainage and avoid ponding conditions.



Sidewalk at Main Entry Doors



Step at Southeast Corner



Handicapped Ramp



## FACILITY ASSESSMENT

### SITE | DRAINAGE

The property drains generally to the south and southwest. An undefined channel exits the property at Eureka Circle just east of the tennis courts. No apparent adverse conditions exist.

There is no modern measures in place on the property to address current stormwater management and stormwater quality conditions. Improvements made to the property will be required to examine these conditions and downstream impacts. Improvements may be required if new building and site infrastructure is proposed. Should they be needed, the location(s) of such BMP's (Best Management Practices) may not be best suited within the building proximity and may be better suited south of the restroom building and east of the tennis courts.

### SITE | LANDSCAPING

Several mature deciduous and evergreen trees exist on the property. Where possible these should be preserved. The general age of the trees on the property are approaching the point where a systematic harvesting/replanting program should be evaluated.

**Recommendation:** Consult the City's urban forester within the next 2-5 years regarding a harvesting/replanting program.

### SITE | EXTERIOR BASKETBALL

The existing basketball court just south of the parking area is showing serious signs of deterioration. The perimeter fencing is too close to the playing surface and is showing distress from this proximity and age.

**Recommendation:** Completely remove the basketball court paving surface and replace with a new gravel base and asphalt system within the next two years. Study the shape, size, and location to ensure longevity of any new investment. Install new goals.



Typical Site Landscaping



Landscaping at Building



Basketball Court

## FACILITY ASSESSMENT

### SITE | FLAG POLE

The flag pole appears to be in proper working conditions and does not require maintenance. If building elements are added that protrude in the direction of the flag pole, a new pole location should be considered.

### SITE | UNDERGROUND UTILITIES

The site is served by natural gas. Underground gas service and valves are located along the front of the property (14<sup>th</sup> Street) and within the eastern half of the alley. A meter located along the rear (north) face of the building appears to be fed from gas lines within 16<sup>th</sup> Street.

Sanitary sewer could not be confirmed by structures above grade, but is thought to exit the west end of the building and collected at a manhole in Carroll Avenue just to the southwest.

Water service is fed from a meter along 16<sup>th</sup> Street and enters the building through a shutoff valve at the rear (north face of the building adjacent to the gas service).

A yard hydrant and drinking fountain system is provided just east of the existing building. This system's operational function is questioned and should be evaluated during routine de-winterization operations.

**Recommendation:** Replace the existing drinking fountain system located between the building and picnic pavilion and provide ADA compliant access to such.



Gas and Water Service



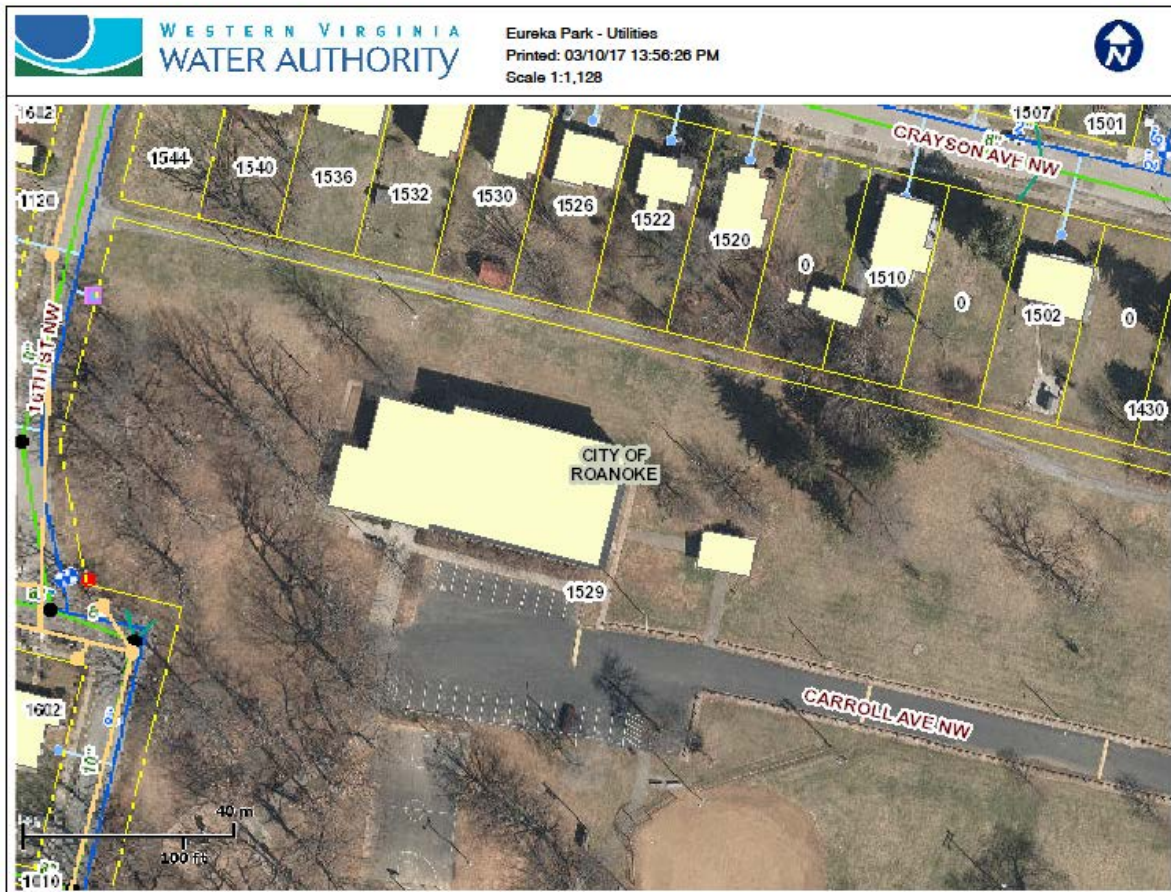
Yard Hydrant and Drinking Fountain



Flag Pole



# FACILITY ASSESSMENT



## FACILITY ASSESSMENT

### EXTERIOR ENVELOPE | MASONRY

The office/program area of Eureka Park Recreation Center is a multi-wythe masonry building with concrete block masonry interior and brick veneer. It does not appear that the building is cavity wall construction. The masonry is in good condition, with limited areas of damage from graffiti.

The gymnasium appears to be multi-wythe masonry walls infilling a concrete beam and column frame. The brick is cracked at the northeast corner of the gymnasium. The crack appears to be caused by relative movement of the precast concrete beam at roof level.

**Recommendation:** Brick at the northeast corner of the gymnasium should be repointed to prevent water infiltration which could result in additional damage to the wall system.

### EXTERIOR ENVELOPE | ROOFS

The roof over the office/program area appears to be the original tar built-up roofing with stone ballast. Evidence of water ponding is visible. From the date of construction, we expect only minimal insulation to be installed.

The roof over the gymnasium is an EPDM membrane with a number of skylights. Framing around the skylights is damaged by water, indicating that the skylights are no longer water tight. The average life span of an EPDM roof is 20 years. Although the installation date of the EPDM roof is not known, the roof appears to be nearing the end of its useful life.

**Recommendation:** Replace the entire roof with a flexible sheet membrane (EPDM or TPO), new rigid insulation to meet current energy code, and new flashings and copings. Replace the gymnasium roof and repair interior skylight framing. A roof system with integral skylights may be considered.



Exterior Masonry Walls



Location of Crack at Northeast Corner



Roof



Syklights



## FACILITY ASSESSMENT

### EXTERIOR ENVELOPE | WINDOWS

The facility's only windows are at the main entrance. These exterior windows are hollow metal frames with single pane glass. The windows appear to be original to the facility.

**Recommendation:** It is recommended that the existing windows be replaced with insulated units.

### EXTERIOR ENVELOPE | ENTRANCES

The main entrance to the facility is located on the south face at the southwest corner of the facility. Staff reported that the entrance is locked while the Center is in operation. A doorbell is located at the front entrance for access.

The main entrance allows direct access into the Center's main meeting room. A glass wall provides a direct line of sight from the staff office to the main entrance, however there is no physical barrier to prevent visitors from coming in the door and interacting with programs occurring in the main space.

There are also a number of doors with direct access to the outside along the perimeter of the building. These doors allow egress from the inside but are locked and do not have pulls from the outside.

**Recommendation:** It is recommended that a renovation provide an entrance lobby that would allow the Recreation Center staff to limit access to each group meeting space. Access control may be desired at the primary entrance to limit and control entrance after hours.

### EXTERIOR ENVELOPE | DOORS/DOOR HARDWARE

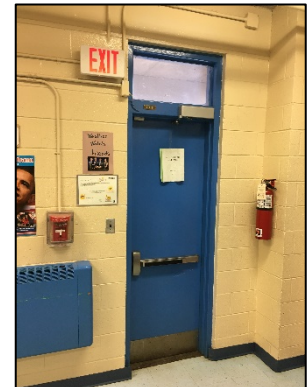
Exterior doors and frames are hollow metal. Doors have panic hardware on the inside to allow egress. Some metal sweeps at the bottom of the doors are damaged on many



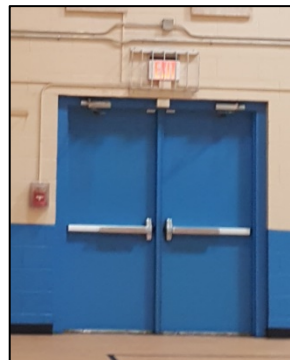
Main Entrance



Main Entrance Door



Exterior Doors



Gymnasium doors

## FACILITY ASSESSMENT

exterior doors. Paint is fading and damaged on many exterior surfaces.

The front door has a lever-type handle on one leaf of the door. This is a desired configuration to prevent doors from being chained closed. Other exterior doors are for exit only and do not have hardware on the outside.

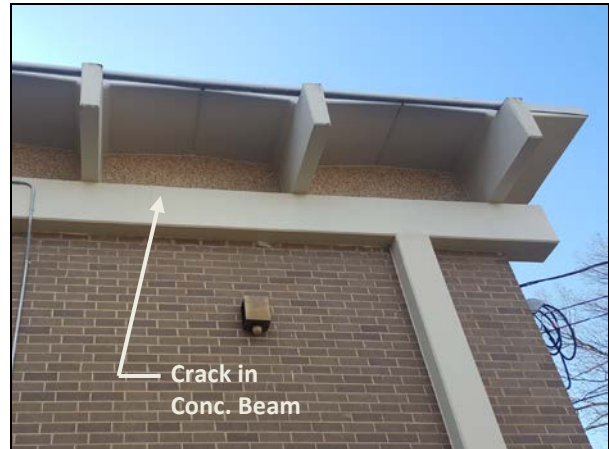
**Recommendation:** Repaint all exterior doors and replace damaged sweeps.

### EXTERIOR ENVELOPE | FASCIAS AND SOFFITS

The building's concrete frames are expressed on the exterior of the building. At the gymnasium, the fascia is infilled with pebble finish precast panels. The panels appears to be in good condition with no signs of damage. The overhangs on the gymnasium are the exposed concrete T-beams with no soffit panels. The concrete structure appears in generally good condition where it is exposed. One crack in the concrete structure was seen in the concrete beam in the last span on the northwest corner of the north face of the building. The crack appears small, but should be monitored.

The classroom area of the building has expressed concrete structure, similar to the gymnasium portion of the building. There concrete beams appear in good condition. A cementitious wood fiber deck (Tectum) is used for the soffit material and for the ceiling of the covered porch on the west side of the building. The cementitious material appears in good condition, although there is some water staining at the porch And near roof drains inside. Fascia panels on the low portion of the building are brake-metal and appear in good condition.

**Recommendation:** Monitor one crack in the roof beam located on the northwest corner of the building. Consult a Structural Engineer for repair if the depth or width of the crack grows.



Concrete Beams & Soffit at Gymnasium



Typical Soffit and Fascia Materials



## FACILITY ASSESSMENT

### EXTERIOR ENVELOPE | ENERGY CONSERVATION

The exterior walls of the building are not insulated, but altering the existing wall construction to provide additional insulation would not be feasible.

The amount of roof insulation on the roof is unknown. The depth of insulation should be determined prior to the next roof replacement and additional insulation added as necessary.

The energy performance of the building could be improved with the addition of an entrance vestibule and replacement of the existing single pane hollow frames with thermally broken frames and insulated glass. An entrance vestibule would provide an air-lock and reduce the infiltration of outside air into the space when people enter the facility.

**Recommendation:** Reconfigure the entrance to provide a secure entrance vestibule. The new entrance should be constructed with modern thermally broken frames and insulated glass. Increase the amount of insulation on the roof during the next roof-replacement.



Hollow Metal Frames with Single Pane Glass

## FACILITY ASSESSMENT

### BUILDING INTERIOR | FLOOR FINISHES

The floor in the office/program area is vinyl composition tile (VCT). It is likely a replacement for the original vinyl asbestos tile (VAT) which was removed. We observed some black mastic at the edge of the VCT floor in storage rooms, indicating that some of the ACM containing mastic may still exist. An environmental testing agent should determine if additional abatement is required.

The floor in the toilet rooms are 6 x 6 quarry tile with marble threshold at the doors. The flooring is in good condition, although there are areas visible where patching has occurred.

The gymnasium floor is a resilient athletic flooring, heat seam welded, vinyl surfaced with a wood appearance. The floor is showing signs of age with some seams beginning to fail.

**Recommendations:** Replace the VCT with new VCT flooring in the office/program area. Perform abatement if necessary.

If only minor toilet room modifications occur the quarry tile could remain, with some repairs. If the toilet rooms are to be replaced, an epoxy resinous flooring is recommended.

Replace the athletic floor with a new resilient athletic floor. The thickness / resilience should be selected based on anticipated use of the space. If a new gym were to be constructed a true wood athletic floor is preferred. Since these systems require a 3 ½" – 5" recessed floor slab it is not feasible to retrofit the existing gym with wood.



Corridor & Toilet Room Flooring



Gymnasium Floor



## FACILITY ASSESSMENT

### BUILDING INTERIOR | WALL FINISHES

Walls in the Recreation Center are primarily exposed concrete masonry that has been painted. In general, the masonry is in good condition.

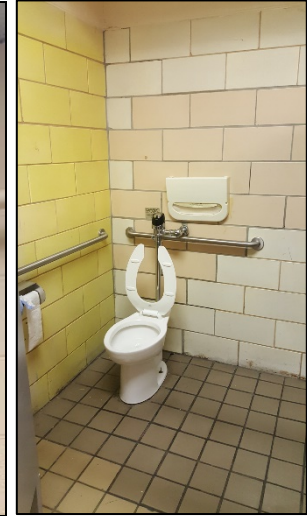
Cracks were observed at the northwest corner of the building in the Computer Room. These could be from a small amount of settlement in the foundation wall. The cracks were only evident in the concrete masonry, and were not observed in the brick veneer.

Walls in the toilet rooms are glazed concrete masonry. Walls are in serviceable condition.

**Recommendation:** Repoint masonry in the northwest corner of the building. Monitor the wall for any additional settlement. The noise reflection in the gym is high. Addition of sound attenuation panels is recommended.



Interior CMU walls



Glazed Concrete Masonry

### BUILDING INTERIOR | CEILING FINISHES

In the classroom spaces, the tectum roof deck serves as the ceiling material. In general the roof deck is in acceptable condition. One area of damage was noted in the Computer Room.

The ceiling of the gymnasium is exposed concrete t-beams. No damage was observed.

**Recommendation:** Roof leaks should be repaired to prevent further damage of the interior finishes.



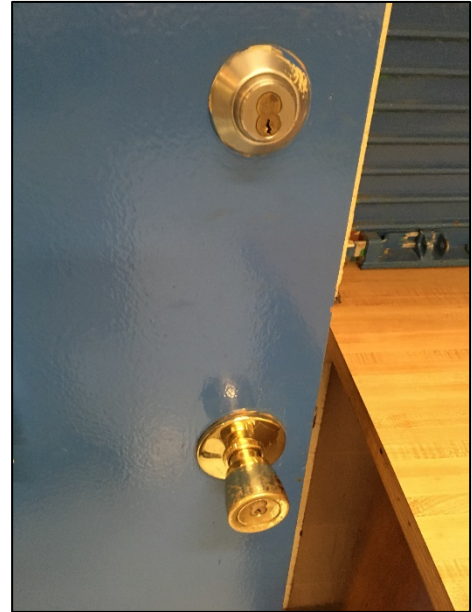
Water Damage at Roof Deck

## FACILITY ASSESSMENT

### BUILDING INTERIOR | DOORS/DOOR HARDWARE

Interior doors are primarily painted wood doors with knob type hardware. The hardware is not ADA compliant. Separate dead bolts are installed at the kitchen, which does not meet the current code requirement for single action existing. A removable mullion is missing at the pair of doors to the gym from the entrance, preventing them from latching or locking. That pair of doors also has the original open push bar panic hardware which could be chained together by an intruder.

**Recommendation:** Replace door hardware with ADA compliant levers. Replace the missing removable mullion and replace the two panic bars at the gym with a flush mount egress hardware.



Interior Door Hardware

### BUILDING INTERIOR | KITCHEN

The kitchen consists of wood cabinets with a double sink and residential grade appliances (refrigerator, range, and hood). There is no commercial exhaust hood, fire suppression system, hand sink, triple sink or grease trap. The floor is VCT, which has joints between tiles.

**Recommendation:** Equip space with new equipment, a commercial exhaust hood, fire suppression system, hand sink, triple sink or grease trap. Install a seamless floor and a scrubbable ceiling.



Kitchen

### BUILDING INTERIOR | ENVIRONMENTALLY SENSITIVE MATERIALS

**Recommendation:** Perform a hazardous materials assessment, if one has not already been done. From the age of construction the composition of the floor mastic and pipe insulation need to be verified.



## FACILITY ASSESSMENT

### ADA ISSUES | LEVEL CHANGES

The entry doors and interior circulation are at the same elevation, appearing to comply with ADA. The two doors from the gym direct to the lead to exterior stairs.

**Recommendation:** An accessible sidewalk should be added from at least one of the exterior stairs south of the gym.

### ADA ISSUES | WATER COOLERS

Two single level accessible water coolers are located in the gym and near the drink machines. Both are at the same height. Two levels are required by ADA and plumbing code.

**Recommendation:** Install an additional water cooler at the higher level or provide a new dual level water cooler.

### ADA ISSUES | SIGNAGE

**Recommendation:** Provide ADA compliant signage at toilet room and program spaces.

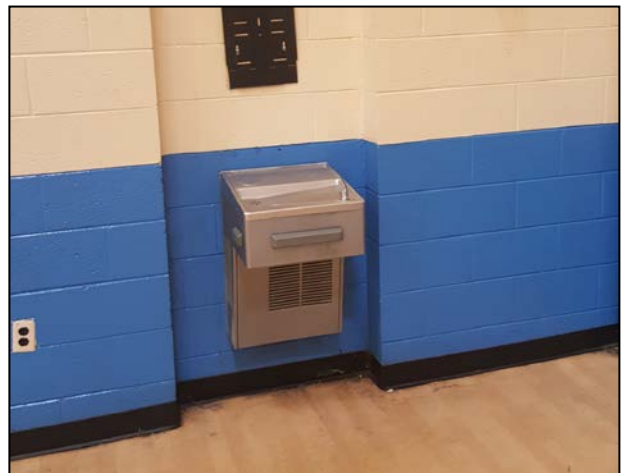
### ADA ISSUES | TOILET ROOMS

The toilet rooms were updated to meet ADA some years ago. They appear to be generally compliant, but a vertical grab bar is lacking at the accessible stall.

**Recommendation:** Provide vertical grab bar at men's and women's accessible stalls.

### BUILDING CODE ISSUES | SPRINKLER

The Building is currently not sprinklered. The building is not required to be by current building code. The gymnasium is 7,488 sq ft, which is under the threshold of a 12,000 sq ft assembly space which requires sprinklering. If a new gym of 12,000 sf or larger is added, an automatic sprinkler would be required.



Typical Water Cooler



Typical Accessible Toilet Stall

## FACILITY ASSESSMENT

### HVAC

#### HVAC | GENERAL

The entire building is heated and cooled. A hot water boiler system heats the gym and support spaces via unit heaters and finned-tube radiators. The gym is currently cooled with packaged DX rooftop units. The support spaces are cooled with a split-system, DX air conditioner.

**Recommendation:** Existing ducting and heating water systems are past their expected life and are recommended for replacement.

#### HVAC | AIR-SIDE | GYM

Two packaged, York rooftop DX air handling units provide cooling for the gym area. Units are approximately 10 years old or older. A transformer / phase converter was observed on the roof, which may step up the voltage from 208 to 480V for the air handling units. The supply air is ducted directly into the space without ducting, and returns directly through a filter grill section. No means of ventilation is apparent for the swing or heating seasons.

Facility staff report that the gym humidity fluctuates significantly, causing buckling of the hardwood gym floor.

Two large, approximately 60"-diameter propeller fans, now nonoperational, are located high in the wall and were likely used for cross-flow cooling in conjunction with operable louvers on the opposing wall, prior to the addition of mechanical cooling.

Four large heating water unit heaters, located in each gym corner, provide heating during winter. Each unit heater is controlled by a nearby wall-mounted thermostat and pipe-mounted aquastat that energize the unit heater fan as needed.



Gym Cooling Supply (Typ. of 2)



Wall Propeller Fan (typ. of 2)



Hot Water Unit Heater (Typ. of 4)



## FACILITY ASSESSMENT

### HVAC | AIR-SIDE | SUPPORT SPACES

The support spaces (offices, community rooms, toilets, and kitchen) are heated and cooled by a split-system heat pump located in a storage room adjacent to the gym, as well as an outdoor condensing unit located behind the building. The unit is 5-ton capacity and utilizes R-22 refrigerant. The indoor unit is approximately 22 years old; the outdoor unit may be a similar vintage. No means of mechanical ventilation was observed for these areas.

Air distribution is via exposed rectangular ductwork through this space. Much of the ductwork appears to be original and has exceeded its typical expected lifespan. Suggesting an inability for the rear community room to adequately cool, a window-mount-style A/C unit has been added to this area, of indeterminate age.

Additional heating is for the common spaces is provided by perimeter finned-tube, hot water radiators.

### HVAC | AIR-SIDE | RESTROOMS

Supplemental heat is provided in each restroom by a ceiling-mounted, hot water unit heater, likely original to the building. One exhaust fan, located in the water heater closet and controlled via manual switch, pulls exhaust from each restroom.

In the stand-alone ballfield restrooms, each room is heated by a small electric wall unit heater with security grating. No other exhaust or ventilation was observed.



5-ton Air Handler



Exposed Ducting



Toilet unit heater



Toilet wall heater

## FACILITY ASSESSMENT

### HVAC | AIR-SIDE | KITCHEN

Per staff, kitchens are only used for warming. A small, residential-style hood was observed, and appears to exhaust to roof.

### HVAC | HEATING WATER SYSTEM

The heating water system is served by a gas-fired scotch marine boiler in the mechanical room of 2003 vintage, and 1,569 MBH input. A 1 1/2-hp pump on a timeclock provides heat to the building, and a smaller, 1/3-hp boiler injection pump feeds the boiler. The boiler's outside air reset control appears to be disabled, and the boiler is running in manual hand mode. Piping insulation appears to be asbestos and is likely original to the building. The estimated age of the pumps is 15 years or older.

A three-way mixing valve provides boiler protection; it is unclear whether mixing valve actuators are functional.

The boiler flue (B-vent) routes to the mechanical room roof, and appears to be in fair condition. Combustion air is provided via louvered door.



Range Hood



Boiler Mixing Valve



Heating Water Pump



## FACILITY ASSESSMENT

### PLUMBING

#### PLUMBING | DOMESTIC WATER

Water is provided from city water via a 1" line, located on the rear of the building (north side). The cold water line enters the north side of the building, and elbows to a mechanical room riser located near the south exterior wall. There does not appear to be a backflow preventer for the building.

#### PLUMBING | BACKFLOW PREVENTERS

The building does not appear to have a backflow preventer.

**Recommendation:** Installation of a backflow preventer is recommended.

#### PLUMBING | SANITARY SEWER

Because of the age of the sanitary system and the risk of kitchen grease and other contaminants entering the system over the years, we recommend scoping of the sanitary sewer system to determine condition. A technician will insert a video camera into the sewer line through the sewer cleanout, and if no obstructions are encountered, will inspect from the cleanout to the city main to determine the sewer line condition.

**Recommendation:** Scope sewer line.

#### PLUMBING | STORM DRAINAGE

The storm drainage system appears to drain to the city sewer system located in the front of the property. Some existing roof drain piping is visible inside the building.

## FACILITY ASSESSMENT

### PLUMBING | WATER HEATER

Domestic hot water is produced using a 50-gallon, 40,000 btu input gas-fired water heater that appears to be in fair condition. No expansion tanks is evident on water heater. No floor drain or drip pan was observed (floor drain may have been covered).

**Recommendation:** Provide a drip pan at the water heater.

### PLUMBING | PLUMBING FIXTURES | SUPPORT AREA RESTROOMS

The men's room contains two water closets, one urinal and one lavatory. The women's room contains four water closets and one lavatory. The restrooms appear to have originally contained showers that were converted to water closets.

The fixtures appear to be in fair condition and of indeterminate age. The flush valves have recently been upgraded to hands-free sensor flush. Lavatories are wall-mounted. Flush valves are standard and do not appear to be low flow type. The lavatories and toilets were functional at the time of writing.

### PLUMBING | PLUMBING FIXTURES | BALLFIELD RESTROOMS

The men's room contains one water closet, one urinal and one lavatory. The women's room contains two water closets and one lavatory. The fixtures appear to be in fair condition and are of steel security construction. The lavatory and toilets were functional at the time of writing.



DHW Heater



Typical Plumbing Fixtures



## FACILITY ASSESSMENT

### PLUMBING | PIPING

Domestic water piping was functional at the time of observation.

### PLUMBING | WATER FOUNTAINS

A water fountain was observed in the gym area in good condition. An additional, exterior water fountain, located adjacent to the picnic shelter, is in poor condition.

### PLUMBING | FLOOR DRAINS

No floor drains were observed.

### PLUMBING | PUMPS

No re-circulation pumps were evident in the building.

### PLUMBING | GREASE TRAPS

No grease trap or interceptor was observed. A grease trap is not required if no food is being prepared in the kitchen. If use changes, installation of a grease trap should be considered.

### PLUMBING | NATURAL GAS

There is currently one active gas meter on the north side of the building with 1 1/2" piping. Inside the building, 1 1/2" black iron gas piping is routed from the front service riser to the mechanical room.

### PLUMBING | FIRE SUPPRESSION

No fire suppression systems were observed.



Gym Water Fountain



Shelter Water Fountain



Natural Gas Meter

## FACILITY ASSESSMENT

### ELECTRICAL

#### ELECTRICAL | DISTRIBUTION

The building is served at 230V single phase from an AEP pole-mounted transformer to the north of the building. Two service masts mounted at the rear of the building provide service entrance into the mechanical room; the second service entrance appears to have been added to provide power for new gym rooftop air handling units.

The main service gear for the original service entrance is a Square-D 400A switchboard as the main service disconnect. The second service entrance routes through a 400A Square-D circuit breaker, then up to a phase converter on the roof for the rooftop units.

The main service also includes seven original vintage (1965) breakers for the unit heaters, fans, and pumps, as well as an additional, modern 230V subpanel. The service equipment and all of the main distribution equipment in the main electrical room, with the exception of the original breakers, appear to be in good to excellent condition.

Exterior ballfield lighting is fed by an overhead AEP pole-mounted transformer to a meter and wooden enclosure south of the gym. Feeders route from a CT cabinet to pole-mounted lights through underground conduit. The restroom building is fed by underground service to a 240/120-V, single-phase meter mounted on the side of the building.



Service Entrance



Original Breaker



Subpanel and Breakers



Ballfield Lighting Cabinet



## FACILITY ASSESSMENT

### ELECTRICAL | LIGHTING

Lighting throughout the facility is predominantly modern fluorescent surface-mount fixtures, utilizing a mix of older T12 and newer T8 lamps, which the staff upgrades as the older fixtures fail. There are some CFL lights in interior and exterior applications, such as in storage applications. Interior lighting appears to be on the whole well maintained and in good condition. A few fixtures are showing some lens discoloration, which is not affecting performance at this time.

**Recommendation:** Replace the older T12 fixtures.

Exterior lighting for the building is accomplished through the use of HID wall packs, building-mounted floods with security grilles, and pole-mount site lighting. Some of the exterior wall packs are starting to show some lens discoloration. All of these systems appear to be in fair good condition. Ballfield lighting is via pole-mount, HID lighting, and most of the pole-mounted fixtures are damaged.

Gymnasium lighting appears to be high bay, open fixture HID. This system looks to be in good condition but is likely more costly to operate than more modern fixtures, such as LED. Skylights provide natural daylight during the day.

The City should evaluate the need for outdoor athletic lighting at the baseball facility. If lighting is to remain, it is recommended that a metal halide sports lighting system be installed.

### ELECTRICAL | EMERGENCY GENERATOR

No emergency generator was observed.



Exterior Wall Pack



Damaged Ballfield Lights



Gym Lighting

## FACILITY ASSESSMENT

### ELECTRICAL | WIRING

The electrical wiring throughout the building is typical of that expected based upon the date of installation. Disconnect switches and general wiring throughout the building are consistent with current codes, and appear to be largely in good condition.

### ELECTRICAL | RECEPTACLES

The wiring devices appear to be in good condition throughout, with some signs of wear on device cover plates. Receptacles and raceway are primarily surface mounted. There are no known issues with the general electrical wiring, receptacles, or switches in the building.

### ELECTRICAL | SECURITY EGRESS LIGHTING

Emergency and egress lighting appears to be provided by normal building lighting fixtures fed from battery packs.

Exit signs appear to have been updated recently.

Overall emergency systems appear to be in good working order and good condition.

### ELECTRICAL | FIRE ALARM SYSTEM

The building is equipped with an older digital point annunciation Vector 3000 series fire alarm system. This model appears to be no longer made, and may present obsolescence issues as parts and support are needed in the future.

There are no recommendations in the Fire Alarm area as a result of this survey.



Typical Light Switch and Wiring



Exit sign



Fire Alarm Panel



## FACILITY ASSESSMENT

### ELECTRICAL | CCTV

The building is equipped with an older CCTV video surveillance system; due to numerous operational issues, replacement is recommended.

**Recommendation:** Replace CCTV system.

### ELECTRICAL | DATA / TELECOMMUNICATIONS

The facility has copper telephone service available, and a significant number of copper telephone extensions are installed throughout the building. As in most similar facilities, it is expected that future additions in the voice communication arena will move in the VOIP (Voice Over IP) direction, and that existing copper systems will not be expanded.

**Recommendation:** Consider exploring available sources for VOIP to allow for modernization and improvements to the data/communications system.

## FACILITY ASSESSMENT





## OPINION OF COST OF RECOMMENDED REPAIRS

An Opinion of Cost Summary of Recommended Repairs is organized in the same fashion as the building assessment with costs provided for each individual repair item recommended within the building assessment. The recommended repairs are organized by priority levels.

### Priority I – Immediate Need

Items or systems that need immediate corrective measure to bring them up to the current building code ADA compliance. Priority I also includes building system failures such as leaks that lead to more dramatic and costly damage if not corrected.

### Priority II – In Need of Repair

Building components that do not require immediate attention, but are identified at the end of their useful life and will need improvements in the next two to five years.

### Priority III – Plan for the Future

Systems that still have some useful life, but are worn and will need to be renovated or replaced in approximately ten years.

	TOTAL	PRIORITY 1	PRIORITY 2	PRIORITY 3
Site	\$53,450	\$8,450	\$26,000	\$19,000
Building Envelope	\$283,440	\$243,440	\$30,000	\$10,000
Building Interior	\$253,332	\$36,400	\$186,932	\$30,000
HVAC	\$245,000	\$245,000	\$0	\$0
Plumbing	\$3,200	\$3,200	\$0	\$0
Electrical	\$103,500	\$0	\$100,500	\$13,000
	<b>\$941,922</b>	<b>\$536,490</b>	<b>\$343,432</b>	<b>\$72,000</b>

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### Priority I – Immediate Need

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### Priority II – In Need of Repair

Building components that do not require immediate attention, but are identified at the end of their useful life and will need improvements in the next two to five years.

### Priority III – Plan for the Future

Systems that still have some useful life, but are worn and will need to be renovated or replaced in approximately ten years.

	TOTAL	PRIORITY 1	PRIORITY 2	PRIORITY 3
Site	\$160,250	\$14,250	\$127,000	\$19,000
Building Envelope	\$283,440	\$243,440	\$30,000	\$10,000
Building Interior	\$253,532	\$36,600	\$186,932	\$30,000
HVAC	\$245,000	\$245,000	\$0	\$0
Plumbing	\$3,200	\$3,200	\$0	\$0
Electrical	\$173,500	\$0	\$170,500	\$13,000
	<b>\$1,118,922</b>	<b>\$542,490</b>	<b>\$514,432</b>	<b>\$72,000</b>



# FEASIBILITY ANALYSIS

## INTRODUCTION

### Planning Process

Spectrum Design worked closely with Roanoke Parks and Recreation through a planning process that was participatory and cooperative. The team collaborated to develop and review a program of spaces that incorporates the needs of Roanoke Parks and Recreation.

### Existing Facility

The existing Eureka Park Recreation Center contains the following program spaces:

<u>Program Space</u>	<u>Area</u>	
Entry	444	SF
Office	165	SF
Gym	7,222	SF
Gym Storage	139	SF
Program 1	660	SF
Program 2	390	SF
Storage	36	SF
Kitchen	160	SF
Kitchen Storage	36	SF
Women's	198	SF
Men's	198	SF
Janitor	24	SF
Mechanical   Electrical	147	SF
 Total Existing Area	 11,020	 SF

The existing Entry serves as a lobby space to the Gym and is open to the larger Program space. Since there is no separation between spaces this is problematic. The noise and distraction of people entering and existing the facility and the gym make it less functional as an instructional space. Also, it cannot be secured for children's programs. There is no barrier physical barrier to prevent other visitors from entering the program space. While the office has a view to the entry the glass partition makes it difficult to perform the reception/check in function.

The existing Gym is reasonably sized to provide a regulation basketball court and two cross-courts. There is space to add permanent retracting bleachers. A storage room can be accessed directly from the Gym, however it is not large enough for the facility's needs. Additional storage is needed. Separate storage rooms that can house different program materials are preferred to one large storage space.

The second Program space is 390 sf which is small for a classroom. Its location allows for a secure space with direct access to the kitchen. It has a small storage closet.

## FEASIBILITY ANALYSIS

### PROPOSED FACILITY: OPTION A

The proposed Eureka Park Recreation Center contains the following program spaces:

<u>Program Space</u>	<u>Area</u>	
Entry	700	SF
Reception	444	SF
Office 1	165	SF
Office 2	160	SF
Gym	7,222	SF
Gym Storage	139	SF
Program 1	660	SF
Program 2	660	SF
Storage	36	SF
Kitchen	390	SF
Kitchen Storage	36	SF
Multi-Purpose	1,000	SF
Individual Toilet	77	SF
Individual Toilet	77	SF
Storage	160	SF
Storage	262	SF
Women's	198	SF
Men's	198	SF
Janitor	24	SF
Mechanical   Electrical	147	SF
<b>Total Proposed Area</b>	<b>14,568</b>	<b>SF</b>

The proposed floor plan expands the Entry to the front, facing the parking and drop off area. This allows adequate space to have a Reception desk for check in. The space outside the Gym and the Program spaces can be observed from both the Reception desk and the Office.

The existing Program space is to have partitions added to make it an enclosed classroom.

An additional Office will be located at the former kitchen location, which give good supervision of the corridor that accesses the Program spaces.

The Kitchen will be expanded to include adequate storage in cabinets and counter space, commercial exhaust hood, prep sinks, triple sink, and hand sink. There will be a direct connection to the new Multi-Purpose Room and a shuttered counter.

The main building addition expands the facility to the west of the site, providing additional Program and Storage space.

The Multi-Purpose Room is sized to accommodate approximately 68 people at a reception with tables and chairs or 145 people at a meeting seated in chairs.

## FEASIBILITY ANALYSIS

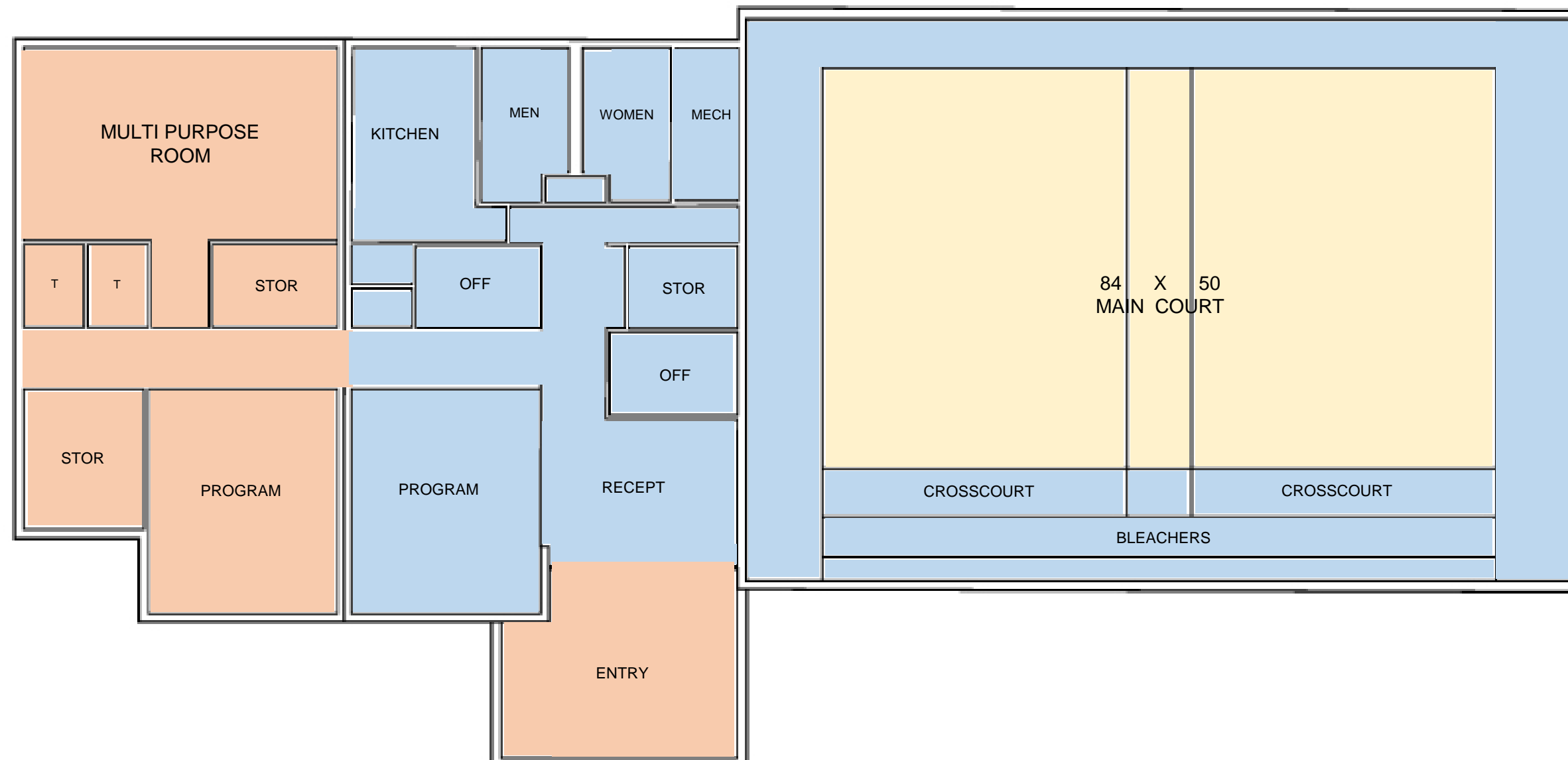
Two individual restrooms are located adjacent to the Multi-Purpose Room to for convenience and to allow children in an after school program to have separate restroom facilities from the main group restrooms.

Another classroom sized Program Space and two Storage rooms are located in the building addition. A door from the corridor provides access to the outside and emergency egress.



# EUREKA PARK RECREATION CENTER OPTION A

- 11,020 SF RENOVATION
- 3,548 SF NEW CONSTRUCTION
- 14,568 SF TOTAL





# EUREKA PARK RECREATION CENTER OPTION A

11,020 SF RENOVATION  
3,548 SF NEW CONSTRUCTION  
14,568 SF TOTAL





## COST SUMMARY OF ADDITIONS AND RENOVATIONS

### EUREKA PARK - OPTION A

	Quantity	Unit Price	Cost
<b>Building</b>			
Renovation	11,020 SF	\$145 /SF	\$1,597,900
Addition	3,548 SF	\$190 /SF	\$674,120
Gym Floor Replacement	7,600 SF	\$35 /SF	\$266,000
Kitchen Equipment	1 LS	\$22,000	\$22,000
<b>Building Cost</b>	<b>14,568 SF</b>		<b>\$2,560,020</b>
<b>Sitework Cost</b>			
Earthwork	1 LS	\$20,000	\$20,000
Exterior Improvements	1 LS	\$80,000	\$80,000
Utilities	1 LS	\$40,000	\$40,000
Reconfigure Parking	1 LS	\$15,000	\$15,000
Replace Outdoor Basketball Court w/ Lights	1 LS	\$120,000.00	\$120,000
<b>Sitework Cost</b>			<b>\$275,000</b>
<b>Equipment Cost</b>			
Gym Equipment	1 LS	\$90,000	\$90,000
Bleachers	1 LS	\$40,000	\$40,000
Scoreboard	1 LS	\$15,000	\$15,000
Volleyball Standards	1 LS	\$5,000	\$5,000
<b>Equipment Cost</b>			<b>\$150,000</b>
<b>Total Construction Cost</b>			<b>\$2,985,020</b>



## FEASIBILITY ANALYSIS

### PROPOSED FACILITY: OPTION B

The second option proposed for Eureka Park Recreation Center is similar to the previous option but adds a second Gym and support space. It contains the following program spaces:

<u>Program Space</u>	<u>Area</u>	
Entry	700	SF
Reception	444	SF
Office 1	165	SF
Office 2	160	SF
Gym 1	7,222	SF
Gym Storage	139	SF
Gym 2	7,222	SF
Gym Storage	400	SF
Program 1	660	SF
Program 2	660	SF
Storage	36	SF
Kitchen	390	SF
Kitchen Storage	36	SF
Multi-Purpose	1,000	SF
Individual Toilet	77	SF
Individual Toilet	77	SF
Storage	160	SF
Storage	262	SF
Women's	198	SF
Men's	198	SF
Women's	560	SF
Men's	450	SF
Janitor	24	SF
Mechanical   Electrical	147	SF
<b>Total Proposed Area</b>	<b>26,100</b>	<b>SF</b>

The proposed floor plan expands the Entry to the front, facing the parking and drop off area. This allows adequate space to have a Reception desk for check in. The space outside the Gyms and the Program spaces can be observed from both the Reception desk and the Office.

A second full size Gym is added with retractable bleacher seating. Both gyms can be accessed by a new wide corridor space that can hold the crowd from a large event utilizing both gym. Additional restrooms and Gym Storage is added as well.

The existing Program space is to have partitions added to make it an enclosed classroom.

An additional Office will be located at the former kitchen location, which give good supervision of the corridor that accesses the Program spaces. The existing pavilion will require demolition due to location conflict and is recommended to be replaced vs relocation to address current code compliance.

## FEASIBILITY ANALYSIS

The Kitchen will be expanded to include adequate storage in cabinets and counter space, commercial exhaust hood, prep sinks, triple sink, and hand sink. There will be a direct connection to the new Multi-Purpose Room and a shuttered counter.

The main building addition expands the facility to the west of the site, providing additional Program and Storage space.

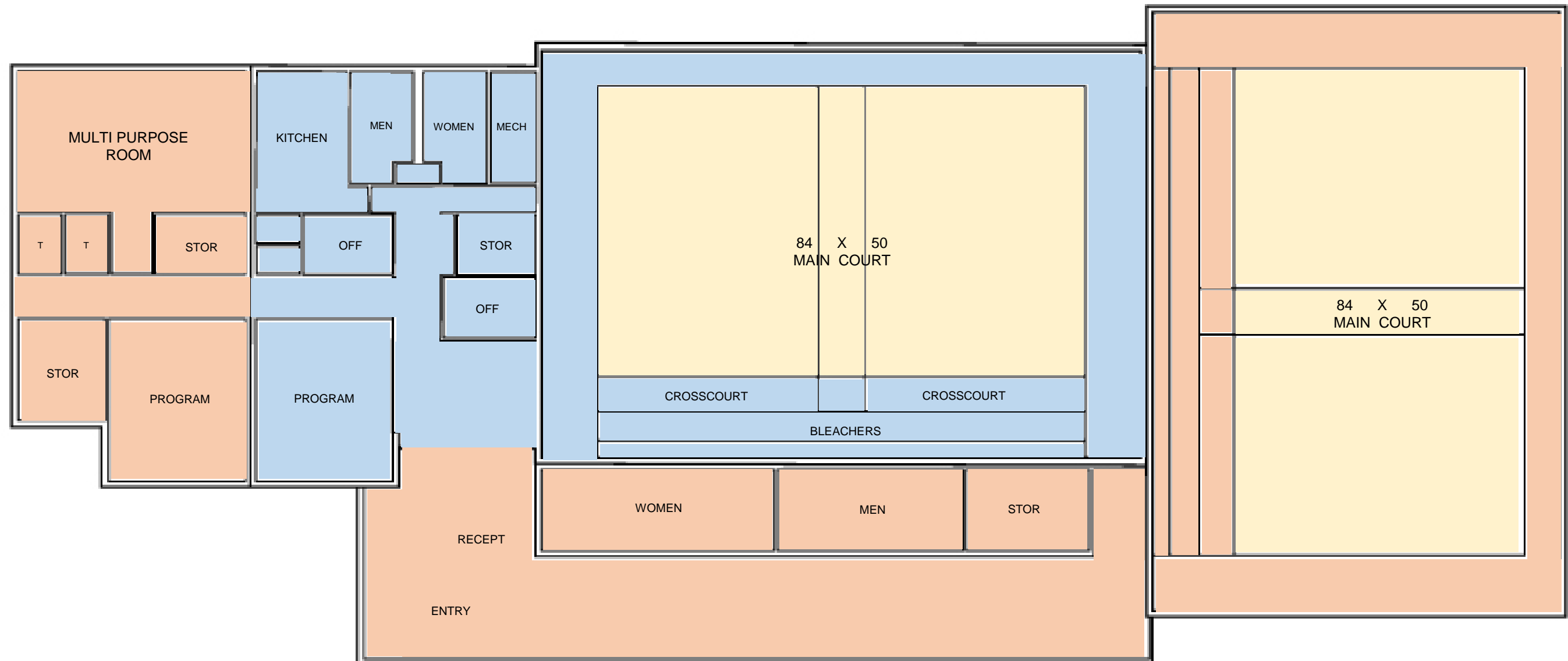
The Multi-Purpose Room is sized to accommodate approximately 68 people at a reception with tables and chairs or 145 people at a meeting seated in chairs.

Two individual restrooms are located adjacent to the Multi-Purpose Room to for convenience and to allow children in an after school program to have separate restroom facilities from the main group restrooms.

Another classroom sized Program Space and two Storage rooms are located in the building addition. A door from the corridor provides access to the outside and emergency egress.

# EUREKA PARK RECREATION CENTER OPTION B

- 11,020 SF RENOVATION
- 15,080 SF NEW CONSTRUCTION
- 26,100 SF TOTAL





# EUREKA PARK RECREATION CENTER OPTION B

- 11,020 SF RENOVATION
- 15,080 SF NEW CONSTRUCTION
- 26,100 SF TOTAL
- 24'x36' NEW PAVILION





## COST SUMMARY OF ADDITIONS AND RENOVATIONS

### EUREKA PARK - OPTION B

	Quantity	Unit Price	Cost
<b>Building</b>			
Renovation	11,020 SF	\$145 /SF	\$1,597,900
Addition	15,080 SF	\$190 /SF	\$2,865,200
Gym Floor Replacement	7,600 SF	\$35 /SF	\$266,000
Kitchen Equipment	1 LS	\$22,000	\$22,000
<b>Building Cost</b>	<b>26,100 SF</b>		<b>\$4,751,100</b>
<b>Sitework Cost</b>			
Earthwork	1 LS	\$150,000	\$150,000
Exterior Improvements	1 LS	\$150,000	\$150,000
Utilities	1 LS	\$75,000	\$75,000
Reconfigure Parking	1 LS	\$15,000	\$15,000
Relocate Outdoor Basketball Court w/ Lights	1 LS	\$120,000.00	\$120,000
Demo & Replace Pavilion	1 LS	\$200,000.00	\$200,000
<b>Sitework Cost</b>			<b>\$710,000</b>
<b>Equipment Cost</b>			
Gym Equipment	1 LS	\$90,000	\$90,000
Bleachers	1 LS	\$40,000	\$40,000
Scoreboard	2 LS	\$15,000	\$30,000
Volleyball Standards	2 LS	\$5,000	\$10,000
<b>Equipment Cost</b>			<b>\$170,000</b>
<b>Total Construction Cost</b>			<b>\$5,631,100</b>