

IRENE B. FRENCH COMMUNITY CENTER

Volume 2- Assessment and Feasibility Study Treatment Recommendations and Use

City of Merriam, Kansas Parks and Recreation
5701 Merriam Drive
Merriam, Kansas 66203

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TREATMENT RECOMMENDATIONS

PART 2:TREATMENT RECOMMENDATIONS AND USE

Introduction

The Irene B. French Community Center is a unique facility with many layers of history and connections to the community of Merriam. This volume of the assessment and feasibility report focuses on treatment recommendations and options for the future of the community center. The formulation of recommendations for the future rehabilitation of the community center take into account the building's existing conditions, historic materials and features, the building's location and setting, and the life-safety of the entire building's occupants.

The goal of the treatment recommendations is to provide the community center with multi-functional spaces that have modern amenities in order for the facility to adapt and respond to the changing needs of the community for the next twenty (20) years. The proposed treatment options also take into consideration cost effective rehabilitation strategies by reorganizing and maximizing the functionality of the existing spaces while conserving those features which contribute to the overall character of the existing building. Additionally, the proposed options include recommendations for the long-term stewardship of the facility which include sustainable design principles and technologies, recommendations for improvements related to universal design principles and ADA accessibility for all patrons, recommendations for improvements to reduce the overall energy consumption of the facility, and recommendations on the life-expectancy of existing equipment, fixtures and finishes.

Included at the end of each treatment option are color coded rehabilitation plans for reference. These plans were developed in collaboration with the Design Team and the Merriam Parks and Recreation Director and Staff based on ideas generated through conversations, as well as tours of other community centers. Tours of regional community center facilities were conducted in order to gain an understanding of what amenities these facilities have, how each space functions, and their target demographics and to discuss strategies for how the Irene B. French Community Center can complement these services and not duplicate amenities already offered in the Merriam facility. The proposed treatment option plans are purely conceptual showing general organization and volume of spaces in order to start visualizing how the community center could function differently after a rehabilitation. These plans were used as the basis for the cost estimates addressing the different treatment options with the intent to indicate a general magnitude of cost. Once a treatment direction is chosen, these plans and costs can be modified during future design phases to include more detail as the final program for the facility is further developed.

It is recommended that all future design and rehabilitation work be performed by qualified design professionals and contractors. Architects, engineers, interior designers and other specialized consultants should be retained who have experience with existing building rehabilitations and community centers. All professionals and contractors should be evaluated through a Request for Qualifications process in order to

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evaluate their record of past performance on similar structures in order to understand their approach for the work they will be hired to perform.

Treatment Recommendations and Options

The following treatment recommendations and potential rehabilitation options are broken down into three distinct treatment approaches. The first approach is to rehabilitate the existing community center building and site to accommodate larger multi-functional spaces, reorganize existing spaces for greater efficiency and functionality and to improve the building's existing infrastructure (HVAC, electrical, plumbing, telecommunications and site utilities) for the long-term care and use of the facility.

The second treatment approach is to rehabilitate the existing 1911, 1938 and 1989-90 portions of the community center building, demolish a large portion of the 1951 addition and to construct a new larger building addition. The 1951 portion of the existing building has had a well-documented history of problems which is detailed in Volume I of this study. The new addition is proposed to be located where the 1951 portion was removed and connect to the main entry of the facility. This new space includes community center functions currently missing from the building including a multi-purpose full size gymnasium, modern ADA compliant locker rooms, family locker rooms, sensible public circulation and convertible fitness spaces for a variety of aerobic exercise classes and equipment. Similar to the first treatment approach, the portions of the existing facility will be rehabilitated to accommodate larger multi-

functional spaces, by reorganizing existing spaces for greater efficiency and functionality and improving the building's infrastructure with new HVAC, electrical, plumbing, telecommunications and site utilities for the long-term care and use of the facility.

The third treatment approach was developed as a means to compare the potential rehabilitation cost of the existing building with cost implications of building a new ground-up community center. A conceptual program for a new facility was based upon collaboration between the Merriam Parks and Recreation Director and Staff with the Design Team. General building volume and square footages are estimated based on the conceptual program and the overall square footages of the current community center. Schematic treatment plans were not developed for this option and thus, cost estimates were generated based upon general building square footage, preliminary material suggestions and other past examples of this type of construction within the region. If this option is chosen as the final direction for the community center, the existing Irene B. French Community Center facility could be available for potential adaptive re-use or be available for sell.

Based upon the three treatment approaches outlined above, treatment options were developed and rehabilitation recommendations were phased to focus upon the urgency of rehabilitation needed: Immediate (0-2 years), Intermediate (2-5 years), Short-Term (5-10 years) and Long-Term (10-20 years). Intermediate **Option A** includes the rehabilitation of the existing facility and Intermediate **Option B** includes the rehabilitation of the existing facility,

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the partial demolition of the 1951 building and a new addition. **Option C** is a separate cost based upon a conceptual program of spaces and gross square footage for a new community center facility on a site yet to be determined.

The rehabilitation treatment options for the existing facility (Options A and B) can be phased so that the rehabilitation construction work can be performed while allowing the facility to remain open during construction.

There are several alternative parking lot improvement options for the existing facility which have been itemized separately. Once a preferred option is determined, the values in the cost estimate total will require adjustment to reflect the comprehensive rehabilitation total.

At the end of the treatment options is an overview of the cost estimates for each of the proposed options. The detailed cost estimates for each of the options are included at the end of this volume of the report in the Appendix.

Due to the conceptual nature of the treatment options, the following list contains assumptions and basis of design materials and fixtures that the Design Team made regarding the future rehabilitation of the building's infrastructure, including its exterior and interior. This list was utilized by the professional cost estimator from the Design Team in order to assist with the production of a more accurate cost range for any potential future work.

- Assume ALL new interior walls to be metal studs with gypsum board, painted.
- Assume ALL new carpeting will be broadloom.
- Assume ALL new ceilings will be a higher grade acoustic ceiling tile.
- Assume ALL hard surface flooring will be poured epoxy terrazzo or terrazzo tile.
- Assume ALL new doors will be solid particle core oak wood veneer doors and painted hollow metal frames with brushed stainless steel hardware.
- Assume ALL casework is plastic laminate, unless otherwise specified.
- Assume ALL countertops are Corian or another similar solid surface.
- Assume ALL plumbing fixtures to be vitreous china with heavy duty chair carriers and dual 1.1/1.6 GPF flush valves with automatic controls.
- Assume ALL sinks are vitreous china top-mounted lavatories with automatic faucets in all restrooms and lever handles in the locker rooms. All sinks shall have ADA compliant fittings and fixtures.
- Assume ALL shower heads are Powers (or equal) pressure balanced, anti-scald devices.
- Assume ALL plumbing faucets to be automatic hard wired.
- Assume bath accessories are hard wired automatic hand dryer, automatic paper towel dispenser, automatic soap dispenser, toilet paper dispenser, recessed trash can and mirrors.
- Assume ALL new light fixtures will be LED.
- Assume all fixtures, furniture, and equipment to be by Owner, unless allowance specified.

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CIVIL TREATMENT RECOMMENDATIONS DETAILED SUMMARY

ADA Accessibility

At the request of the Merriam Community Director, Anna Slocum, SK Design Group (SKD) included an analysis of an accessibility route from Merriam Drive to the Irene B. French Community Center in order to gain an ADA accessible route for pedestrians to use during Farmer's Market events. The idea being that the increased activity can be utilized to coordinate Merriam Community Center events simultaneously. It was found that the existing concrete walk from Merriam Drive exceeded the maximum allowable grade to be considered an ADA accessible route. Moreover, portions of the concrete paver path have a cross slope that exceeds the maximum allowable slope of 2.0%. Therefore, a proposed accessible route was designed as depicted in Exhibit 3.

The onsite ADA accessible route, as it pertains to handicap parking stalls and access to the main entry, was designed in conjunction with the Merriam Drive route in order to utilize the same pedestrian circulation path.

Asphalt Paving

Due to a visual inspection of the asphaltic paving SKD was unable to fully assess the full depth construction of the paving, including the base course, in order to determine if the paving is suitable for its intended use. Core samples would be needed to perform the full depth analysis. However, the visual inspection indicates that the paving is in relatively good condition. Due to the

parking lot paving having been milled and overlaid in the summer of 2014, recommended repairs are limited to crack repair/maintenance. In the short term, SKD recommends to perform full depth crack repair on any of the existing cracks to prevent further damage to the sub-surface. Every 3 to 5 years, additional crack repair should be performed followed with proposed installation of a seal coat as a part of the maintenance schedule.

Site Drainage

Currently there are several different key elements affecting site drainage including: roof runoff directed to downspouts, surface draining on the property, parking lot drainage directed toward the catch basins, and foundation drainage.

The parking lot drainage appears to be effective whereas there is little to no evidence to show that water is not being properly directed toward the installed storm drain inlets.

The termination of the downspouts are inconsistent, with most surface drainage directed across the existing ground surface or the concrete walkways. There are existing trench drains within the concrete walkways, located on the east side of the building, covered by metal plates which are not currently being utilized and are mostly filled with leaves. It is recommended that all downspouts be connected to a sub-surface drain and terminated at one of the existing storm drain catch basins to avoid water having any potential to enter into the foundation or to create patches of ice on the walkways during the winter months. A proposed roof drain plan is depicted on Exhibit 6.

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Surface drainage away from the building is not currently being effectively achieved due to the build-up of landscaping material around the perimeter of the building. Over time, the landscaping has increased and created a condition where the ground has become level with the existing window wells or in many instances, above them. Additionally, the overgrowth and raised areas have created a level surface or even reverse grade toward the building, resulting in water not being properly directed away from the building. The deteriorated state of the window wells has contributed to this infiltration, as well. It is recommended to remove any built-up landscaping and provide positive grade away from the building.

Due to the community center's proximity to the flood zone and the utilization of multiple sump pumps, it is apparent that sub-surface water is a considerable issue on the site. In order to establish a more permanent solution, SKD recommends that foundation drainage be installed around the perimeter of the foundation as outlined on Exhibit 6.

Concrete Curbs

The concrete curbs show signs of damage from typical wear due to their age as well as isolated impact damage. At this time monitoring of the concrete curbs is recommended with portions being repaired/replaced, as needed. It is estimated that the existing curbs can be retained for another 15-20 years, if properly maintained.

Walkways

The concrete walkways are in fair condition with areas at the east side of the building showing increased signs of degradation. It is evident that isolated panels of sidewalk have been replaced in

the past. A system that continues the monitoring of the concrete walkways should be implemented as part of the maintenance assessment and that concrete panels be replaced as needed when elevation differences of 1/4" occur, in order to avoid tripping hazards.

Isolated portions of the concrete pavers show excessive settlement. These areas should be removed and the base be properly compacted in order to correct these settlement issues. Transitions between concrete walkways should result in no more than 1/4" vertical elevation difference. It is recommended that areas not meeting this specification be removed and re-installed upon a properly compacted sub-base.

Domestic Fire and Protection Lines

Inquiries were made to the water utility company, Water One, in order to gather information on the specifics of current requirements regarding the domestic water service and fire suppression supply line. As for the domestic water service line, a backflow preventer is required at the entry point into the building prior to distribution to the fixtures or equipment followed by a pressure reducing device, and ultimately a backflow preventer on the branch line servicing the irrigation system. The fire suppression line, per Water One, requires a double check backflow preventer at the entry point of the building before distribution to the fire suppression system. It was discovered through investigations that all of the requirements have been successfully implemented except for the installation of the backflow preventer on the domestic water service line. It is recommended that an approved backflow preventer be installed on the domestic

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water service to meet current requirements of Water One for the City utilities.

Storm Drain Piping and Catch Basins

A visual inspection of the storm drain catch basins as well as a video inspection, indicate that the basins are partially filled with leaves, dirt and debris. A maintenance program should be implemented to ensure that the basins are kept clear of any foreign or organic material in order to ensure full functionality of the system. A yearly inspection and cleaning of the system, preferably in the fall after the majority of the leaves have fallen, would be sufficient.

The video inspection indicated that a portion of the southern storm piping has an offset where the pipe has become slightly disconnected at a joint. This condition is typical of the installed pipe, reinforced concrete pipe (RCP). Due to the offset occurring within a grassy area of the property, the offset is not considered a critical issue. The area should be monitored for settlement which would indicate soil migration into the offset which may require further investigation and repair.

Sanitary Sewer (outside of the building)

A video inspection was performed on the sanitary sewer outside of the footprint of the building. Contrary to the 1989 renovation documents and Johnson County Wastewater as-builts showing that the main line runs directly to Kessler Lane from the east side of the building, it was determined that the main line sewer wraps around the building (coming from the west) as represented on Exhibit 7. The main line transitions from ABS (acrylonitrile butadiene styrene) pipe to clay pipe throughout its entire

length. The video shows evidence of previous repairs, as well as existing root problems within the main line. It is recommended that any damaged sections (as depicted during the video inspection) be repaired followed by lining of the entire pipe with Insituform.

It is understood that due to the recommended interior plumbing modifications, the grease interceptor would no longer be necessary. This coupled with evidence from the video inspection that the grease interceptor was installed too low, resulting in the system holding water, is reason enough to remove and replace the interceptor with the new sewer pipe.

Traffic Circulation

During the assessment, it was observed that patrons were driving through the north parking lot, travelling the wrong direction down one-way lanes of travel on several occasions. The north parking appears to be designed to maximize parking, although the current layout is confusing to patrons. Two options for redesign of the northern parking lot were generated in order to promote a natural flow of traffic from the entry, in and around the northern parking lot. Option 1 (Exhibit 4) is the least intrusive with the majority of the work consisting of restriping the parking stalls and the reconfiguration of the two existing islands, effectively reversing the direction of travel. Option 2 (Exhibit 5) is more intrusive which includes the work as a part of Option 1, as well as relocation of the entry/exit from 57th Street and closure of the one-way exit from Kessler Lane. Both options result in a reduced number of parking stalls.

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MECHANICAL, ELECTRICAL AND PLUMBING TREATMENT RECOMMENDATIONS

The treatment recommendation for the basis of design mechanical systems are similar to the current 4-pipe chilled and heating water system with heating and cooling fan coil units (FCU's) providing the majority of conditioning of the building as is and in Options A and B. The base systems were chosen due to several reasons, including Owner familiarity with the systems, relative robustness and longevity as compared to roof top units, easy reconfiguration and expansion and relative ease of installation in tighter ceiling plenums as compared to large ducted air handling units.

Chilled water will be produced in Options A, B and B1 by an energy efficient air cooled chiller similar to the current chiller with the exception that the chiller barrel will be located indoors so the chilled water piping will not need to be installed outdoors. This will eliminate the need of glycol in the system for freeze protection which increases system pressure loss and decreases heat transfer. This will provide a more efficient system than the current chiller. The current chilled water pumping system is a constant flow system. A variable primary pumping system will be provided under Options A, B and B1 that will reduce overall pumping costs.

Heating water will be produced by high efficiency gas-fired condensing boilers, similar to the current boilers installed in 2011. In fact, those boilers will remain in use in Option A unless required by the State boiler inspector to be classified for

commercial use, as they are currently classified as residential boilers. These boilers will be replaced in Options B and B1 due to new location of the main mechanical room, as well as the fact that they are not commercial boilers.

New 4 pipe heating and cooling fan coil units will be utilized in Options A and B except for the new Jenks Conference Center and the addition under Option B. Due to the size of the Jenks Conference Center and the need for the sub-zoning of the space, the use of FCU's or the existing single zone rooftop unit will not be adequate. An indoor variable volume multi-zone air handling unit with an economizer, and chilled and heating water coils, is being proposed to serve the Jenks Conference Center under Options A and B and is to be located in the existing stage area. The economizer will provide ventilation and pressurization air for the space and will allow for free cooling during mild times of the year. The variable air flow will allow for diversification of loads and will reduce fan energy use.

A similar, but roof mounted, multi-zone air handling unit, is being proposed to serve the new Fitness and Aerobics center proposed in Option B. A service vestibule will be provided, integral to the unit, to allow service of the unit during inclement weather. Also under Option B, a similar but single zone, variable volume roof mounted air handling unit with service vestibule is proposed to serve the new Gymnasium.

The current building has no ventilation for human occupation or pressurization. Under Options A and B, self-contained, roof mounted dedicated

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outside air system (DOAS) units will be provided to introduce ventilation and pressurization air to the areas served by the fan coil units. These units will have total energy recovery wheels to transfer energy from the locker rooms and restrooms exhaust systems.

Under Option B1, the areas in Option B that are conditioned by FCU's and the DOAS units, will be served by variable volume air handling units with variable air volume (VAV) box terminal units with heating coils. The air handling units will have economizers and chilled water and heating coils. One unit will serve the 1911 building spaces and will be located on the roof of that building. The other unit will be utilized in lieu of the multi-zone unit serving the Jenks Conference Center and will serve the entire 1938 building. The units serving the Option B addition will remain as is. This Option is being proposed as it is a more robust system than fan coil units and provides for more centralized maintenance. With fan coil units, there are multiple units spread throughout the building that need filters to be changed and motors, coils and control valves at each FCU to be maintained, along with the DOAS units maintenance. With the Option B1, air handling units there are centralized air handling units to service along with the VAV boxes that only require coil, control valve and damper maintenance and do not have filters to replace. One drawback to the air handling units is that since they are centralized, and do require larger ductwork which can be an issue in a historic building with low floor to floor ceiling heights.

A variable refrigerant flow system (VRF) was considered for this building but with large areas requiring air handling units such as the Jenks Conference Center and the new Fitness and Aerobics Center and the Gymnasium, this system did not lend itself well to efficient design, appropriate for the building configuration.

TREATMENT RECOMMENDATIONS

Immediate Recommendations: (0-2 years, by individual discipline)

This work will need to be performed regardless of the final treatment option chosen.

CIVIL

1. Remove excess mulch/dirt from around base of the building, re-grade to drain away from the building.
2. Install upgrades for ADA Site Improvements.
 - Remove 17 lineal feet of curb and construct flush curb with transitions and integral detectible warning elements.
 - Remove 12 square yards of concrete walk and install new concrete ramps.
 - Remove and replace 12 lineal feet of curb and install new concrete curbs.
 - Remove and replace 41 square yards of concrete sidewalk.
 - Re-stripe asphalt parking lot to include a total of 5 handicap accessible stalls per ADA parking stall requirements.
3. Remove outdoor shower and piping in its entirety.
 - Install concrete patch where piping was removed through the concrete slab.
4. Install new sidewalk expansion sealant joint at building/sidewalk connection along south elevation above Mechanical 013B.
 - Assume: 10 linear feet of concrete epoxy crack injection repairs.
 - Assume: Removing 4" topping slab (same dimension as the room), infilling three man-holes and installing a new concrete topping slab, waterproofing and expansion sealant joint.
5. Clean out exterior storm sewer lines/drains.
6. Clean out debris from exterior window wells and secure metal grates. Review on an annual basis.

ARCHITECTURAL

1. Stair No. 2 - Install new infill panel behind guardrail at second floor landing and install additional new LED wall sconces.
 - Assume: 4 sconces.

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2. Install new metal handrail extension and return to Stair No. 3 (one (1) location at the first floor stair landing)
3. Install new door hardware on main entrance doors.
 - Door pulls, locks, ADA push button actuator, closers, sweeps, gaskets and weatherstripping.
 - Assume 6 pairs of doors:
 - Two (2) sets of doors at east entrance.
 - One (1) set of doors at northeast entrance.
 - Two (2) sets of doors at west entrances.
 - One (1) set of doors at south entrance.
4. Correct roof drainage system.
 - Enlarge scupper through masonry wall.
 - Two (2) locations on East wall of 1911 building.
 - One (1) location on east elevation of 1938 addition.
 - One (1) location on north elevation of 1938 addition.
 - Install new larger prefinished metal conductor heads and downspouts to grade. Downspouts are to tie in to recommended subsurface drainage system.
 - Install new downspouts at 1951 addition canopies in two (2) locations.
5. Install new hybrid silicone sealants around ALL existing windows and doors.
 - Refer to attached plans with typical exterior wall assemblies and window sizes.
6. Install new exterior building control joint at 1989-90 building connection to 1911 construction.
 - Assume silicone sealant with custom exterior metal cover to protect sealant from UV deterioration.
7. Concrete epoxy crack injection repair at south concrete canopy and minor concrete patching.
 - Assume: 5 linear feet of crack injection and 5 square feet of patching.
8. Repoint chimneys 100 percent and replace parapet cap with pre-finished metal cap with vents.
 - Assume: Two (2) brick chimneys 3'x3'x5'.

TREATMENT RECOMMENDATIONS

MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION

1. Code compliant Elevator Upgrades to be integrated.
 - Correct concrete hoistway water infiltration (epoxy crack injection, sealants and waterproofing).
 - Clean out elevator drain.
 - Install oil minder sump pump.
 - Install elevator phone/intercom and connect for emergency assistance in the elevator cab.
 - Reroute 9 feet of chilled water line piping out of the Elevator Machine Room 020B in order to eliminate code violation issues.
 - Install relief vent with motorized louver at top of hoistway (in the event that the building remains as not being fully sprinklered).
 - Install sloped concrete topping slab to ensure the bottom of the hoistway drains properly.
 - Remove existing corrosion on hoistway steel rails and supports, prime and repaint.

2. Sump Pump Upgrades and On-going Maintenance.
 - Determine source panels and associated branch circuits of all exterior sump pumps.
 - Install local weather rated disconnecting means for exterior sump pumps per building code.
 - Install GFI circuit breakers and/or receptacles for exterior sump pumps
 - Assume: Quantity of twelve (12).
 - Connect all exterior and interior sump pumps to drains.
 - Repair sumps to working condition.
 - Install new vented sump pump covers on all interior sump pumps.
 - Abandon and infill sump pits that are not required for proper building drainage.

3. Chilled and hot water chemical treatment.
 - Connect chilled and hot water chemical treatment system to prevent further deterioration of valves and piping.

4. Install glycol system for chiller.
 - To allow chiller to be used year-round, glycol prevents the need to winterize the system.

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5. Install fire dampers to ductwork at floor and at all fire wall penetrations.
 - Assume: Six (6) new dampers.
 - One (1) fire damper in 1951 exhaust riser.
 - One (1) at each mezzanine and second floor.
 - Two (2) exhaust risers in 1911 building.
6. Fire caulk floor and fire wall piping penetrations.
 - Assume: 20 linear feet of sealant.
7. Add Emergency Stop push button to basement entrance door at Mechanical 013A.
8. Cap leaking abandoned control valve in Campbell Room 015.
9. Insulate chilled water pump in Mechanical 020A.
10. Remove transfer grilles if no known use in Fitness 123 and patch gypsum board.
 - Two (2) grilles, 12"x12" size.
11. Install two (2) backflow preventers.
 - One on chilled water make-up water system.
 - One on domestic water service as it enters the building per Water Service Department guidelines and building code.
12. Repair existing locker room exhaust system in both Men's and Women's Locker Rooms to function and exhaust correctly.
 - Replace if unable to repair.
13. Replace FCU, controls and valves in Merriam Park 116.
 - Assume: One (1) FCU and two (2) valves.
14. Replace sewage ejector pump and piping.
 - Demolish existing gypsum board soffit in Campbell Room 015.
 - Demolish existing sewage ejector pump check valves and piping.
 - Determine source of back up on inlet to sewage ejector and replace underslab piping to sewage ejectors.
 - Replace and reroute sewage ejector discharge piping (4" GI piping with grooved fittings, approximately 50').

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- Replace and reroute 2” diameter sewage ejector vent piping directly to the roof (approximately 20’).
 - Install new sewage ejector pumps and check valves.
 - Install new painted gypsum board soffit in Campbell Room 015.
 - Reconnect piping to sanitary sewer.
 - Clean sanitary piping.
15. Install battery backups at each sump pump to run existing sump pumps during power outages and minimize potential for flooding in the Basement.
16. Install pipe insulation where missing for domestic cold, hot and hot circulating piping.
- Assume 20 linear feet of pipe insulation.
17. Remove Storage 005 baseboard heater and associated piping and replace.
18. Install ADA trap and supply guards at all existing sinks with exposed piping to prevent potential for burns.
19. Remove fire sprinkler auxiliary drain direct connection to sump pump cover and connect to sewer.
20. Replace broken vent piping in M020A.
21. Replace pitted waste piping above Maintenance 010.
22. Replace galvanized iron piping in 1951 First Floor plumbing shaft.
23. Install new backflow preventer on water service.
24. Replace cleanout piping in 1951 addition drinking fountain waste riser.
25. Replace finned tube radiator in Office 126.
26. Remove and install new emergency egress light fixtures.
- Replace all emergency egress light fixtures that are older than 10 years.
 - Assume: Fifteen (15) fixtures.
 - Install new emergency egress light fixtures where require by building code including above every exterior emergency egress door.

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- Assume: Six (6) total fixtures.
27. Install additional exit signs per building code.
 - Assume: Five (5) total fixtures.
 28. Install new GFCI outlets for drinking fountains, assume quantity of three (3).
 29. Install new GFCI outlets in Locker Rooms and Restrooms, assume quantity of ten (10).
 30. Install new GFCI outlets in Kitchen, assume quantity of fifteen (15).
 31. Install CO2 Sensors in Gymnasium and Fitness/Aerobics Room(s) and in all rooms on the Second Floor.
 32. Replace 1951 addition drinking fountain waste riser cleanout.

TELECOMMUNICATIONS

1. Install new security system for entire building.
 - Basis of design: intrusion alarm system with door contacts, motion sensors, key card access and control, remote monitoring, two cameras and panic button at control desk. Install security cameras, devices, cabling and connections.
2. Telephone Service Improvements.
 - Disconnect underground telephone utility service 100 pair cable from demarcation telephone backboard location.
 - Reroute exposed portion of telephone service 100 pair cable to underground through basement wall penetration.
 - Reconnect telephone service 100 pair cable to demarcation telephone backboard location.
 - Seal wall penetrations at both ends of telephone service conduit.
3. Cable TV service improvements.
 - Provide protection for existing materials and finishes during rehabilitation work.
 - Reroute or replace two (2) exposed above grade exterior cables serving cable TV to interior spaces.

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- Re-route fiber optic cable for cable TV to different, concealed location and provide watertight installation.
- If TV cable is installed through the roof, it must be installed through an approved roof penetration by the roofing manufacturer.
- Intercept, extend and reconnect two (2) rerouted cables serving interior spaces, coordinate with Cable TV provider.

MAINTENANCE (not included in cost estimate, work to be performed over the next two years)

1. Civil: Fill cracks in asphalt paving in order to prevent water entering asphalt.
2. Civil: Route downspouts to underground storm drain.
3. Clean Storage 016B and the equipment.
4. Install occupancy sensors for lighting in all rooms (Basement, First and Second Floors).
 - Add additional ceiling mounted occupancy sensors in restrooms and locker rooms.
5. Inspect and take physical piping samples for visual inspection of corrosion and scaling.
 - Will require brief system interruption and replacement of removed section of piping.
 - Recommend taking two (2) samples each for chilled water, heating water, domestic cold and domestic hot water piping for analysis prior to the next building rehabilitation construction project.
6. Reattach disconnected diffuser in Reception 125.
7. Install new FCU for Office 133E and Janitor 132.
8. Remove suspect mold from basement walls, restore or replace drywall and paint.
9. Determine source of natural gas smell in Maintenance 010 and provide proper ventilation.
10. Install Proset trap guard to Corridor 014B floor drains.

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11. Remove flammable/chemicals from Storage 019 and 011 and move to ventilated space.
12. Clean janitor's sink in Janitor Closet 132 and 133K and reinstall grates. Caulk Janitor 133K sink.
13. Label all piping in the building to trace supply and return, as well as active lines versus abandoned piping that can be removed.
14. Trace feeders to accurately label all panels and provide an updated circuit schedule on Panel MDP.
15. Trace and correct all branch circuits and breaker connections for compliance with building code throughout the building. Remove abandoned feeder and branch conduit and wiring.
16. Consider replacing existing cloth insulated feeder conductors and branch circuit conductors within the facility (will be undertaken during subsequent rehabilitation options). There is a concern with potential fire hazards if wires are not replaced.
17. Provide and maintain working clearance at Panel 'G'. Maintain minimally 30" x 48" clear floor area in front of panel.
18. Label dimmer system switches on Second Floor.
19. Retrofit all existing light fixtures which have not been changed from T12 to T8 light bulbs.
20. Retrofit all existing incandescent light bulbs with comparable compact fluorescent or LED light bulbs.
21. Determine source panels and associated branch circuits for all exterior sump pumps.
22. Repair existing exterior building wall mounted light fixtures to working condition.
23. Remove child protective plastic inserts in all duplex receptacles.
 - If child protection is required, replace duplex receptacles with tamper-proof duplex receptacles.

TREATMENT RECOMMENDATIONS

24. Install covers on all open outlets, junction boxes and wireway locations.
25. Replace existing condensate drain piping and reconnect per building code. This situation occurs in two (2) locations.

TREATMENT RECOMMENDATIONS

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Immediate Actions Required			
Demo Walks	594 SF	1.00	594
Demo Curb & Gutter	29 LF	1.50	44
New Walks	594 SF	6.00	3,564
New Curb & Gutter	29 LF	20.00	580
Restripe Parking Lot	109 EA	25.00	2,725
Demo Outdoor Shower and Patch as needed	1 EA	500.00	500
Demo Topping Slab @ Old Coal Room	338 SF	5.00	1,688
Water Proofing @ Old Coal Room Lid	338 SF	8.00	2,701
New Topping	338 SF	10.00	3,376
Clean Out Storm Lines	1 LS	1,500.00	1,500
Clean Out Window Wells	1 LS	750.00	750
Install Infill Panel @ Guardrail	1 EA	150.00	150
New LED Wall Sconces	4 EA	500.00	2,000
Install Handrail Extensions	1 EA	100.00	100
Install New Hardware on Entry Doors	4 PR	2,000.00	8,000
Enlarge Scupper	3 EA	250.00	750
New Metal Conductor and Downspouts/Splash bl	5 EA	200.00	1,000
Install Sealant @ All windows	39 EA	125.00	4,875
Install New Building Control Joint	45 LF	50.00	2,250
Patch South Canopy	1 LS	500.00	500
Repoint Chimneys and Install New Cap	2 EA	2,500.00	5,000
Elevator Upgrades	1 EA	10,000.00	10,000
Upgrade Sum Pump	1 EA	3,500.00	3,500
Chemical Treat Chilled and Hot Water	1 LS	7,500.00	7,500
Install Glycol for Chiller	1 LS	6,500.00	6,500
Install Fire Dampers	6 EA	500.00	3,000
Fire Caulk	20 LF	10.00	200
Add Emergency Stop Button	1 EA	1,500.00	1,500
Cap leaking Abandoned Control Valve	1 EA	75.00	75
Insulate Chilled Water Pump	1 EA	150.00	150
Remove Transfer Grilles and Patch	2 EA	150.00	300
Install BFP	2 EA	3,000.00	6,000
Repair Exhaust System	1 EA	1,500.00	1,500
Replace FCU and Valves	1 EA	6,500.00	6,500
Replace Sewage Ejector and Piping	1 EA	15,000.00	15,000
Install Battery Backup at Sumps	3 EA	250.00	750
Install Pipe Insulation	20 LF	2.00	40
Replace Baseboard Heater	1 EA	3,500.00	3,500
Install ADA Trap and Supply Guards	10 EA	150.00	1,500
Rework Fire Sprinkler Drain	1 EA	500.00	500
Replace Broken Vent Piping	1 EA	65.00	65
Replace Waste Piping	1 EA	125.00	125
Replace Piping @ Drinking Fountain	1 EA	200.00	200
Install BFP on Water Service	1 EA	2,500.00	2,500
Replace Finned tube Radiator	1 EA	1,500.00	1,500
Install Emergency Egress Lighting	26 EA	350.00	9,100
Install New GFIC Outlet	28 EA	150.00	4,200
Install CO2 Sensor	1 EA	500.00	500
New Security System for Entire Building	31,983 SF	4.00	127,933
Rework Telephone Entrance	1 EA	1,250.00	1,250
Rework Cable TV Entrance	1 EA	1,250.00	1,250
			0
General Requirements	1 LS	31,114.18	31,114
	subtotal		290,399
	Contractor's Fee	6%	17,424
	subtotal		307,823
	Design/Estimate Contingency	15%	46,173
	subtotal		353,996
	Escalation to Mid-Point - 01/30/2017	5.3%	18,756
	TOTAL		372,753

TREATMENT RECOMMENDATIONS

Intermediate Recommendations: (2-5 years)

OPTION A – Rehabilitation of Existing Building

CIVIL

1. Re-grade around entire building and install foundation French drains.
 - Install new continuous French drain around entire perimeter of the building and connect to existing storm water system.
 - Install new landscaping to replace areas disturbed.
 - Basis of Design: 1000 square feet of grass.
 - Basis of Design: 5 trees.
 - Basis of Design: 30 lineal feet of shrubs.
2. Replace broken and disconnected section of pipes in southwest corner of building below grade. Restore landscape / sod as required.
3. Base Option – Rework existing parking lot layout.
 - Restripe existing parking lot.
 - Revise two (2) concrete island with new landscaping with grass and trees.
 - Install new parking lot entrance signage.
 - Basis of Design: two (2) new metal and limestone 4' tall signs with stainless steel letters and LED ground lighting.
4. Alternate Option – New parking lot layout.
 - Restripe existing parking lot.
 - Install new asphalt for north parking lot.
 - Revise two (2) concrete islands with new landscaping including grass and trees.
 - Infill existing entrance drives, one off of W 57th street and the other off of Kessler Lane (concrete and grass).
 - Install new double concrete drive off of W 57th Street.
 - Install new concrete circle drive island for improved circulation at entrance.
 - Install new LED parking lot lighting.
 - Install new parking lot entrance signage.
 - Assume two (2) new metal and limestone 4' tall signs with stainless steel letters and LED ground lighting.

TREATMENT RECOMMENDATIONS

5. ADA Walk to Farmer's Market
 - Remove existing concrete walk and pavers and install 130 square yards of concrete walk for new ADA accessible path. Restore disturbed landscaped areas and install new plant materials where sidewalk is relocated.
 - Remove and replace 13 square yards of concrete walk at southeast side of building to provide ADA accessible route with detectible warning surface.
6. Install new LED lighted bollards and landscape lighting.
 - Basis of Design: fifteen (15) LED lighted metal bollards.
7. Install new landscaping around North, East and South elevations of the building and at parking.
 - Basis of Design: Quantity of ten (10) new ornamental trees.
 - Basis of Design: 70 lineal feet of shrubs.
 - Basis of Design: 300 square feet of perennials.
 - Basis of Design: 500 square feet of new grass.
 - Basis of Design: \$20,000 allowance for entry sculpture.
8. Install new concrete sidewalk sealants at east and north elevation sidewalks.
 - Basis of Design: 70 lineal feet.
9. Replace existing 2" diameter water service with new 2 1/2" diameter water service with new water meter, backflow preventer and three valve bypass and pressure regulating valve.
10. Reconnect existing 2" diameter. Reduced Pressure Zone backflow preventer for the irrigation system.

ARCHITECTURAL

1. Hazardous Materials Removal
 - *Abatement should be completed by a qualified company contracted directly with the Owner prior to the start of any rehabilitation project. This can be completed in phases if necessary and only focus on areas under construction. Costs will be higher for the abatement if the company is required to mobilize multiple times.*
 - *See attached cost proposal for removal of materials.*
2. Renovate existing building entry and add new building canopy.

TREATMENT RECOMMENDATIONS

- Install new steel framed structure with galvanized metal roof deck and standing seam roofing. Brick/stone wainscot and column bases, pre-finished metal panel veneer, rigid insulation and painted gypsum board walls and ceilings.
 - New concrete foundation (grade beams on piers) with slab-on-grade floor and integration with new canopy structure.
 - Install new dark bronze anodized aluminum storefront and automatic sliding doors at entrance and vestibule with associated hardware for egress, integral aluminum walk-off mat system extending to the elevator, new lighting, new brushed stainless steel pinned entrance lettering.
3. Remove existing exterior concrete and brick canopy and cast-in-place concrete ramp and stair from east side of 1951 building.
- Install new ADA compliant concrete ramp and new exterior door in existing opening. Install brick in former stair opening.
4. Install new building wide signage for wayfinding and individual room signage.
- Assume acrylic with wood and aluminum accents and window for printed room names. 3D braille and characters per ADA and building code requirements for permanent room locations (mechanical, restrooms, etc.).
5. Rehabilitate Basement into Community Room and Game Room (living room concept) and upgrade interior finishes of main corridors.
- Selective demolition of existing walls, flooring and acoustic ceiling tile.
 - Demolish existing mop sink and sump pump from former storage room.
 - Install new gypsum board walls, patch existing gypsum board walls, patch existing concrete floor, paint, new carpeting, new rubber base, new acoustic ceiling tile, new dimmable lighting, new electrical and telecom hook-ups, new HVAC. Install new doors, frames and hardware at adjacent corridor access doors.
 - Provide allowance for furniture, A/V and equipment: \$20,000.
 - Install new removable vinyl graphic signage two walls.
 - Basis of Design: (2) 8'x10' graphics – Allowance \$2,000.
6. Renovate basement existing Restrooms (Men's 012B and Women's 012A).
- Demolition of existing plumbing fixtures, bath accessories and interior finishes, remove and salvage toilet partitions for reinstallation.
 - Select demolition of one side of north wall in Women's restroom for installation of sound insulation. Install gypsum board and paint.

TREATMENT RECOMMENDATIONS

- Install fiberglass batt insulation between restroom walls and between restrooms and adjacent spaces.
 - Install new low-flow dual flush automatic toilets and faucets, new porcelain toilets and sinks, new countertops, domestic water piping, new bath accessories and ADA grab bars, re-install existing toilet partitions, new ceramic tile on wet wall only, paint all existing gypsum board walls, new rubber base, new terrazzo floor, new acoustic ceiling tile, new lighting, new HVAC.
7. Renovate basement existing Campbell Room 015.
- Demolition of existing casework, vanity sink, drinking fountain, ceiling fans.
 - Demolition of portions of existing load bearing CMU corridor wall.
 - Shore existing floor framing above and install new steel headers over new openings.
 - Install new plastic laminate casework with art drying racks and enclosed storage, install new stainless steel sink and faucet, install new dual height ADA drinking fountain with chilled water, install new gypsum board walls, patch existing gypsum board walls, patch existing concrete floor, paint, new doors, frames and hardware, new carpeting, new rubber base, new acoustic ceiling tile, new dimmable lighting, new electrical and telecom hook-ups, new HVAC.
 - Install new A/V equipment (overhead retractable projection screen, overhead projector, sound).
8. Repair and/or Replace Basement Concrete and Masonry Window Well Structure.
- Temporary shoring and select demolition of the two (2) southern window wells along the west elevation of the 1951 building and epoxy repair two (2) existing concrete window wells (one on the west and one on the south).
 - Replace with new poured-in-place concrete structure and drainage system.
 - 6" thick walls, assume they are 5' in height.
 - Assume 5 linear feet of crack injection at building wall and lintel.
 - Remove and reset four (4) existing masonry window wells along the north and east side of the 1911 building.
9. Renovate Basement of 1911 Building into Maintenance/Storage Space.
- Repair Fitness Room 004 Exhaust Fan (space to be used for equipment storage).
 - Create new IT room.
 - Repaint all walls, install clear concrete sealer for floors.

TREATMENT RECOMMENDATIONS

- Install new painted gypsum board wall, metal door frame and wood door for revised mechanical space.
- Repair 20 square feet plaster walls on Stair Number 1 (coordinate with hazardous materials abatement for lead base paint remediation).
- Repair damaged concrete floor slab.
 - Assume 20 square feet of concrete floor patch.
- Demolish existing walls to accommodate new plan layout and remove existing boiler, pump, temperature control compressor, air drier, night setback panel and all pneumatic control equipment and associated piping and accessories from Mechanical 008. Install new painted gypsum board wall and door. Repair deteriorated wood panel door to adjacent crawl space.

10. Rehabilitate First Floor 1911 Building into Administration Office Suite.

- Demolish existing interior gypsum board wall partitions, carpeting, rubber base and acoustic ceiling tile.
- Install new full height movable furniture system walls and doors (Assume 10' tall partitions with stacked transoms & drop in ceilings as required for acoustical privacy).
- Install new interior finishes including: plastic laminate casework with solid surface countertop. Install new stainless steel sink and faucet in workroom/break room, patch existing plaster and gypsum board walls, patch existing tongue and groove wood floor, paint, new carpeting, new rubber base, new acoustic ceiling tile, new lighting, new electrical and telecom hook-ups, new HVAC.
- Install new 2x2 architectural direct-indirect LED light fixtures.

11. Rehabilitate First Floor Kitchen and Create New Classroom.

- Demolish existing commercial kitchen hood and exhaust in its entirety.
- Demolish kitchen walk-in refrigerator in its entirety.
- Demolish portion of exterior brick window infill (during next phase, additional verification is needed to confirm structural steel header exists above windows).
- Remove and salvage existing commercial dish washing equipment, cooking equipment, individual freezer/refrigerators, ice maker, movable wire shelving, stainless steel island, washer/dryer and tri-compartment sink.
- Demolish existing exhaust system above existing wash room.
- Install exhaust and heat for Janitor 133K.

TREATMENT RECOMMENDATIONS

- Install new dark bronze anodized aluminum storefront window in exterior opening.
- Install new smaller commercial hood and select kitchen equipment (convection ovens, full height refrigerator, full height freezer, warming drawers, dishwasher, ice machine).
- Install new kitchen exhaust fan and ductwork.
- Install new gypsum board walls and wood veneer solid doors and metal frames for new kitchen, classroom, storage and adjacent restroom walls.
- Install new interior finishes: new plastic laminate casework (6') with solid surface counter top, new stainless steel tri-compartment sink and dual faucet with spray. Patch existing concrete floor and install clear sealer, (kitchen), install new poured epoxy terrazzo flooring (classroom), paint all walls, new doors, frames and hardware, new rubber base, new acoustic ceiling tile, new lighting, new electrical and telecom hook-ups, new HVAC.
- Allowance: \$20,000 for new kitchen equipment.

12. Rehabilitate First Floor Existing Reception, Lobby and Corridors.

- Demolish existing control desk and reception storage room.
- Demolish existing interior finishes (flooring, wallcovering, rubber base, acoustic ceiling tile).
- Remove and salvage donor recognition and plaques, reinstall.
- Create new Mobile Lending Library. Install new painted gypsum board wall, install new rolling/coiling door.
- Install new interior finishes and two (2) new dual height ADA drinking fountains with chilled water; install new gypsum board walls, patch existing gypsum board walls, patch existing concrete floor; paint, new doors, frames and hardware, new rubber base, new acoustic ceiling tile, new lighting, new electrical and telecom hook-ups, new HVAC. Existing gypsum board ceilings to remain.
- Install poured epoxy terrazzo in the Elevator Lobby, Lobby and ALL first floor Corridors, install new rubber base.
- Install new carpet and rubber base in the reception, copy room and lending library.
- Install new tactile rubber stair treads and risers with visible and tactile nosings at stairs in corridor on either side of the gymnasium (west elevation).
- Install new stained and varnished solid wood control desk with metal accents and dual height solid surface countertops.

TREATMENT RECOMMENDATIONS

- Increase connectivity, improve views, create a welcoming environment and provide necessary upgrades per ADA requirements.
13. Rehabilitate First Floor Existing Men's and Women's Locker Rooms to provide ADA upgrades and Add Family Changing Room.
- Demolition of existing plumbing fixtures, bath accessories, toilet partitions, showers, benches, counters, metal lockers.
 - Install gypsum board walls with fiberglass batt insulation between restroom walls and between restrooms and adjacent spaces.
 - Install new low-flow dual flush automatic valves at toilets and automatic faucets, new porcelain toilets and sinks, new countertops, domestic water piping, new bath accessories and ADA grab bars, new toilet partitions, new vented metal lockers, new ceramic tile on wet wall only, new burnished CMU block shower stall partitions with translucent shower doors, paint all existing gypsum board walls, new rubber base, new poured epoxy terrazzo floor, new wood veneer solid doors and hollow metal frames, new acoustic ceiling tile, new lighting, new HVAC.
14. Rehabilitate First Floor Existing Restrooms (Men's 102, Women's 113, Men's 130 and Women's 131) and Add Family Restroom.
- Demolition of existing plumbing fixtures, bath accessories and interior finishes, remove and salvage toilet partitions for reinstallation.
 - Install gypsum board walls with fiberglass batt insulation between restroom walls and between restrooms and adjacent spaces.
 - Install new low-flow dual flush automatic toilets and faucets, new porcelain toilets and sinks, new countertops, domestic water piping, new bath accessories and ADA grab bars, re-install existing toilet partitions, new ceramic tile on wet wall only, paint all existing gypsum board walls, new rubber base, new terrazzo floor, new wood veneer solid door and hollow metal frame, new acoustic ceiling tile, new lighting, new HVAC.
15. Install new sink in Janitor's Rooms 133K and 132 - two (2) total sinks.
16. Rehabilitate Merriam Park Room.
- Demolish existing lockers in their entirety, install new drywall.
 - Remove and reinstall ballet bar.
 - Refinish wood floor.
 - Install new closet gypsum board walls and double door.

TREATMENT RECOMMENDATIONS

- Install new acoustic ceiling tile, paint all gypsum board walls, paint hollow metal door frame, install new rubber base.

17. Rehabilitate First Floor Hocker Grove 128 and adjacent closet spaces.

- Demolish existing plastic laminate casework, stainless steel sink and faucet.
- Install new gypsum board walls and wood doors with hollow metal frames for new closets, patch existing gypsum board walls, paint all walls, new doors, frames and hardware, new carpeting, new rubber base, new acoustic ceiling tile, new dimmable lighting, new electrical and telecom hook-ups, new HVAC.
- Install new A/V equipment (overhead retractable projection screen, overhead projector, sound).

18. Rehabilitate First Floor Jenks Gymnasium 115, Stage and Storage spaces.

- Demolish existing vinyl floor and tectum ceiling (coordinate removal of tectum acoustical panels with hazardous material remediation).
- Strip paint from brick walls, wood stage floor and concrete bleachers in its entirety.
- Enlarge existing stage access doors by 4' (2) locations, brick walls.
 - Provide new structural steel lintel over opening.
- Install new weather-stripped access doors, quantity of six (6) total doors at area below stage.
- Patch existing concrete floor, paint bleachers, handrails and door frames, install new athletic flooring and rubber base, install new acoustic ceiling tile, new dimmable lighting, new electrical and telecom hook-ups, new HVAC.
- Install new A/V equipment (overhead retractable projection screen, overhead projector, sound).
- Install new handrails at stage in back of house areas per code requirements and paint.
- Install relief louvers and backdraft dampers for attic exhaust fan.
- Remove existing fixed basketball goals and vinyl wall pads.
- Install new retractable, height adjustable basketball goals and new vinyl wall impact pads.
- Paint existing storage spaces and install new light fixtures.

19. Minor interior finish upgrade for Fitness Room.

- Install new acoustic ceiling tile and replace two (2) existing ceiling fans with new low profile ceiling fans.

TREATMENT RECOMMENDATIONS

20. Abandon 1911 Mezzanine (Use as storage space only).
 - Cap existing plumbing piping and remove fixtures (Quantity one (1) toilet and one (1) sink).

21. Minor interior finish upgrade for Second Floor rooms.
 - Add two (2) additional doors (one to the east and one to the west exhibit gallery).
 - Remove existing carpeting from conference room space and refinish wood floor

22. Exterior Rehabilitation:
 - Repaint all exterior exposed metal including lintels and columns in their entirety. Remove all signs of corrosion and utilize the following finish system: one (1) coat primer, two (2) coats topcoat (TNEMEC or Sherwin Williams equivalent).
 - Repoint masonry 100 percent at head of all window lintels, typical throughout the facility.
 - Remove miscellaneous fasteners from masonry and patch material in-kind for watertight enclosure.
 - Clean designated masonry areas 100 percent and apply penetrating stone water repellent to gymnasium clerestory walls.
 - Repoint water table stones of 1911 and 1938 building 100 percent.
 - Install new stone patching compound throughout the facility.
 - Assume: 50 square feet.
 - Repoint 100 percent of all glass block (east elevation of 1911 building and south elevation of 1951 building).
 - Install new sealants at capstone of 1911 east historic stair side walls.
 - Replace cast stone at two upper limestone bands of 1989-90 building addition. Numerous cast stone units show signs of cracking. Repoint 100 percent of this area.
 - Remove and replace existing exposed cotton weep rope, trim exposed black membrane, install new weeps as required during cast stone replacement.
 - Repoint approximately 50 percent of the 1989-90 building masonry. Repoint 100 percent of the cast stone base. Apply penetrating water repellent at this section of masonry.
 - Install new sealant around perimeter of 1989-90 building addition at grade.
 - Repoint 100 percent at the mortar joint on the 1951 building addition where the brick wall transitions to the concrete foundation wall.

TREATMENT RECOMMENDATIONS

- Install sealants around all exterior wall penetrations including hose bibs, HVAC piping, sump pump piping, dryer vents, utility connections, etc.
 - Assume: 20 lineal feet.
 - Install lock mechanisms on hose bibs.
- Install permanent, well-fitting ventilation louvers and screens for basement/crawlspace.
- Remove mortar from low stone wall capstones on east side of 1951 building and install sealant at skyward facing and head joints. Repoint bed joints and install a weep at head joints per manufacturer's recommendations.
- Epoxy crack injection repair crack on east elevation of 1951 building.
 - Assume 9 feet.
- Paint door and frame of south exterior single door at 1951 building
- Install new 1 ½" diameter round metal handrails per building code on south elevation. Paint to match existing facility standard exterior paint finishes.
- Remove exterior exposed conduit from face of building.
- Repoint masonry 100 percent and install helical masonry anchors to stabilize existing construction at northwest scupper/downspout of 1951 building and on north elevation at former downspout location.
 - Assume: 40 square feet.
- Repoint gymnasium clerestory (limestone and brick infill) 100 percent at the north, east and south elevations of 1938 building.
- Repoint 35 percent of masonry exterior on south elevation of 1938 building with efforts to concentrate around downspouts, at brick detailing and at base of wall.
- Replace missing or broken red brick window sill units.
 - Assume: Quantity of ten (10) bricks.
- Repoint approximately 20 percent of masonry on west elevation of 1938 and 1911 buildings.
- Install new sealant around brick/sidewalk connection at both west entry doors and the east entry door on the 1938 building.
- Install new sealant around base of 1911 building/sidewalk connection on the east side of the building.
- Repoint 40 percent of masonry exterior and install helical masonry anchors to stabilize masonry at northeast corner of the 1938 building scupper/downspout location.
- Masonry crack injection.
 - Assume: 10 lineal feet.
- Stone consolidation treatment.

TREATMENT RECOMMENDATIONS

- Assume: Quantity of twenty (20) stones.
 - Remove mortar and install new sealant at intersection between 1911 and 1938 building at northeast corner.
 - Clean efflorescence from north elevation of 1938 building after new exhaust fan installation.
 - Repoint 60 percent of masonry on north elevation of 1938 building, concentrate around downspouts, at brick detailing and at base of the wall.
23. Install new EPDM membrane roofing system and pre-finished metal parapet caps for all roofs (1911, 1938, 1951, 1989).
- Include all new flashings, polyisocyanurate tapered insulation, sealants and installation of new scuppers, conductor heads and downspouts.
 - Remove fasteners installed for Christmas lighting anchors from roof parapet cap. Replace metal coping for watertight enclosure.
 - Assume 100 percent repointing and resetting of existing stone parapet caps.
 - Assume: 50 square feet for wood decking substrate replacement/repairs.
 - Assume: 50 square feet for concrete deck substrate repairs.

CIRCULATION

1. Renovate Stair Number 1 in 1911 Building.
 - Install new tactile rubber stair tread and riser system with visual and tactile nosings (Basement, First, Mezzanine and Second Floors).
 - Paint stair walls and existing handrail.
2. Renovate Stair Number 2 in 1989-90 Building.
 - Install new tactile rubber tread and riser system with contrasting nosings.
 - Install two (2) new wall sconce light fixtures for increased illumination, minimum 9 footcandle light levels at floor.
 - Paint stair walls and existing handrail.
3. Stair Number 3 in 1951 Building Addition
 - Paint stair walls and existing handrail.
4. Update elevator cab interior finishes.
 - Install new carpeting, clean and polish existing cab interior wainscot, install new translucent ceiling and LED light fixtures.
5. Perform routine maintenance on existing inclined stair platform lift.

TREATMENT RECOMMENDATIONS

MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION

- I. Install new four (4) pipe heating and cooling HVAC system. Existing boilers to remain and add fourth boiler.
 - Demolish all existing fan coil units and associated piping, ductwork and controls throughout the building including abandoned steam piping.
 - Clean all existing duct work to remain and connect to new systems.
 - Remove existing boiler stack piping for three (3) existing boilers.
 - Install fourth boiler and rework existing boiler stack piping for all four (4) boilers to provide recommended clearances between intakes and flues.
 - Existing boilers are Lochinvar “Knight” KBN286, 267 MBH output, high efficiency, residential gas fired boilers.
 - Install new chiller with 85 ton air cooled high efficiency screw or scroll compressor with indoor barrel and 12 degree delta T (43-55) and 105 degree ambient.
 - Install two (2) new variable volume chilled water pumps, 60 percent with 105 gallons per minute (GPM) variable primary B&G 1510 base mounted) with differential pressure control.
 - Install two (2) new variable volume hot water pumps, 100 percent (65 GPM) variable flow secondary B&G 1510 base mounted or series 80 in-line pumps) with differential pressure control.
 - Install chilled water quick and auto fill and expansion tank.
 - Install new pot chemical feeders for both chilled and hot water systems.
 - Install heating water air separator.
 - Install chilled water air separator.
 - Install all new chilled water piping with new chilled water distribution system with 4” diameter mains and two way valves.
 - Install all new hot water piping with new heating water distribution system with 3” diameter mains and two way valves.
 - Install new 4” floor drain at boilers and pipe to sewage ejector basin.
 - Install all new fan coil units (FCU’s) throughout the building.
 - Assume one (1) new FCU per room, two (2) in large meeting rooms. Currently there are nineteen (19) 4-pipe FCU’s, six (6) 2-pipe FCU’s and six (6) cabinet unit heaters.
 - Units shall have cooling coil, heating coil, MERV 8 filters, stainless steel drain pan with condensate overflow switch.
 - Assume all new FCU’s shall be located in the ceiling unless technically infeasible.

TREATMENT RECOMMENDATIONS

- Install heating water unit heaters with line voltage thermostats and aquastats.
2. Install new ventilation system for Mechanical 013A.
 - Assume 2000 cfm fan and new intake and exhaust louvers with motorized dampers.
 3. Install new Direct Digital Control Building Automation System (DDC BAS) and digital thermostats throughout the building to allow for automated operation of the heating and cooling system with real-time system data and control.
 - Provide HVAC zones based upon room use and occupancy.
 4. Install new Dedicated Outdoor Air System (DOAS) for ventilation and new exhaust systems (All floors).
 - Demolish all existing restroom and locker room exhaust systems and ductwork.
 - Demolish 1951 building overhead exhaust and ductwork.
 - Install new ductwork, dampers, grilles/diffusers and ventilation fans/system serving Basement, First and Second floor spaces from central dedicated outdoor air unit(s) for fresh air and to provide positive pressure inside the building.
 - Install new self-contained DessertAire or similar units with total energy heat wheel, DX coil, hot gas reheat, DDC controls and supplemental heat for ventilation into fan coil units.
 - DOAS unit for 1911 building (west side of roof) 1000 EA/1150 SA.
 - DOAS unit for 1938 building (north roof above locker rooms), 1250 EA/1450 SA.
 - DOAS unit for 1951 building (south roof above restrooms), 1900 EA/2200 SA.
 5. Refurbish and maintain Gymnasium roof top unit and connect to new Building Automation System.
 - Clean existing ductwork and add relief louvers and backdraft dampers.
 6. Install new eye washing station in Mechanical 013A.
 7. Install new mop sink in Mechanical 013A, pipe to sewage ejector basin.

TREATMENT RECOMMENDATIONS

8. Install CO2 Sensors in Gymnasium and Fitness/Aerobics Room(s) and in all rooms on the Second Floor.
9. Install three (3) new sump pumps in Basement.
10. Install new Fire Alarm System for entire building (All floors).
 - Remove existing zoned fire alarm system, devices and cabling.
 - Includes fire alarm panel, horns, strobes, heat and smoke detectors (fire devices) and cabling for code compliance with ability to expand in the future.
11. Install new Fire Suppression System.
 - Install new 4" diameter water service for fire suppression system with double check backflow preventer and new Storz fire department connection.
 - Expand existing fire suppression system to include all assembly spaces.
 - Jenks Gymnasium, all corridors, Campbell Room, new game room, kitchen, Hocker Grove Room and Merriam Park Room.
 - Install a dry fire suppression system for the gallery spaces on second floor of 1911 building.
12. Install all new exterior emergency egress light fixtures per code requirements.
 - Assume: Quantity of ten (10) fixtures.
13. Install all new exit signs per code requirements.
 - Assume: Quantity of twenty (20) fixtures.
14. Install all new LED exterior building lighting (connected to emergency egress lighting system).
 - Assume two (2) lights per elevation and one (1) light above each exterior door. (Six (6) lights total).
15. Install all new LED light fixtures throughout the facility.
 - Assume that ALL existing light fixtures are replaced with new fixtures.
 - Install occupancy sensors and automatic time controls in compliance with IECC and/or ASRAE 90.1.
16. Install all new main distribution electrical panel, branch circuits, feeders, all new wiring and provide grounding for the entire building.
 - Determine source panels and consolidate active loads.

TREATMENT RECOMMENDATIONS

- Demolish existing abandoned branch circuit conduit, wiring and all cloth wiring.
- Demolish existing panels.
- Install 1-phase load centers and consolidate branch circuits to new 3-phase panel(s) as required for rehabilitation work.
- Install new 3-phase MDP panel for rehabilitation work.
- Install all new panel feeders and branch circuits.
 - Includes circuits for HVAC and plumbing equipment.
- Install new THHN/THWN insulated conductors.
- Install all new light switches and outlets (all floors).
 - Assume all large offices: 6 to 8 duplex receptacles, 2 branch circuits each office.
 - Assume all small offices and staff work spaces: 4 duplex receptacles, 1 branch circuit each office.
 - Assume all corridors and stairs: 1 duplex receptacle and branch circuit.
 - Assume new basement Game Room: 6 duplex receptacles with 2 branch circuits and 2 dedicated circuits for TV/projector.
 - Assume all meeting rooms and gallery spaces: 6 duplex outlets with 2 branch circuits and 2 dedicated circuits for TV/Projector.
 - Assume all fitness rooms: 12 duplex outlets with 3 branch circuits and 2 dedicated circuits for TVs.
 - Assume gymnasium: Install new outlets in existing locations.
 - Assume each locker room will need 2 hand dryers – (2) 30 amp circuits each.
 - Assume all other spaces not noted: 3 duplex outlets with 1 circuit.

17. Install separate meter for parking lot lighting from street lighting.

- Separate parking lot controls.

18. Install all new stage lighting and A/V equipment.

- Install new electrical panel.
- Install new repositionable stage lights.
- Install new sound system.

19. Install all new ADA compliant drinking fountains.

- Assume: Three (3) dual height/dual spigot drinking fountains with chilled water.

TREATMENT RECOMMENDATIONS

20. Replace 2" diameter water main with 2 ½" diameter main in basement.
 - Assume: 20 feet pipe length.
21. Provide new 4" floor drain in pit at water service back flow preventer and pipe to sewage ejector basin.
22. Replace ALL galvanized iron piping throughout the building including the 1951 building at first floor plumbing shaft.
23. Replace 4" diameter underslab piping from 1951 basement restroom chase to sewage ejector basin.
24. Plug and grout floor drains in Storage 120.

TELECOMMUNICATIONS

1. Create new IT room.
 - Includes removal and relocation of all phone and data equipment from existing room in the 1951 portion of the basement into an existing room on the east side of the 1911 building.
 - Includes installation of independent mechanical D/X cooling for IT room.
 - Provide dedicated network rack for IT equipment, patch panel(s) and patch cabling within the new closet.
 - Reroute and extend all communication utility service entrance cables to the new closet.
 - Relocate existing video surveillance system equipment to new IT room.
2. Install all new telecommunications wiring/cabling throughout the building, install with wire basket, cable tray and/or J-hooks above accessible ceilings.
 - Demolish all existing communications cables.
 - Assume new Cat6 plenum cabling in conduit with voice/data outlets throughout the facility.
 - Assume all large offices: 2 or 3 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables).
 - Assume all small offices and staff work spaces: 2 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables).
 - Assume main corridors: 2 outlet locations (with phones and cables).
 - Assume Basement Game Room and Campbell Room: 4 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables).

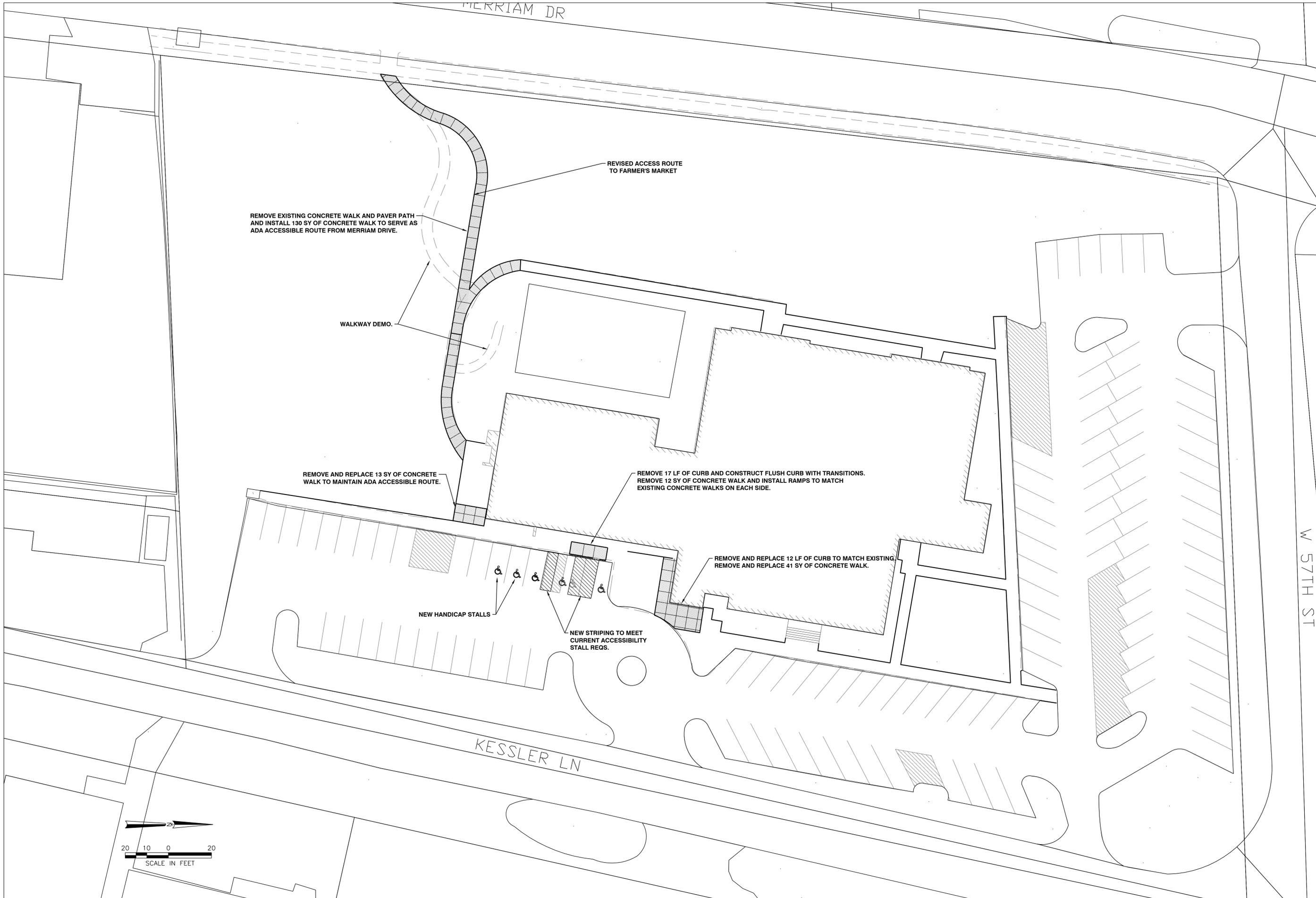
TREATMENT RECOMMENDATIONS

- Assume First Floor meeting rooms and gallery spaces: 4 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables, one ceiling mounted connection at minimum).
 - Assume fitness rooms: To be determined, varies based on equipment and if each machine requires a separate connection.
 - Assume gymnasium: 2 outlet locations near stage (each outlet having 1 voice and 2 data jacks with 3 cables).
 - Assume reception and copy room: 4 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables).
 - All other rooms not noted: assume 1 outlet location (having 1 voice and 2 data jacks with 3 cables).
3. Telephone system improvements.
- Separate the shared phone system with the City of Merriam in order to provide a stand-alone public address system in the building.
 - Determine if existing phone switch is re-usable and relocate existing phone switch equipment.
4. Install new Public Address (PA) system.
- Relocate existing PA system equipment to the new IT room.
 - Install new speakers throughout the facility.
 - Assume: one new speaker per room, 2 in corridors.
5. Expand existing security system.
- Relocate surveillance cameras within the rehabilitated facility as required.
 - Add additional video surveillance cameras, cabling and equipment.
 - Assume: 5 new cameras.

OPTIONAL

1. Lightning protection system for entire building (not included in cost estimate).

TREATMENT RECOMMENDATIONS



REMOVE EXISTING CONCRETE WALK AND PAVER PATH AND INSTALL 130 SY OF CONCRETE WALK TO SERVE AS ADA ACCESSIBLE ROUTE FROM MERRIAM DRIVE.

REVISED ACCESS ROUTE TO FARMER'S MARKET

WALKWAY DEMO.

REMOVE AND REPLACE 13 SY OF CONCRETE WALK TO MAINTAIN ADA ACCESSIBLE ROUTE.

REMOVE 17 LF OF CURB AND CONSTRUCT FLUSH CURB WITH TRANSITIONS. REMOVE 12 SY OF CONCRETE WALK AND INSTALL RAMPS TO MATCH EXISTING CONCRETE WALKS ON EACH SIDE.

REMOVE AND REPLACE 12 LF OF CURB TO MATCH EXISTING. REMOVE AND REPLACE 41 SY OF CONCRETE WALK.

NEW HANDICAP STALLS

NEW STRIPING TO MEET CURRENT ACCESSIBILITY STALL REGS.

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IRENE B. FRENCH COMMUNITY CENTER
CONCEPTUAL DESIGN - CIVIL
5701 MERRIAM DRIVE
MERRIAM, KANSAS 66203

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DATE: MAY 5, 2015
 REVISION & DATE:

SHEET NUMBER:

ADA ACCESSIBILITY MODIFICATIONS

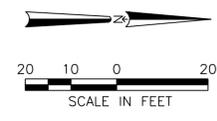
EXHIBIT 3

MERRIAM DR

KESSLER LN

W 57TH ST

PARKING COUNT
EXIST ADA: 3
EXIST STANDARD: 112
NEW ADA: 5
NEW STANDARD: 109



SUSAN RICHARDS JOHNSON & ASSOCIATES, INC.
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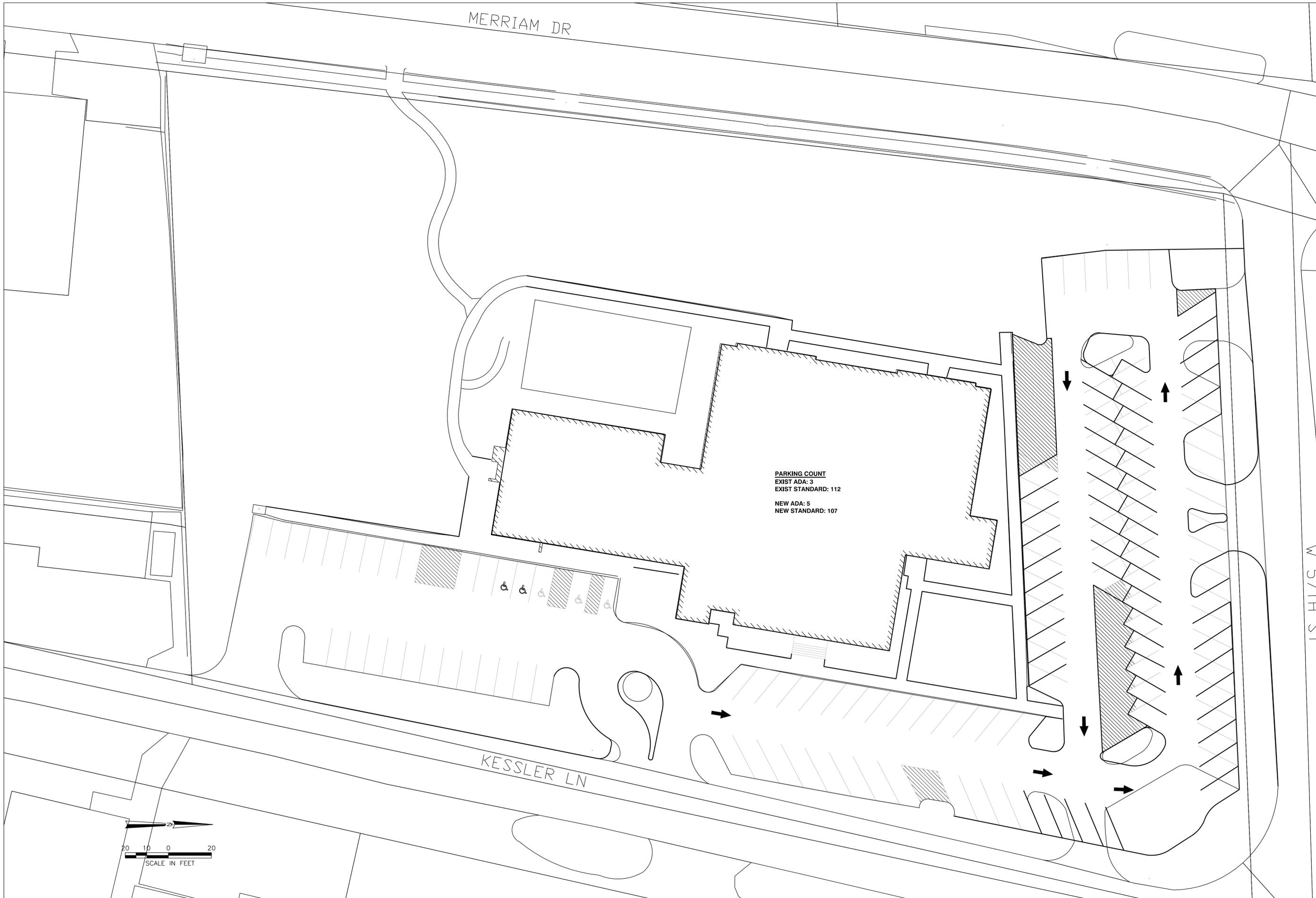
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PARKING CIRCULATION
OPTION 1
EXHIBIT 4



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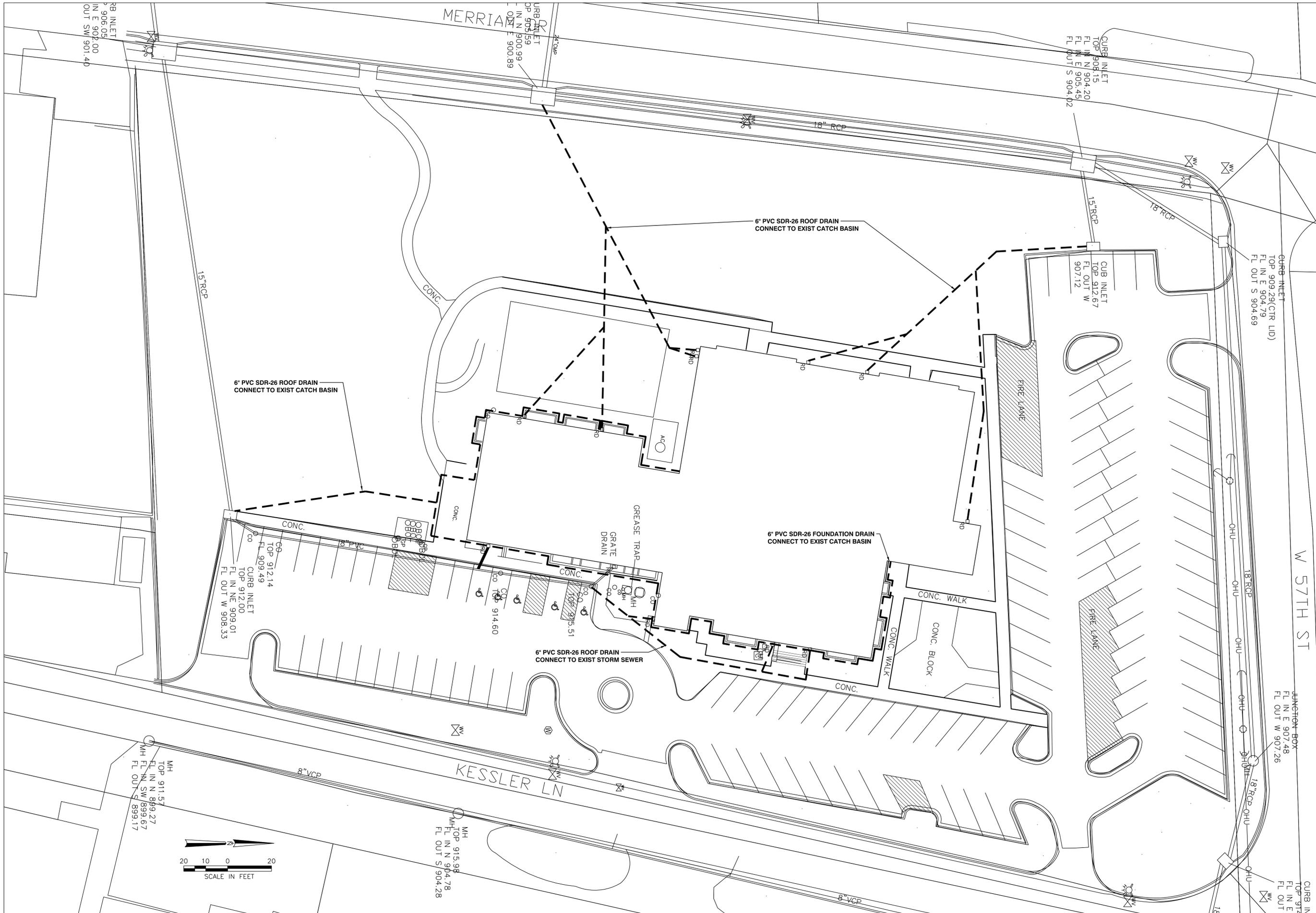
SK
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DATE: MAY 5, 2015
 REVISION & DATE:

SHEET NUMBER:
 PARKING CIRCULATION
 OPTION 2
 EXHIBIT 5



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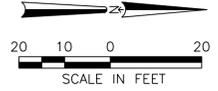
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SHEET NUMBER:

SITE DRAINAGE
 EXHIBIT 6



MH
 TOP 911.57
 FL IN N 899.27
 FL IN SW 899.67
 FL OUT S 899.17

MH
 TOP 915.98
 FL IN N 904.78
 FL OUT S 904.28

CONC.
 TOP 912.14
 FL 909.49
 CURB INLET
 TOP 912.00
 FL IN NE 909.01
 FL OUT W 908.33

CURB INLET
 TOP 908.15
 FL IN N 904.20
 FL IN E 905.45
 FL OUT S 904.02

CURB INLET
 TOP 909.29 (CTR LID)
 FL IN E 904.79
 FL OUT S 904.69

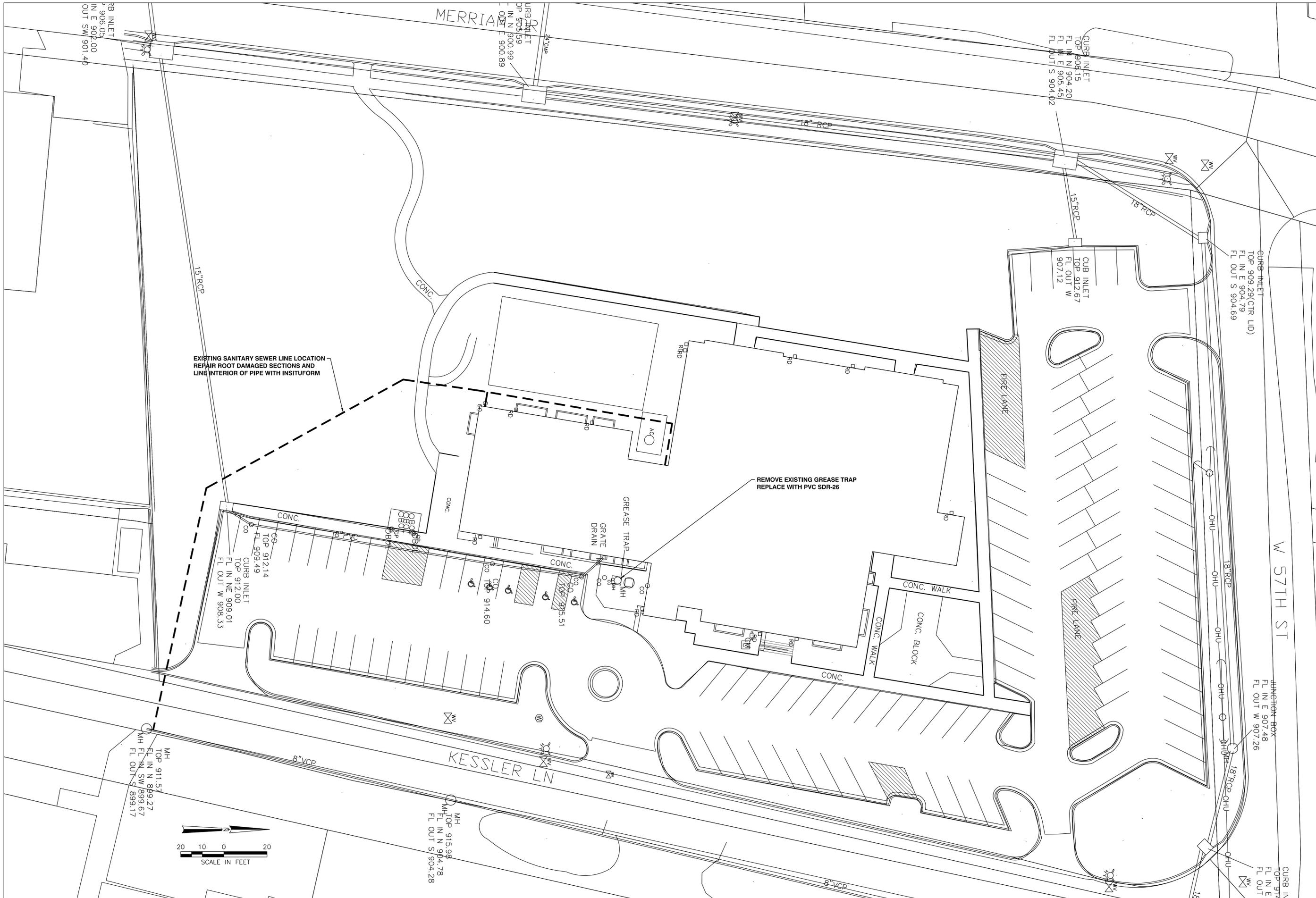
CURB INLET
 TOP 912.67
 FL OUT W 907.12

URB INLET
 OP 903.59
 FL IN N 900.99
 FL OUT E 900.89

RB INLET
 TOP 906.05
 FL IN E 902.00
 FL OUT SW 901.40

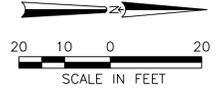
JUNCTION BOX
 FL IN E 907.48
 FL OUT W 907.26

CURB INLET
 TOP 917
 FL IN E
 FL OUT



EXISTING SANITARY SEWER LINE LOCATION
REPAIR ROOT DAMAGED SECTIONS AND
LINE INTERIOR OF PIPE WITH INSITUFORM

REMOVE EXISTING GREASE TRAP
REPLACE WITH PVC SDR-26



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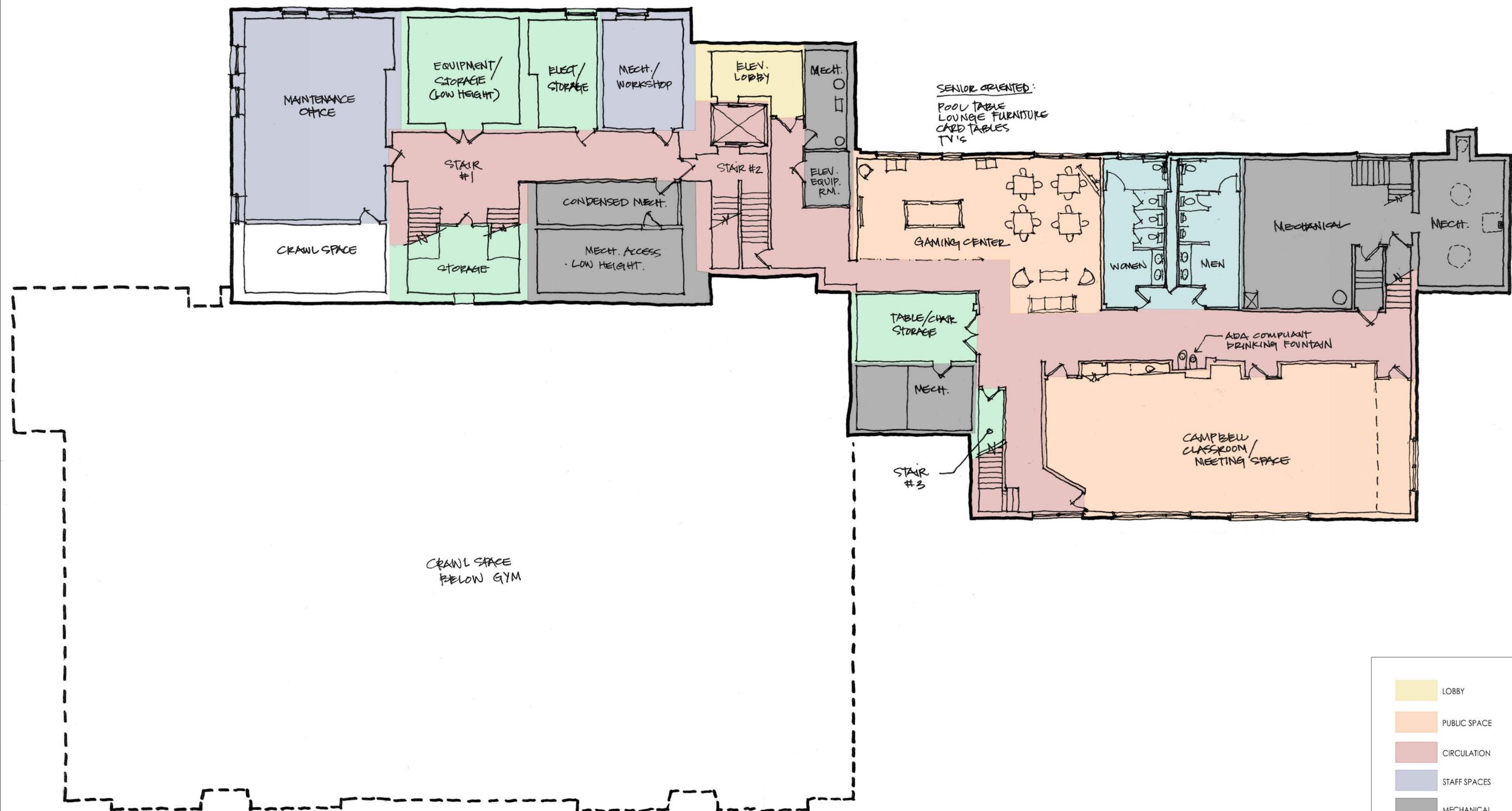
**IRENE B. FRENCH COMMUNITY CENTER
CONCEPTUAL DESIGN - CIVIL
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DATE: MAY 5, 2015
REVISION & DATE:

SHEET NUMBER:

SEWER AS-BUILT/REPAIR
EXHIBIT 7



**IRENE B. FRENCH COMMUNITY CENTER
 CONCEPTUAL DESIGN - OPTION A
 5701 MERRIAM DRIVE
 MERRIAM, KANSAS 66203**

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DATE: MAY 5, 2015
 REVISION & DATE:

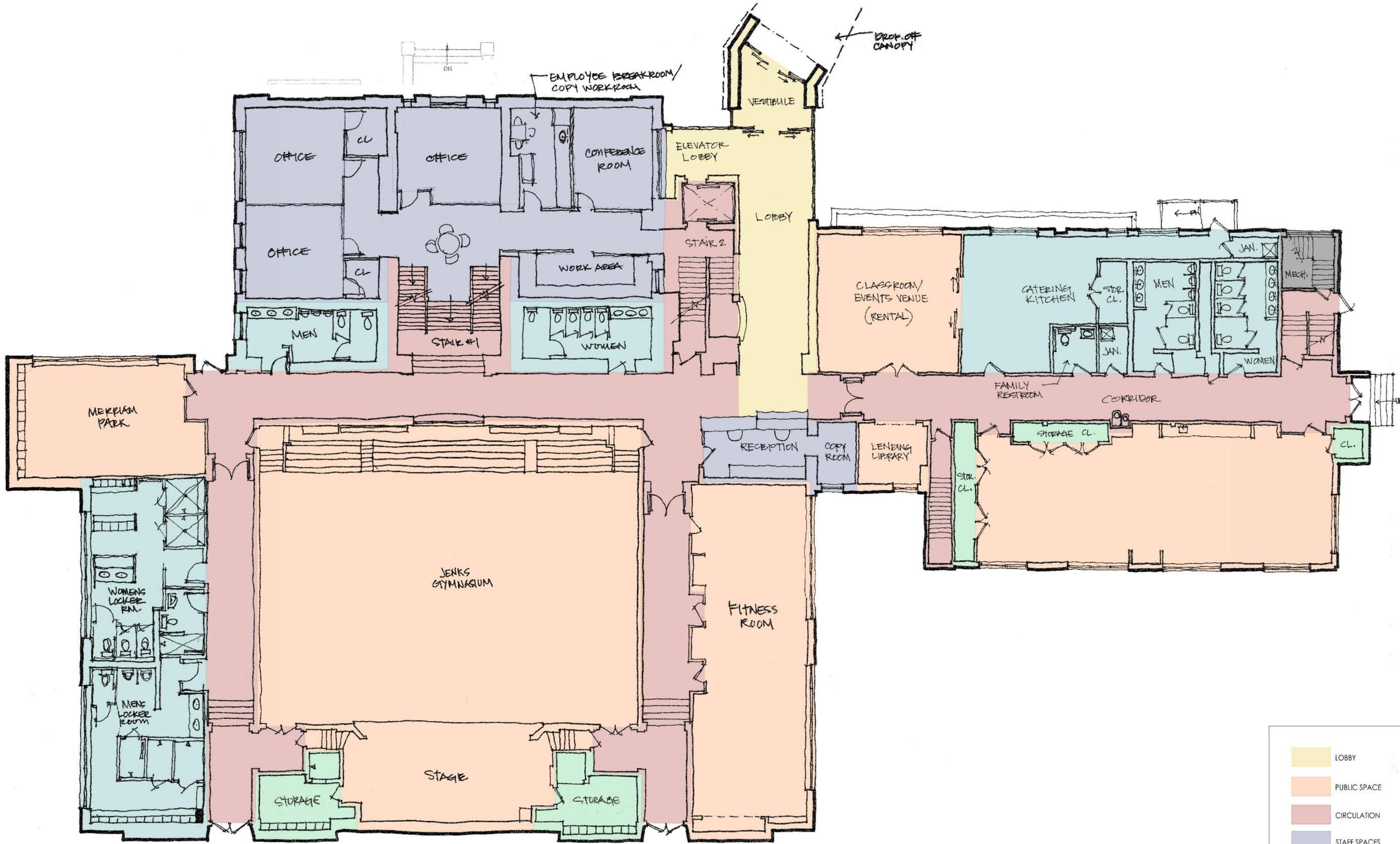
PROPOSED BASEMENT FLOOR PLAN
 SHEET NUMBER:

A/AO

B OPTION A - PROPOSED BASEMENT FLOOR PLAN

Scale: 1/8" = 1'-0" NORTH

- LOBBY
- PUBLIC SPACE
- CIRCULATION
- STAFF SPACES
- MECHANICAL
- SUPPORT SPACES
- STORAGE



1 OPTION A - PROPOSED FIRST FLOOR PLAN

Scale: 1/8" = 1'-0" NORTH

- LOBBY
- PUBLIC SPACE
- CIRCULATION
- STAFF SPACES
- MECHANICAL
- SUPPORT SPACES
- STORAGE

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IRENE B. FRENCH COMMUNITY CENTER
CONCEPTUAL DESIGN - OPTION A
 5701 MERRIAM DRIVE
 MERRIAM, KANSAS 66203

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DATE: MAY 5, 2015
 REVISION & DATE:

PROPOSED FIRST FLOOR PLAN
 SHEET NUMBER:

A/A1

**IRENE B. FRENCH COMMUNITY CENTER
 CONCEPTUAL DESIGN - OPTION A
 5701 MERRIAM DRIVE
 MERRIAM, KANSAS 66203**

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DATE: MAY 5, 2015
 REVISION & DATE:

PROPOSED SECOND FLOOR PLAN
 SHEET NUMBER:

A/A2



- LOBBY
- PUBLIC SPACE
- CIRCULATION
- STAFF SPACES
- MECHANICAL
- SUPPORT SPACES
- STORAGE

2 OPTIONS A - PROPOSED SECOND FLOOR PLAN

Scale: 1/8" = 1'-0" NORTH



CONSTRUCTION MANAGEMENT RESOURCES, LLC

ESTIMATING • SCHEDULING • PROJECT MANAGEMENT • CONSULTING
 5201 JOHNSON DRIVE, SUITE 330, MISSION, KANSAS 66205 (913) 262-6715 • FAX (913) 262-1380

Irene B. French Community Center
 Merriam, KS
 Susan Richards Johnson & Associates
 Preliminary Estimate Estimate 05/05/2015

DESCRIPTION	TOTAL	Addition	0 SF		31,983 SF	
			\$/SF	Renovation	\$/SF	Site
Option A						
01 00 00 GENERAL CONDITIONS	468,144	-	0.00	444,324	13.89	23,819
02 41 00 DEMOLITION	191,281	-	0.00	183,574	5.74	7,707
02 50 00 HAZARDOUS MATERIAL ABATEMENT	6,244	-	0.00	6,244	0.20	-
03 30 00 CAST-IN-PLACE CONCRETE	36,307	-	0.00	36,307	1.14	-
04 01 20 MASONRY RESTORATION AND CLEANING	148,300	-	0.00	148,300	4.64	-
04 20 00 UNIT MASONRY	17,020	-	0.00	17,020	0.53	-
05 12 00 STRUCTURAL STEEL	32,851	-	0.00	16,439	0.51	16,412
06 10 00 ROUGH CARPENTRY	19,231	-	0.00	19,231	0.60	-
06 40 16 INTERIOR ARCHITECTURAL WOODWORK	118,529	-	0.00	118,529	3.71	-
07 13 00 SHEET WATERPROOFING	3,376	-	0.00	3,376	0.11	-
07 21 00 THERMAL INSULATION	-	-	0.00	-	0.00	-
07 50 00 MEMBRANE ROOFING	166,356	-	0.00	160,886	5.03	5,471
07 60 00 SHEET METAL FLASHING AND TRIM	4,049	-	0.00	1,967	0.06	2,082
07 92 00 JOINT SEALANTS	6,782	-	0.00	6,782	0.21	-
08 11 00 STEEL DOOR & FRAMES	2,750	-	0.00	2,750	0.09	-
08 11 73 SLIDING METAL DOORS	2,500	-	0.00	2,500	0.08	-
08 14 16 FLUSH WOOD DOORS	8,250	-	0.00	8,250	0.26	-
08 41 00 ALUMINUM ENTRANCES AND STOREFRONTS	34,977	-	0.00	34,977	1.09	-
08 51 13 ALUMINUM WINDOWS	2,275	-	0.00	2,275	0.07	-
08 71 00 DOOR HARDWARE	7,700	-	0.00	7,700	0.24	-
09 21 16 GYPSUM SYSTEMS	170,330	-	0.00	170,330	5.33	-
09 30 13 CERAMIC TILE	62,083	-	0.00	62,083	1.94	-
09 51 00 ACOUSTICAL PANEL CEILINGS	47,797	-	0.00	47,797	1.49	-
09 64 00 WOOD FLOORING	80,744	-	0.00	80,744	2.52	-
09 65 13 RESILIENT WALL BASE AND ACCESSORIES	6,193	-	0.00	6,193	0.19	-
09 65 19 RESILIENT TILE FLOORING	6,023	-	0.00	6,023	0.19	-
09 66 00 TERRAZZO	53,490	-	0.00	53,490	1.67	-
09 68 00 CARPET	33,276	-	0.00	33,276	1.04	-
09 90 00 PAINTING	56,433	-	0.00	56,433	1.76	-
10 11 00 VISUAL DISPLAY BOARDS	-	-	0.00	-	0.00	-
10 14 00 SIGNS	36,000	-	0.00	25,000	0.78	11,000
10 21 13 TOILET COMPARTMENTS	16,375	-	0.00	16,375	0.51	-
10 22 26 OPERABLE PARTITIONS	-	-	0.00	-	0.00	-
10 28 00 TOILET AND BATH ACCESSORIES	13,600	-	0.00	13,600	0.43	-
10 44 00 FIRE-PROTECTION SPECIALTIES	1,350	-	0.00	1,350	0.04	-
10 51 00 METAL LOCKERS	15,300	-	0.00	15,300	0.48	-
11 40 00 FOOD SERVICE EQUIPMENT	15,000	-	0.00	15,000	0.47	-
11 66 00 ATHLETIC EQUIPMENT	21,000	-	0.00	21,000	0.66	-
12 60 00 MULTIPLE SEATING	-	-	0.00	-	0.00	-
14 20 00 ELEVATORS	-	-	0.00	-	0.00	-
21 00 00 FIRE PROTECTION	93,785	-	0.00	93,785	2.93	-
22 00 00 PLUMBING	280,750	-	0.00	280,750	8.78	-
23 00 00 HVAC	1,100,206	-	0.00	1,100,206	34.40	-
26 00 00 ELECTRICAL	881,859	-	0.00	806,859	25.23	75,000
27 50 00 A/V EQUIPMENT	20,000	-	0.00	20,000	0.63	-
31 20 00 EARTH MOVING	12,960	-	0.00	-	0.00	12,960
31 31 00 TERMITE CONTROL	-	-	0.00	-	0.00	-
32 12 16 ASPHALT PAVING	6,503	-	0.00	-	0.00	6,503
32 13 13 CEMENT CONCRETE PAVING	8,209	-	0.00	-	0.00	8,209
32 92 00 LAWN & GRASSES	2,762	-	0.00	-	0.00	2,762
32 93 00 EXTERIOR PLANTS	31,417	-	0.00	-	0.00	31,417
33 10 00 WATER DISTRIBUTION	14,000	-	0.00	-	0.00	14,000
33 30 00 SANITARY SEWERAGE	-	-	0.00	-	0.00	-
33 40 00 STORM DRAINAGE	-	-	0.00	-	0.00	-
33 46 16 FOUNDATION DRAINAGE SYSTEMS	4,972	-	0.00	-	0.00	4,972
subtotal	4,369,340	-	0.00	4,147,025	129.66	222,315
Contractor's Fee 6%	262,160	-	0.00	248,822	7.78	13,339
subtotal	4,631,500	-	0.00	4,395,847	137.44	235,654
Design/Estimate Contingency 15%	694,725	-	0.00	659,377	20.62	35,348
subtotal	5,326,225	-	0.00	5,055,224	158.06	271,002
Escalation to Mid-Point - 01/30/2017 5.3%	282,207	-	0.00	267,849	8.37	14,359
TOTAL	5,608,433	-	0.00	5,323,072	166.43	285,361

TREATMENT RECOMMENDATIONS

Intermediate Recommendations: (2-5 years)

OPTION B – Rehabilitation of Existing Building and New Addition

CIVIL

1. Re-grade around entire building and install foundation French drains.
 - Install new continuous French drain around entire perimeter of the building.
 - Install new landscaping to replace areas disturbed.
 - Assume: Quantity of 1000 square feet of grass.
 - Assume: Quantity of 5 trees.
 - Assume: Quantity of 30 lineal feet of shrubs.
2. Replace broken and disconnected section of pipes in southwest corner of building below grade. Restore landscaping disturbed by utility repairs.
3. New parking lot layout (similar to Alternate Parking Lot from Option A).
 - Restriping existing parking lot.
 - Install new asphalt for north and east parking lots.
 - Two (2) new concrete islands with grass and tree.
 - Infill existing entrance drives, one off of W 57th Street and the other off of Kessler Lane (concrete and grass).
 - Install new double concrete drive off of W 57th Street
 - Install new concrete circle drive island.
 - Install new LED parking lot lighting.
 - Install new parking lot entrance signage.
 - Assume two (2) new metal and limestone 4 foot tall signs with stainless steel letters and LED ground lighting.
4. ADA Walk to Farmer's Market.
 - Remove existing concrete walk and pavers and install 130 square yards of concrete walk for new ADA accessible path.
 - Remove and replace thirteen (13) square yards of concrete walk at southeast side of building to provide ADA accessible route. Coordinate walks with egress from new addition.
5. Install new LED lighted bollards and landscape lighting.
 - Assume fifteen (15) LED lighted metal bollards.

TREATMENT RECOMMENDATIONS

6. Install new landscaping around North, East and South elevations of the building and at parking.
 - Assume: 10 new ornamental trees.
 - Assume: 70 lineal feet of shrubs.
 - Assume: 300 square feet of perennials.
 - Assume: 500 square feet of new grass.
 - Assume: \$20,000 allowance for entry sculpture.
7. Install new concrete sidewalk sealants at east and north elevation sidewalks.
 - Assume: 70 lineal feet.
8. Select demolition of trees, landscaping, parking lot, sidewalk and trash receptacle for demolition of existing 1951 building and prep for new building.
 - Assume: 600 square feet sidewalk and curb, 600 square feet parking lot.
 - Relocate trash receptacle to the south corner of the parking lot, create new CMU and wood enclosure.
 - Re-grade land where the building was removed.
 - Install new landscaping and outdoor seating.
9. Replace existing 2” diameter water service with new 2 ½” diameter water service with new water meter, backflow preventer and 3 valve bypass and pressure regulating valve.
10. Reconnect existing 2” diameter reduced pressure zone backflow preventer for the irrigation system.

ARCHITECTURAL

- I. Hazardous Materials Removal
 - *Abatement should be completed by a qualified company contracted directly with the Owner prior to the start of any rehabilitation project. This can be completed in phases if necessary and only focus on areas under construction. Costs will be higher for the abatement if the company is required to mobilize multiple times.*
 - *See attached cost proposal for removal of materials.*

TREATMENT RECOMMENDATIONS

2. Renovate existing building entry and add new building canopy.
 - Install new steel framed structure with galvanized metal roof deck and standing seam roofing. Brick/stone wainscot and column bases, pre-finished metal panel veneer, rigid insulation and painted gypsum board walls and ceilings.
 - New concrete foundation (grade beams on piers) with slab-on-grade floor and integration with new canopy structure.
 - Install new dark bronze anodized aluminum storefront and two automatic sliding doors at entrance and vestibule with associated hardware, integral aluminum walk-off mat system extending to the elevator, new lighting, new brushed stainless steel pinned entrance lettering.

3. Demolition of 2/3 of 1951 building, and install new mechanical room.
 - Provide temporary shoring and alternate power/HVAC for the facility while demolition is under way.
 - Retain portion of east, north and west concrete foundation walls.
 - Install new south cast-in-place concrete foundation wall to complete mechanical basement and new structural concrete floor.
 - Assume 12” thick concrete walls with two faces of reinforcing and 24” wide x 12” deep footings.
 - Assume structural floor to be 4” slab on metal formdeck supported by steel bar joists.
 - Refer to civil scope for allowance for landscaping and French drains.
 - New mechanical room to have exposed concrete walls, ceiling and floor. Install new door and painted hollow metal frame.

4. New building addition (approximately 15,000 gross square feet).
 - New addition consists of new locker rooms (Men’s, Women’s, Family) with saunas.
 - New fitness/weight room.
 - New Aerobics room with folding acoustic fabric covered wall partition.
 - New full size gymnasium with raised mezzanine walking track. Scope of work includes:
 - Storage space.
 - Retractable bleacher seating.
 - Retractable and height adjustable basketball goals.
 - Volleyball station setup.
 - Digital Scoreboard.

TREATMENT RECOMMENDATIONS

- Vinyl gymnasium divider.
 - A/V sound system.
 - Assumed construction is of concrete slab on grade with grade beam foundations.
 - Load bearing CMU with clearspan bar joists and galvanized metal roof deck.
 - New holeless hydraulic elevator and stair for walking track access.
 - Metal stud furring, fiberglass batt insulation, gypsum board, rigid insulation, limestone and brick veneer, prefinished metal panels, flat roof with glass skylights, glass light monitor and TPO roofing.
 - Interior finishes for new locker rooms: burnished CMU shower walls, ceramic tile wet walls, plumbing fixtures and accessories to match the remainder of the facility, carpet and poured epoxy terrazzo flooring, rubber base, painted gypsum board walls, sport court composite athletic flooring for all fitness spaces including gym, acoustic ceiling tile, metal lockers, cedar wood sauna, new light fixtures, telecommunication/data, electrical and HVAC.
5. Install new building wide signage for wayfinding and individual room signage.
- Assume acrylic with wood and aluminum accents and window for printed room names. 3D braille and characters per ADA and building code requirements as required for permanent rooms.
6. Repair Basement Masonry Window Well Structures.
- Remove and reset existing masonry window wells along the north and east side of the 1911 building.
7. Install new basement concrete window well structure.
- New 6" thick cast-in-place concrete structure and drainage system.
8. Renovate Basement of 1911 Building into Maintenance/Storage Space.
- Repair Fitness Room 004 exhaust fan (space to be used for equipment storage).
 - Create new IT room.
 - Repaint all walls, install clear concrete sealer for exposed concrete floors.
 - Install new painted gypsum board wall, metal door frame and wood door for revised mechanical space.
 - Assume 20 square feet concrete floor patching.

TREATMENT RECOMMENDATIONS

- Repair 20 square feet plaster walls on Stair Number I. Coordinate work with hazardous materials remediation.
 - Install new mop sink in south storage room in 1911 building.
9. Rehabilitate basement elevator lobby and corridor.
- Selective demolition of existing walls, flooring and acoustic ceiling tile.
 - Install new gypsum board walls, patch existing gypsum board walls, patch existing concrete floor, paint, new doors, frames and hardware, new carpeting, new rubber base, new acoustic ceiling tile, new dimmable lighting, new electrical and telecom hook-ups, new HVAC.
10. Rehabilitate First Floor 1911 Building into Administration Office Suite.
- Demolish existing interior gypsum board wall partitions, carpeting, rubber base and acoustic ceiling tile.
 - Install new full height movable furniture system walls and doors (Assume 10 feet tall partitions with stacked transoms and drop in ceiling as required for acoustical privacy).
 - Install new interior finishes including: plastic laminate casework with solid surface countertop, install new stainless steel sink and faucet in workroom/break room, patch existing plaster and gypsum board walls, patch existing tongue and groove wood floor, paint, new carpeting, new rubber base, new acoustic ceiling tile, new lighting, new electrical and telecom hook-ups, new HVAC.
 - Install new 2x2 architectural direct-indirect LED light fixtures.
11. Rehabilitate former First Floor Kitchen space (north end) into new Community Room and Game Room (living room concept).
- Selective demolition of existing walls, flooring and acoustic ceiling tile.
 - Demolish existing commercial kitchen hood and exhaust in its entirety.
 - Demolish kitchen walk-in refrigerator in its entirety.
 - Demolish portion of exterior brick window infill.
 - Remove and salvage existing commercial dish washing equipment, cooking equipment, individual freezer/refrigerators, ice maker, movable wire shelving, stainless steel island, washer/dryer and tri-compartment sink.
 - Demolish existing exhaust system above existing wash room.
 - Install new anodized aluminum storefront window in exterior opening.
 - Interior finishes: Install new gypsum board walls, patch existing gypsum board walls, patch existing concrete floor, paint, new doors, frames and hardware, new

TREATMENT RECOMMENDATIONS

nanawall glass folding door at Lobby side, new carpeting, new rubber base, new acoustic ceiling tile, new dimmable lighting, new electrical and telecom hook-ups, new HVAC.

- Provide allowance for furniture, A/V and equipment: \$20,000.

12. Rehabilitate First Floor Existing Reception, Lobby and Corridors.

- Demolish existing control desk and reception storage room.
- Demolish existing interior finishes (flooring, wallcovering, rubber base, acoustic ceiling tile).
- Remove and salvage donor recognition and plaques for reinstallation.
- Create new Mobile Lending Library. Install new painted gypsum board wall, install new rolling/coiling door.
- Install new interior finishes and (2) new dual height ADA drinking fountains with chilled water; install new gypsum board walls, patch existing gypsum board walls, patch existing concrete floor, paint, new doors, frames and hardware, new rubber base, new acoustic ceiling tile, new lighting, new electrical and telecom hook-ups, new HVAC (existing gypsum board ceilings to remain).
- Install poured epoxy terrazzo in the Elevator Lobby, Lobby and all first floor corridors.
- Install new carpet and rubber base in the reception, copy room and lending library.
- Install new tactile rubber stair treads and risers with visible and tactile nosings at stairs in corridor on either side of the gymnasium (west end of corridor).
- Install new stained and varnished solid wood control desk with metal accents and dual height solid surface countertops.
 - Increase connectivity, improve views, create a welcoming environment and provide necessary upgrades per ADA requirements.

13. Rehabilitate Merriam Park (Dance Studio) into Catering Kitchen.

- Demolish existing mirrors, ballet bar, metal lockers and wood flooring.
- Install new smaller commercial hood and select kitchen equipment.
- Install new gypsum board wall, doors and washer/dryer hookups and mop sink for Janitor's closet and Laundry closet.
- Kitchen: Install new interior finishes: Install new plastic laminate casework (6 feet) with solid surface counter top, new stainless steel tri-compartment sink and faucet, new poured epoxy terrazzo flooring paint all walls, new doors, frames and hardware, new rubber base, new acoustic ceiling tile, new lighting, new electrical and telecom hook-ups, new HVAC.

TREATMENT RECOMMENDATIONS

- Allowance: \$25,000 for new kitchen equipment.
14. Rehabilitate First Floor Existing Men's and Women's Locker Rooms into Men's and Women's Restrooms with full ADA upgrades for conference facilities.
- Demolition of existing plumbing fixtures, bath accessories, toilet partitions, showers, benches, counters, metal lockers.
 - Install gypsum board walls with fiberglass batt insulation between restroom walls and between restrooms and adjacent spaces.
 - Install new low-flow dual flush automatic valves at toilets and automatic faucets, new porcelain toilets and sinks, new countertops, domestic water piping, new bath accessories and ADA grab bars, new toilet partitions, new ceramic tile on wet wall only, paint all existing walls, new rubber base, new poured epoxy terrazzo floor, new wood veneer solid doors and hollow metal frames, new acoustic ceiling tile, new lighting, new HVAC.
15. Rehabilitate First Floor Existing Restrooms Men's 102, Women's 113 into four (4) family restrooms.
- Demolish existing plumbing fixtures, bath accessories and interior finishes.
 - Select demolition of existing stone wall for new doors. Install temporary shoring to support load bearing stone wall. Install new steel lintels at two (2) openings.
 - Install gypsum board walls with fiberglass batt insulation between restroom walls and between restrooms and adjacent spaces.
 - Install new low-flow dual flush automatic valves at toilets and automatic faucets, new porcelain toilets and sinks, new countertops, domestic water piping, new bath accessories and ADA grab bars, new ceramic tile on wet wall only, paint all walls, new rubber base, new terrazzo floor, new wood veneer solid door and hollow metal frame, new acoustic ceiling tile, new lighting, new HVAC.
16. Rehabilitate former Fitness Room 123 into new Hocker Grove.
- Install new gypsum board walls and wood doors with hollow metal frames for new closets and revised entry, patch existing gypsum board walls, paint all walls, new doors, frames and hardware, new carpeting, new rubber base, new acoustic ceiling tile, new dimmable lighting, new electrical and telecom hook-ups, new HVAC.
 - Install new A/V equipment (overhead retractable projection screen, overhead projector, sound).

TREATMENT RECOMMENDATIONS

17. Rehabilitate First Floor Jenks Gymnasium | 15, Stage and Storage spaces into Jenks Conference Center.

- Demolish existing vinyl gym floor and tectum ceiling.
- Demolish brick storage rooms as indicated on the plans.
- Demolish portions of the existing brick gym walls for new double door entrances.
 - Install new masonry lintels over new openings. Coordinate removal of tectum wall and ceiling panels with hazardous materials remediation.
- Demolish existing interior storefront window on east gym wall. Install new wood door and metal frame in former storefront window opening.
- Strip paint from brick walls and wood stage floor; refinish wood floor.
- Enlarge existing stage access doors by 4 feet through the brick walls.
 - Provide new structural lintels over openings.
- Install new acoustical access doors, quantity of six (6) total doors.
- Install new wood framed floor and flooring substrate in gymnasium and at storage areas to bring floor elevation up to same elevation as the first floor. (Note: Alternate is to install new floor sloped to allow for auditorium seating and improved views of speakers.)
 - Assume 2x4 cripple stud walls at 12 feet on center with 2x10 floor joists at 12" on center.
 - Assume tongue and groove ¾" plywood subfloor.
- Install new gypsum board walls to create new storage rooms.
- Install new carpeting, rubber base, paint all gypsum board walls (not brick), three (3) new movable fabric folding partitions, install new acoustic ceiling tile, new dimmable lighting, new electrical and telecom hook-ups.
 - Assume the folding partitions are motorized, include one (1) branch circuit each.
- Install new A/V equipment including overhead retractable projection screen, overhead projector, sound system (x3).
- Install relief louvers and backdraft dampers for attic exhaust fan.

18. Abandon 1911 Mezzanine (Use as storage space only).

- Cap existing plumbing piping and remove fixtures (One (1) toilet and one (1) sink).

19. Minor interior finish upgrade for Second Floor rooms.

TREATMENT RECOMMENDATIONS

- Add two (2) additional doors (one (1) to the east and one (1) to the west exhibit gallery).
- Remove existing carpeting from conference room space and refinish wood floor.

20. Exterior Rehabilitation:

- Repaint 100 percent of all exterior exposed metal lintels and columns, one (1) coat primer, two (2) coats topcoat (TNEMEC or Sherwin Williams equivalent).
- Repoint 100 percent of masonry at head of all window lintels, typical throughout the facility.
- Remove miscellaneous fasteners from masonry.
- Clean 100 percent of masonry and apply penetrating stone water repellent to gymnasium clerestory walls.
- Repoint 100 percent skyward facing water table stones of 1911 and 1938 building.
- Install new stone patching compound at significantly deteriorated stone throughout the facility.
 - Assume: 50 square feet.
- Repoint 100 percent of all glass block (east elevation of 1911 building).
- Install new sealants at capstone of 1911 east historic stair side walls.
- Replace 100 percent of cast stone at the two upper limestone bands of 1989-90 building addition. Numerous cast stone units appear cracked and unsound. Repoint 100 percent of this area.
- Remove and replace existing exposed cotton weep rope, trim back membrane, install new weeps as required during cast stone replacement.
- Repoint 50 percent of 1989-90 building. Repoint 100 percent of cast stone base. Apply penetrating water repellent.
- Install new sealant around perimeter of 1989-90 building addition at grade.
- Install sealants around all exterior wall penetrations including hose bibs, HVAC piping, sump pump piping, dryer vents, utility connections, etc.
 - Assume: 10 lineal feet.
 - Install lock mechanisms on hose bibs.
- Install permanent, well-fitting ventilation louvers and screens for basement/crawlspace.
- Remove exterior exposed conduit from face of building.
- Repoint 100 percent of gymnasium clerestory (limestone and brick infill) at north, east and south elevations of 1938 building.

TREATMENT RECOMMENDATIONS

- Repoint 35 percent on south elevation of 1938 building, concentrate restoration efforts around downspouts, at brick detailing and at base of wall.
 - Replacement of missing or structurally unsound red brick window sill units.
 - Assume: Quantity of ten (10) bricks.
 - Spot repoint 20 percent of masonry on west elevation of 1938 and 1911 buildings.
 - Install new sealant around brick/sidewalk connection at both west entry doors and the east entry door on the 1938 building.
 - Install new sealant around base of 1911 building/sidewalk connection on the east side of the building, concentrate restoration efforts around downspouts, at brick detailing and at base of the wall.
 - Repoint 40 percent of masonry and install helical masonry anchors to stabilize masonry at northeast corner of the building at 1938 building scupper/downspout location.
 - Install masonry crack epoxy injection.
 - Assume: Quantity of ten (10) lineal feet.
 - Install stone consolidation treatment.
 - Assume: Quantity of twenty (20) stones.
 - Remove mortar and install new sealant at 1911 and 1938 building connection at northeast corner.
 - Clean efflorescence from north elevation of 1938 building after new exhaust fan installation.
 - Repoint 60 percent of masonry on north elevation of 1938 building, concentrate restoration efforts around downspouts, at brick detailing and at base of the wall.
21. Install new EPDM membrane roofing system and pre-finished metal parapet caps for ALL roofs. (1911, 1938, 1989).
- Includes all flashings, materials, polyisocyanurate tapered insulation, sealants and installation of new scuppers, conductor heads and downspouts.
 - Remove miscellaneous fasteners from roof parapet cap which were installed for Christmas lighting anchors. Replace prefinished metal parapet coping with new for water tight enclosure.
 - Assume 100 percent repointing and resetting of capstones.
 - Assume: 50 square feet for wood decking substrate replacement/repairs.
 - Assume: 50 square feet for concrete deck substrate repairs.

TREATMENT RECOMMENDATIONS

CIRCULATION

1. Renovate Stair Number 1 in 1911 Building.
 - Install new tactile rubber stair tread and riser system with visual and tactile nosings (Basement, First, Mezzanine and Second Floors).
 - Paint stair walls and existing handrail.
2. Renovate Stair Number 2 in 1989-90 building addition.
 - Install new tactile rubber tread and riser system with contrasting nosings.
 - Install two (2) new wall sconce light fixtures for increased illumination.
 - Paint stair walls and existing handrail.
3. Stair Number 3 in 1951 building addition.
 - Refurbish existing stair from Basement mechanical room to First Floor. Add new stair to provide access from first floor up to new gymnasium walking track at the mezzanine level.
 - Install new tactile rubber tread and riser system with contrasting nosings and painted metal handrails to match existing stair.
4. Update existing elevator cab interior finishes.
 - Install new carpeting, clean and polish existing wainscot at cab interior, install new luminous ceiling and LED light fixtures.
5. Install new holeless hydraulic elevator lift in new proposed addition from first floor to Gymnasium mezzanine level.
6. Perform routine maintenance on existing inclined stair platform lift.

MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION

1. Install all new four (4) pipe heating and cooling HVAC system.
 - Demolish all existing fan coil units (FCU's) and associated piping, ductwork and controls throughout the building including abandoned steam piping.
 - Clean all existing duct work to remain and connect to new systems.
 - Remove existing boilers in their entirety.
 - Install three (3) new 400 MBH nominal gas fired condensing boilers and buffer tank in new mechanical room for building heat and to serve the new water heater.
 - Basis of Design: Lochinvar “Knight XL” or equal commercial grade unit.

TREATMENT RECOMMENDATIONS

- Install new 115 ton air cooled high efficiency screw or scroll compressor with indoor barrel and 12 degree delta T (43 - 55) and 105 degree ambient.
 - Install two (2) new variable volume chilled water pumps, 60 percent (140 GPM) variable primary B&G 1510 base mounted pumps located in new Mechanical Room.
 - Install two (2) new variable volume hot water pumps, 100 percent (85 GPM) variable flow secondary B&G 1510 base mounted or series 80 in-line pumps located in new Mechanical Room.
 - Install new water quick & auto fill, air separator, expansion tank and pot chemical feeder located in new Mechanical Room.
 - For both chilled and hot water systems.
 - Install all new chilled water piping with new chilled water distribution system with 4" diameter mains and two way valves.
 - Install all new hot water piping with new heating water distribution system with 3" diameter mains and two way valves.
 - Install new 4" floor drains for boilers.
 - Install all new FCU's throughout the building.
 - Assume one (1) new FCU per room, two (2) FCU's in large meeting rooms (currently there are nineteen (19) 4-pipe FCU's, six (6) 2-pipe FCU's and six (6) cabinet unit heaters).
 - Units shall have cooling coil, heating coil, MERV 8 filters, stainless steel drain pan with condensate overflow switch.
 - Assume all new FCU's shall be located in the ceiling unless technically infeasible.
 - Install heating water unit heaters with line voltage thermostats and aquastats.
2. Install new ventilation system for new mechanical room.
 - Assume 2000 cfm fan and new intake and exhaust louvers with motorized dampers.
 3. Install new Direct Digital Control Building Automation System (DDC BAS) and Digital Thermostats throughout the building to allow for automated operation of the heating and cooling system with real-time system data and control.
 - Provide HVAC zones based upon room use and occupancy.
 4. Install new Dedicated Outdoor Air System (DOAS) for ventilation and new exhaust systems (All floors – Base Bid).

TREATMENT RECOMMENDATIONS

- Demolish all existing restroom and locker room exhaust systems and ductwork.
 - Install new ductwork, dampers, grilles/diffusers and ventilation fans/system serving Basement, First and Second floor spaces from central dedicated outdoor air unit(s) for fresh air and to provide positive pressure inside the building.
 - Install new self-contained DessertAire or similar units with total energy heat wheel, DX coil, hot gas reheat, DDC controls and supplemental heat for ventilation into fan coil units.
 - DOAS unit for 1911 building (west side of roof), 1000 EA/1150 SA.
 - DOAS unit for 1938 building (north roof above former locker rooms), 1250 EA/1450 SA.
 - DOAS exhaust for new locker rooms in proposed building addition, 2000 cfm roof mounted exhaust fan.
5. ALTERNATE OPTION: Instead of extensive 4-pipe HVAC system, install roof mounted Air Handling Units to provide heat and cooling through ductwork in 1911 and 1938 buildings. A smaller 4-pipe HVAC system will still be required.
- Install Variable Air Volume Air Handling Units with hot water reheat coils and DDC controls.
 - Basis of Design: Titus or equal Variable Air Volume boxes.
 - Install new Air Handling Unit for 1911 building - 10,000 cfm roof mounted AHU with plenum return fan(s), economizer, hot water preheat coil, chilled water coil, plenum fan(s), CO2 override control and service vestibule.
 - Install new Air Handling Unit for 1938 building - 12,000 cfm indoor AHU with plenum return fan(s), economizer, hot water preheat coil, chilled water coil, plenum fan(s) and CO2 override control and service vestibule.
 - Clean existing ductwork and install new ductwork for rehabilitation, add relief louvers and backdraft dampers.
6. Install new roof mounted air handling unit for east fitness rooms and locker rooms of proposed new building addition.
- Install one (1) 7500 cfm roof mounted Variable Air Volume multi-zone Air Handling Unit with economizer, hot water preheat coil, plenum fans, chilled and hot water multi-zone coils, CO2 OA override and service vestibule.
7. Install new roof mounted air handling unit for west gymnasium portion of the proposed new building addition.

TREATMENT RECOMMENDATIONS

- Install one (1) 9000 cfm roof mounted Variable Air Volume single zone Air Handling Unit with economizer, hot water preheat coil, plenum fans, chilled water coil, hot water reheat coil, CO2 OA override and service vestibule.
8. Install new exhaust fan system for interior restrooms
 - Install one (1) 1250 cfm roof mounted exhaust fan for the 1938 building restrooms.
 - Install one (1) 1000 cfm fan for the 1911 building restroom and general exhaust.
 - Install one (1) 1250 cfm roof mounted exhaust fan for the new locker rooms in proposed addition.
 9. Install new eye washing station in new mechanical room with tempering mixing.
 10. Install new mop sink in new Mechanical Room.
 11. Install three (3) new sump pumps in Basement.
 12. Install new duplex sewage ejector pumps and associated basin and cover in new Mechanical Room.
 13. Install new Fire Alarm System for entire building (All floors).
 - Remove existing zoned fire alarm system, devices and cabling.
 - Includes fire alarm panel, horns, strobes, heat and smoke detectors (fire devices) and cabling for code compliance with ability to expand in the future.
 14. Install new Fire Suppression System.
 - Install new 4" diameter water service for fire suppression system with double check backflow preventer and new Storz fire department connection.
 - Expand existing fire suppression system to include the entire building (existing and new construction).
 - Install a dry fire suppression system for the gallery spaces on second floor of 1911 building.
 15. Install all new exterior emergency egress light fixtures per code requirements.
 - Assume: Quantity ten (10) fixtures.

TREATMENT RECOMMENDATIONS

16. Install all new exit signs per code requirements.
 - Assume: Quantity of twenty (20) fixtures.
17. Install all new LED exterior building lighting.
 - Assume two (2) lights per elevation and one (1) light above each exterior door (Total quantity of six (6) lights).
18. Install all new LED light fixtures throughout the facility.
 - Assume that ALL existing light fixtures are replaced with new fixtures.
 - Install occupancy sensors and automatic time controls in compliance with IECC and/or ASRAE 90.1.
19. Install all new main distribution electrical panel, branch circuits, feeders, all new wiring and provide grounding for the entire building.
 - Determine source panels and consolidate active loads.
 - Demolish existing abandoned branch circuit conduit, wiring and all cloth wiring.
 - Demolish existing panels.
 - Install 1-phase load centers and consolidate branch circuits to new 3-phase panel(s) as required for rehabilitation work.
 - Install new 3-phase MDP panel for rehabilitation work.
 - Install all new panel feeders and branch circuits.
 - Includes circuits for HVAC and plumbing equipment.
 - Install new THHN/THWN insulated conductors.
 - Install all new light switches and outlets (all floors).
 - Assume all large offices: 6 to 8 duplex receptacles, 2 branch circuits each office.
 - Assume all small offices and staff work spaces: 4 duplex receptacles, 1 branch circuit each office.
 - Assume all corridors and stairs: 1 duplex receptacle and branch circuit.
 - Assume new basement Game Room: 6 duplex receptacles with 2 branch circuits and 2 dedicated circuits for TV/projector.
 - Assume all meeting rooms and gallery spaces: 6 duplex outlets with 2 branch circuits and 2 dedicated circuits for TV/Projector.
 - Assume all fitness rooms: 12 duplex outlets with 3 branch circuits and 2 dedicated circuits for TVs.
 - Assume gymnasium: Install new outlets in existing locations.
 - Assume each locker room will need 2 hand dryers – (2) 30 amp circuits each.

TREATMENT RECOMMENDATIONS

- Assume all other spaces not noted: 3 duplex outlets with 1 circuit.
20. Install separate meter for parking lot lighting from street lighting.
 - Separate parking lot controls.
 21. Install all new stage lighting and A/V equipment.
 - Install new electrical panel.
 - Install new repositionable stage lights.
 - Install new sound system.
 22. Install all new ADA compliant drinking fountains.
 - Assume: Quantity of three (3) dual height/dual spigot drinking fountains with chilled water.
 23. Provide new 4" floor drains in pits at water service Reduced Pressure Zone back flow preventer, boilers, chiller barrel and pumps.
 24. Replace all cold and hot water distribution piping.
 25. Install new hot water heater and associated piping.
 - Demolish existing north building water heater and associated piping and flue.
 - Install new indirect water heater for entire building with stainless steel heat exchanger utilizing boiler water for heating source, primary and secondary loop circulation pumps, expansion tank & mixing valve.

TELECOMMUNICATIONS

- I. Create new IT room.
 - Includes removal and relocation of all phone and data equipment from existing room in the 1951 portion of the basement into an existing room on the east side of the 1911 building.
 - Includes installation of independent mechanical D/X cooling for IT room.
 - Provide dedicated network rack for IT equipment, patch panel(s) and patch cabling within the new closet.
 - Reroute and extend all communication utility service entrance cables to the new closet.
 - Relocate existing video surveillance system equipment to new IT room.

TREATMENT RECOMMENDATIONS

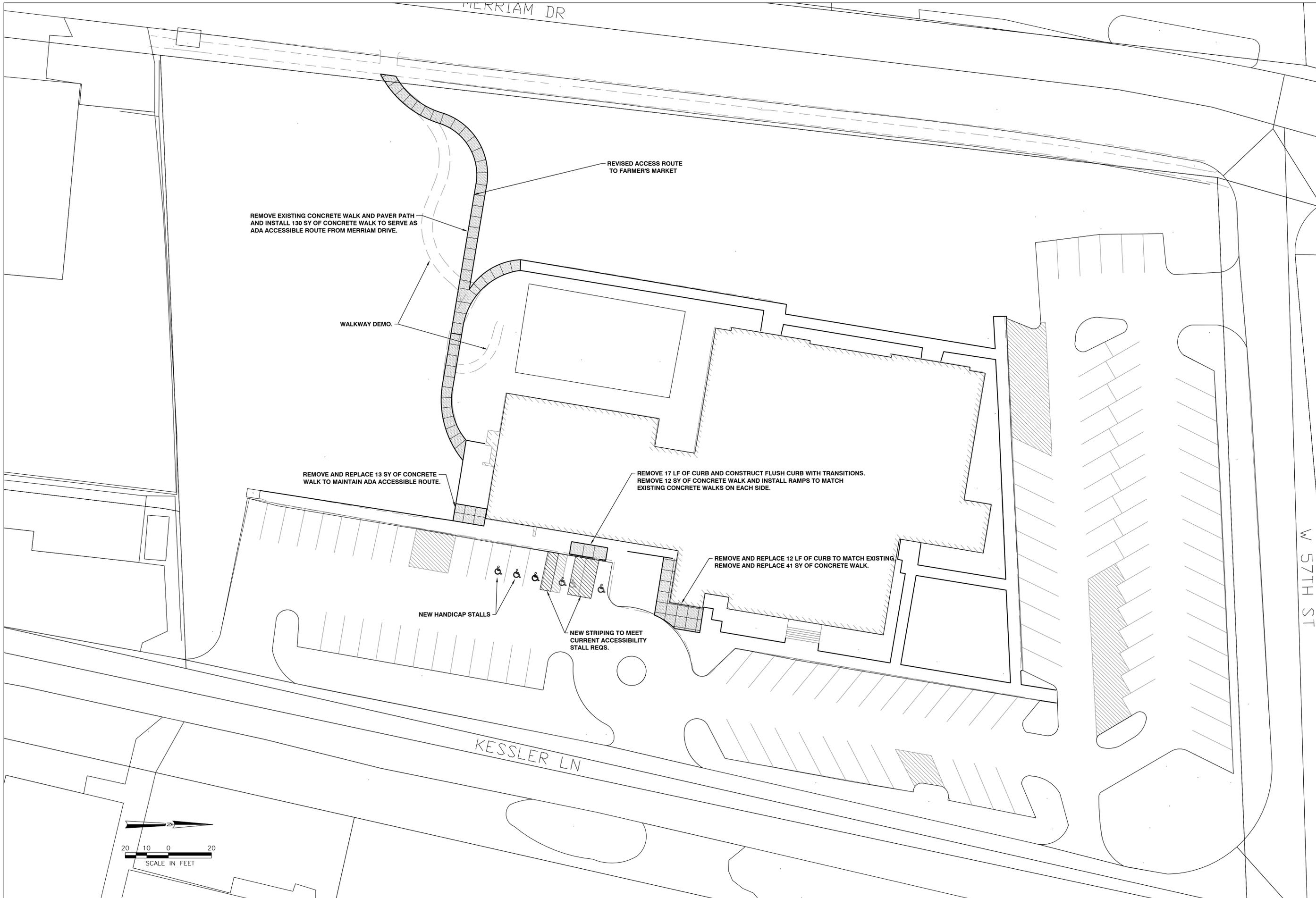
2. Install all new telecommunications wiring/cabling throughout the building, install with wire basket, cable tray and/or J-hooks above accessible ceilings.
 - Demolish all existing communications cables.
 - Assume new Cat6 plenum cabling in conduit with voice/data outlets throughout the facility.
 - Assume all large offices: 2 or 3 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables).
 - Assume all small offices and staff work spaces: 2 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables).
 - Assume main corridors: 2 outlet locations with phones and cables.
 - Assume Basement Game Room and Campbell Room: 4 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables).
 - Assume First Floor meeting rooms and gallery spaces: 4 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables, one ceiling mounted connection at minimum).
 - Assume fitness rooms: To be determined, varies based on equipment and if each machine requires a separate connection.
 - Assume gymnasium: 2 outlet locations near stage (each outlet having 1 voice and 2 data jacks with 3 cables).
 - Assume reception and copy room: 4 outlet locations (each outlet having 1 voice and 2 data jacks with 3 cables).
 - All other rooms not noted: assume 1 outlet location (having 1 voice and 2 data jacks with 3 cables).
3. Telephone system improvements
 - Separate the shared phone system with the City of Merriam in order to provide a stand-alone public address system in the building.
 - Determine if existing phone switch is re-usable and relocate existing phone switch equipment.
4. Install new Public Address (PA) system.
 - Relocate existing PA system equipment to the new IT room.
 - Install new speakers throughout the facility.
 - Assume: One (1) new speaker per room, and two (2) in corridors.
5. Expand existing security system.
 - Relocate surveillance cameras within the rehabilitated facility as required.
 - Add additional video surveillance cameras, cabling and equipment.

TREATMENT RECOMMENDATIONS

- Assume: Quantity of five (5) new cameras.

OPTIONAL

- I. Lighting protection system for entire building (not included in cost estimate).



REMOVE EXISTING CONCRETE WALK AND PAVER PATH AND INSTALL 130 SY OF CONCRETE WALK TO SERVE AS ADA ACCESSIBLE ROUTE FROM MERRIAM DRIVE.

WALKWAY DEMO.

REMOVE AND REPLACE 13 SY OF CONCRETE WALK TO MAINTAIN ADA ACCESSIBLE ROUTE.

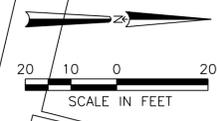
REVISED ACCESS ROUTE TO FARMER'S MARKET

REMOVE 17 LF OF CURB AND CONSTRUCT FLUSH CURB WITH TRANSITIONS. REMOVE 12 SY OF CONCRETE WALK AND INSTALL RAMPS TO MATCH EXISTING CONCRETE WALKS ON EACH SIDE.

REMOVE AND REPLACE 12 LF OF CURB TO MATCH EXISTING. REMOVE AND REPLACE 41 SY OF CONCRETE WALK.

NEW HANDICAP STALLS

NEW STRIPING TO MEET CURRENT ACCESSIBILITY STALL REGS.



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**IRENE B. FRENCH COMMUNITY CENTER
 CONCEPTUAL DESIGN - CIVIL
 5701 MERRIAM DRIVE
 MERRIAM, KANSAS 66203**

All drawings and written information appearing herein shall not be duplicated, disclosed or otherwise used without the written consent of the architect.

DATE: MAY 5, 2015
 REVISION & DATE:

SHEET NUMBER:

ADA ACCESSIBILITY MODIFICATIONS

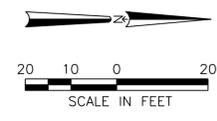
EXHIBIT 3

MERRIAM DR

KESSLER LN

W 57TH ST

PARKING COUNT
EXIST ADA: 3
EXIST STANDARD: 112
NEW ADA: 5
NEW STANDARD: 109



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DATE: MAY 5, 2015
REVISION & DATE:

SHEET NUMBER:
PARKING CIRCULATION
OPTION 1
EXHIBIT 4

MERRIAM DR

KESSLER LN

15 5TH W

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DATE: MAY 5, 2015
REVISION & DATE:

SHEET NUMBER:
PARKING CIRCULATION
OPTION 2
EXHIBIT 5



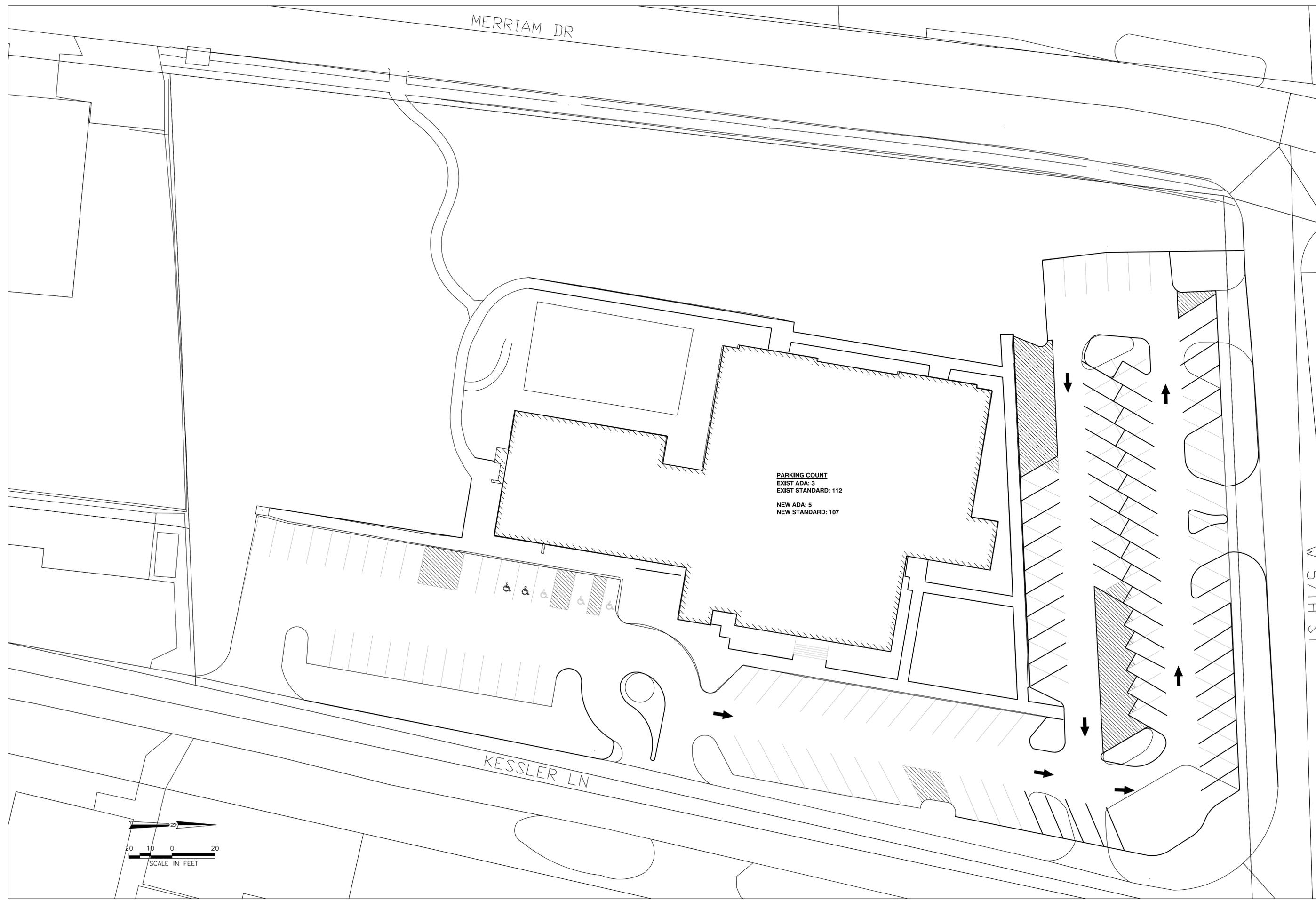
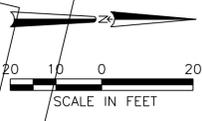
SK Design Group, Inc.
Civil Engineers
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Overland Park, KS 66211
(913)-451-1818
fax (913)-451-7599
www.skdg.com

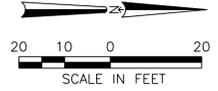
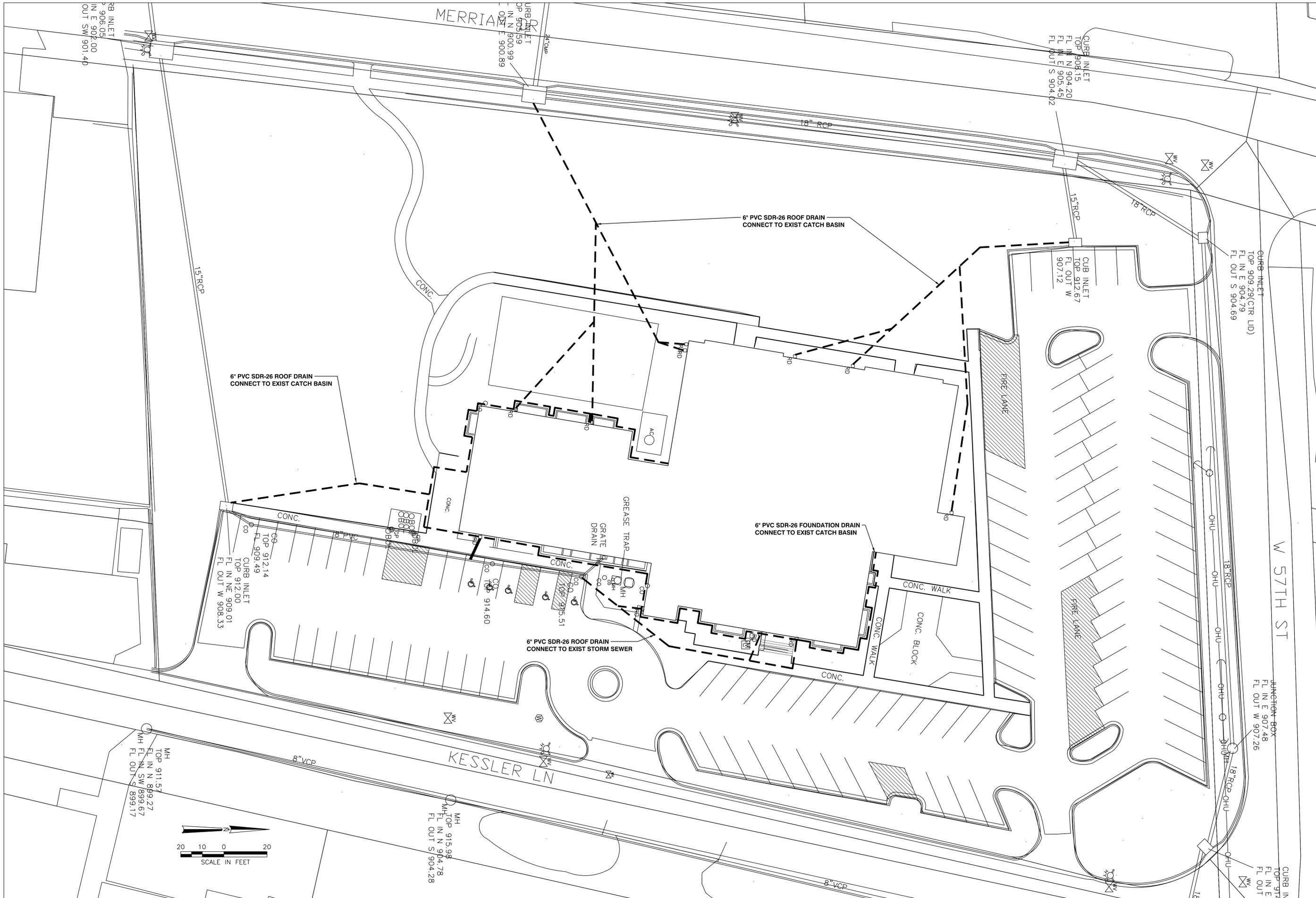


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Website: www.srjarchi.com

Susan Richards Johnson & Associates, Inc.
Missouri State Certificate of Authority #2007024884

PARKING COUNT
EXIST ADA: 3
EXIST STANDARD: 112
NEW ADA: 5
NEW STANDARD: 107





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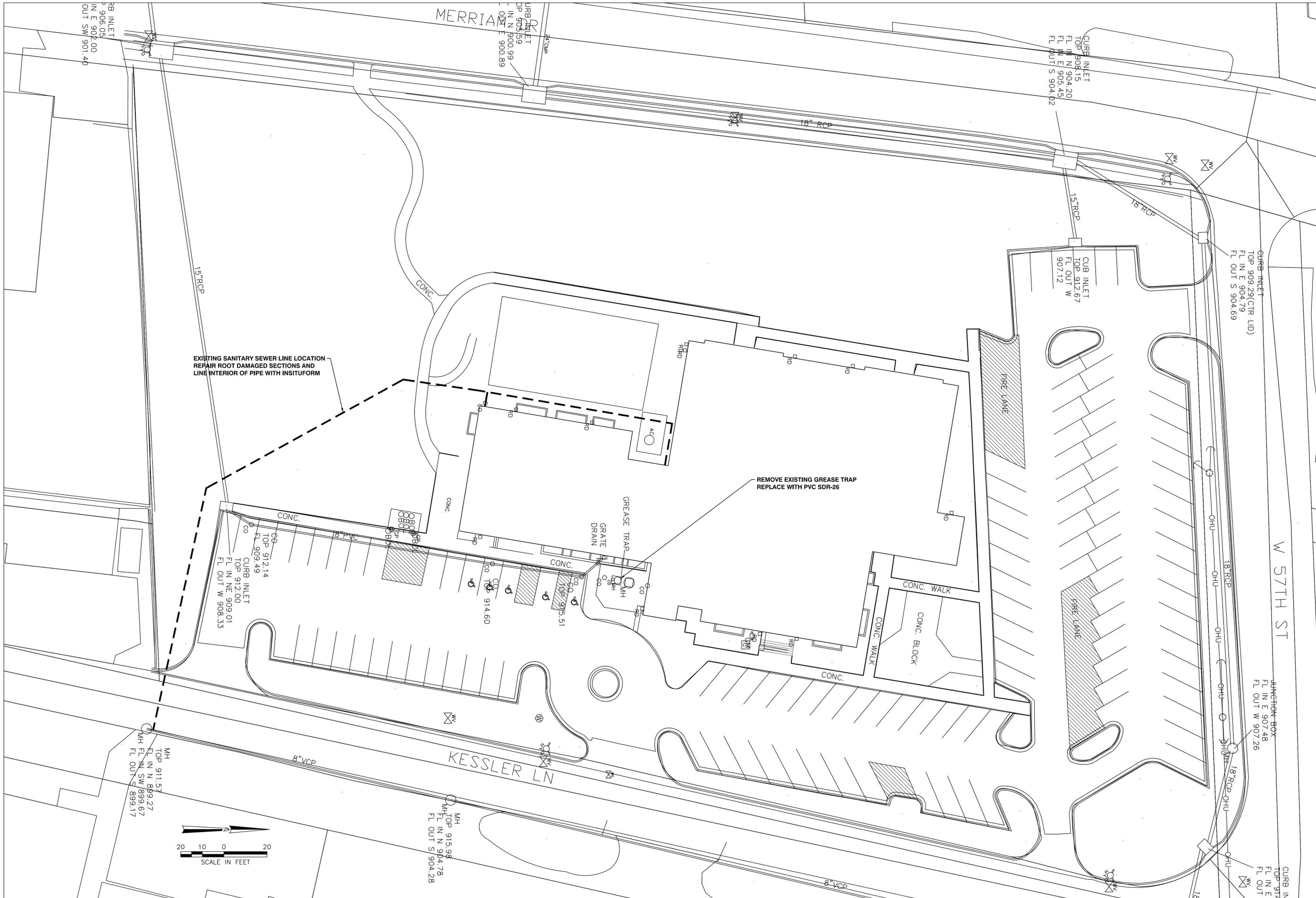
**IRENE B. FRENCH COMMUNITY CENTER
 CONCEPTUAL DESIGN - CIVIL
 5701 MERRIAM DRIVE
 MERRIAM, KANSAS 66203**

All drawings and written information appearing herein shall not be duplicated, disclosed or otherwise used without the written consent of the architect.

DATE: MAY 5, 2015
 REVISION & DATE:

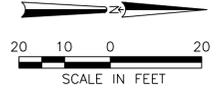
SHEET NUMBER:

SITE DRAINAGE
 EXHIBIT 6



EXISTING SANITARY SEWER LINE LOCATION
REPAIR ROOT DAMAGED SECTIONS AND
LINE INTERIOR OF PIPE WITH INSITUFORM

REMOVE EXISTING GREASE TRAP
REPLACE WITH PVC SDR-26



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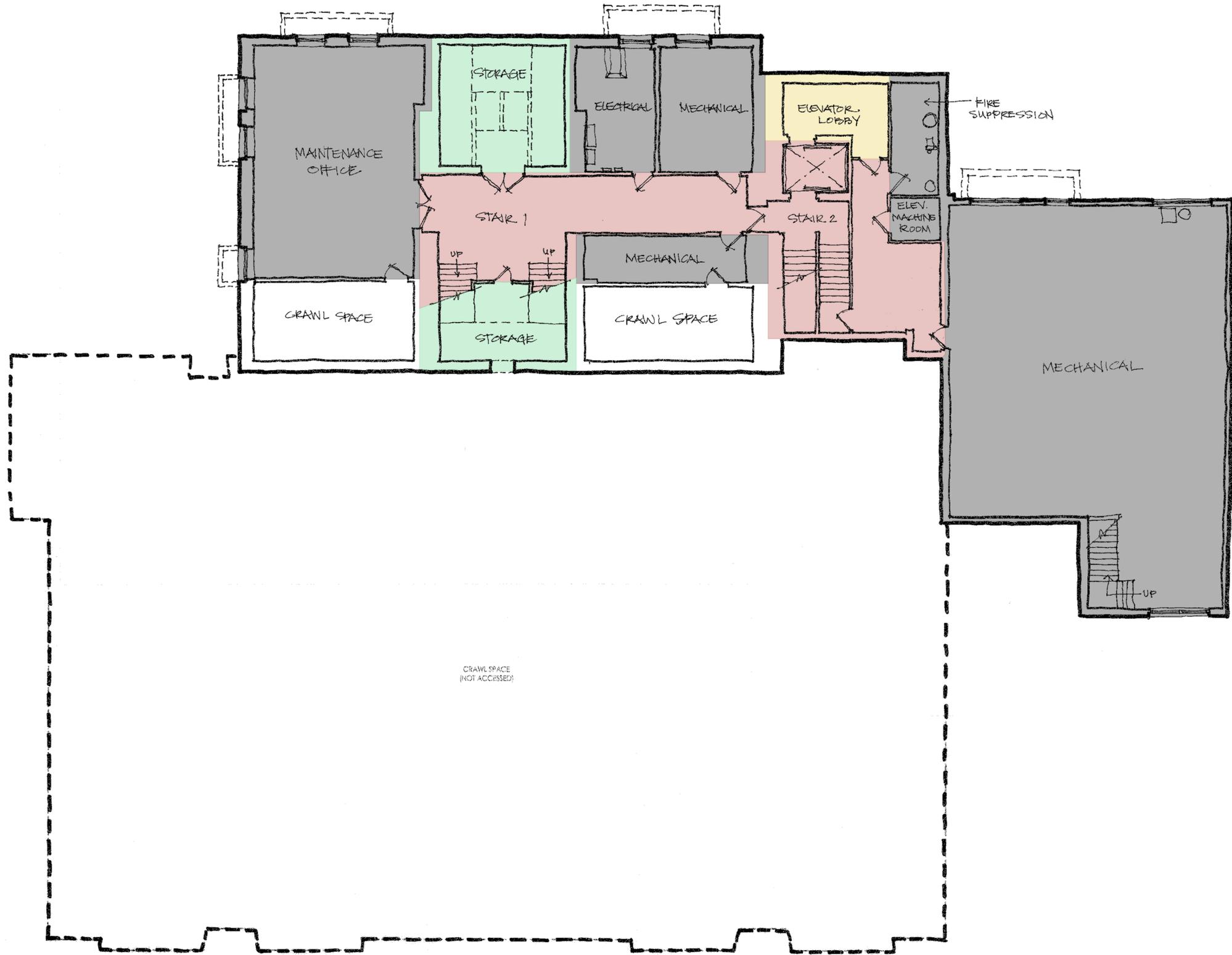
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DATE: MAY 5, 2015
REVISION & DATE:

SHEET NUMBER:
SEWER AS-BUILT/REPAIR
EXHIBIT 7



B OPTION B - PROPOSED BASEMENT FLOOR PLAN

Scale: 1/8" = 1'-0"

NORTH



- LOBBY
- PUBLIC SPACE
- CIRCULATION
- STAFF SPACES
- MECHANICAL
- SUPPORT SPACES
- STORAGE

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IRENE B. FRENCH COMMUNITY CENTER
CONCEPTUAL DESIGN - OPTION B
 5701 MERRIAM DRIVE
 MERRIAM, KANSAS 66203

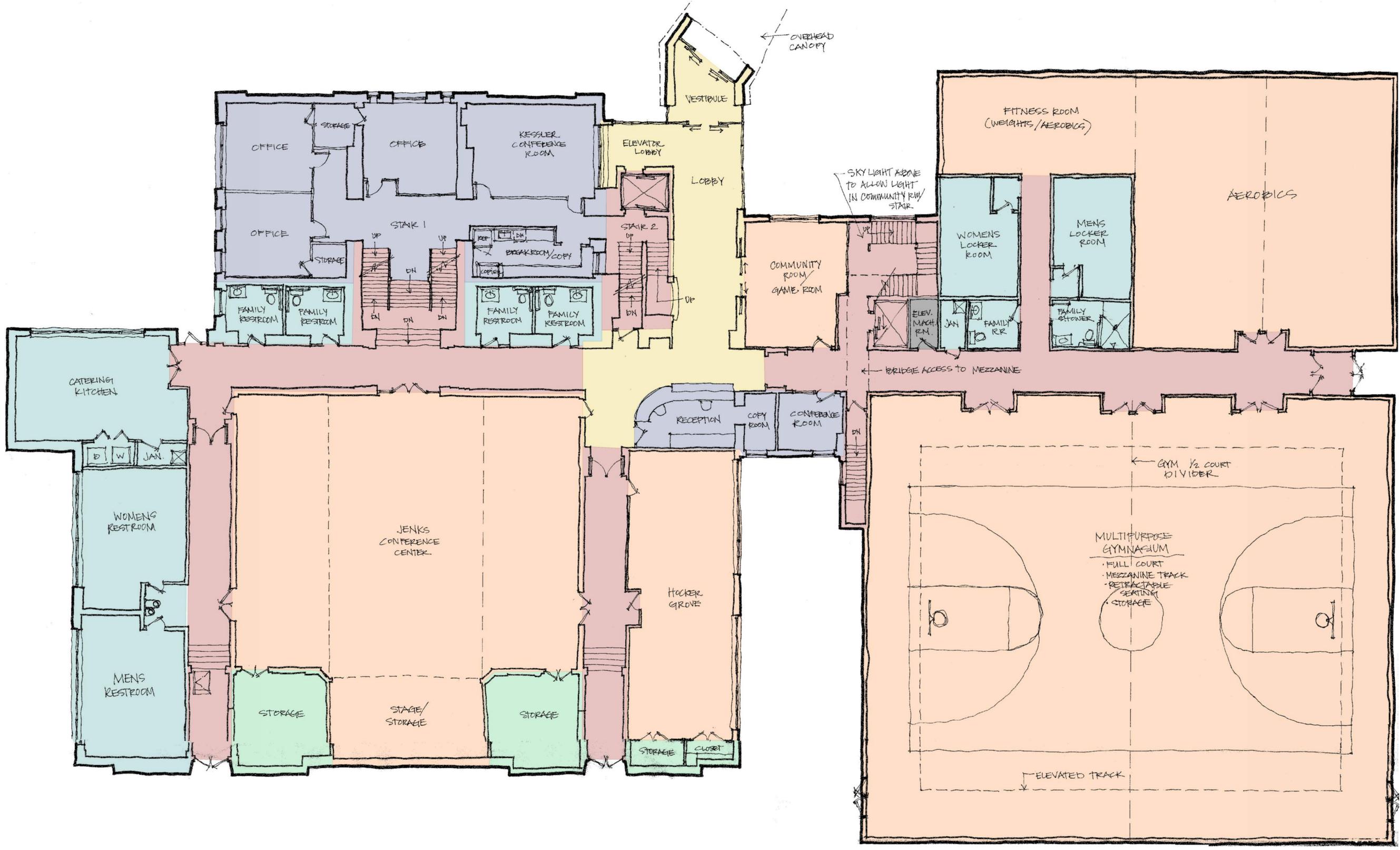
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DATE: MAY 5, 2015
 REVISION & DATE:

PROPOSED BASEMENT FLOOR PLAN

SHEET NUMBER:

B/AO



**IRENE B. FRENCH COMMUNITY CENTER
 CONCEPTUAL DESIGN - OPTION B
 5701 MERRIAM DRIVE
 MERRIAM, KANSAS 66203**

All drawings and written information appearing herein shall not be duplicated, disclosed or otherwise used without the written consent of the architect.

DATE: MAY 5, 2015
 REVISION & DATE:

PROPOSED FIRST FLOOR PLAN
 SHEET NUMBER:

B/A1

1 OPTION B - PROPOSED FIRST FLOOR PLAN

Scale: NOT TO SCALE



 LOBBY	 MECHANICAL
 PUBLIC SPACE	 SUPPORT SPACES
 CIRCULATION	 STORAGE
 STAFF SPACES	



2 OPTIONS B - PROPOSED SECOND FLOOR PLAN

Scale: 1/8" = 1'-0"
 NORTH

- LOBBY
- PUBLIC SPACE
- CIRCULATION
- STAFF SPACES
- MECHANICAL
- SUPPORT SPACES
- STORAGE



CONSTRUCTION MANAGEMENT RESOURCES, LLC

ESTIMATING • SCHEDULING • PROJECT MANAGEMENT • CONSULTING
5201 JOHNSON DRIVE, SUITE 330, MISSION, KANSAS 66205 (913) 262-6715 • FAX (913) 262-1380

Irene B. French Community Center
Merriam, KS
Susan Richards Johnson & Associates
Preliminary Estimate Estimate 05/05/2015

18,437 SF

25,268 SF

DESCRIPTION	TOTAL	Addition	\$/SF	Renovation	\$/SF	Site
Option B						
01 00 00 GENERAL CONDITIONS	814,843	390,863	21.20	389,980	15.43	34,000
02 41 00 DEMOLITION	240,338	-	0.00	232,631	9.21	7,707
02 50 00 HAZARDOUS MATERIAL ABATEMENT	6,244	-	0.00	6,244	0.25	-
03 30 00 CAST-IN-PLACE CONCRETE	244,601	198,457	10.76	46,144	1.83	-
04 01 20 MASONRY RESTORATION AND CLEANING	112,500	-	0.00	112,500	4.45	-
04 20 00 UNIT MASONRY	698,491	681,471	36.96	17,020	0.67	-
05 12 00 STRUCTURAL STEEL	612,244	513,814	27.87	82,019	3.25	16,412
06 10 00 ROUGH CARPENTRY	36,093	9,190	0.50	26,902	1.06	-
06 40 16 INTERIOR ARCHITECTURAL WOODWORK	95,757	18,437	1.00	77,320	3.06	-
07 13 00 SHEET WATERPROOFING	3,376	-	0.00	3,376	0.13	-
07 21 00 THERMAL INSULATION	565	565	0.03	-	0.00	-
07 50 00 MEMBRANE ROOFING	253,479	120,898	6.56	127,111	5.03	5,471
07 60 00 SHEET METAL FLASHING AND TRIM	17,835	13,786	0.75	1,967	0.08	2,082
07 92 00 JOINT SEALANTS	10,140	4,001	0.22	6,139	0.24	-
08 11 00 STEEL DOOR & FRAMES	12,850	10,100	0.55	2,750	0.11	-
08 11 73 SLIDING METAL DOORS	2,500	-	0.00	2,500	0.10	-
08 14 16 FLUSH WOOD DOORS	23,250	15,000	0.81	8,250	0.33	-
08 41 00 ALUMINUM ENTRANCES AND STOREFRONTS	69,007	34,030	1.85	34,977	1.38	-
08 51 13 ALUMINUM WINDOWS	2,275	-	0.00	2,275	0.09	-
08 71 00 DOOR HARDWARE	21,700	14,000	0.76	7,700	0.30	-
09 21 16 GYPSUM SYSTEMS	160,729	31,999	1.74	128,731	5.09	-
09 30 13 CERAMIC TILE	71,029	20,205	1.10	50,824	2.01	-
09 51 00 ACOUSTICAL PANEL CEILINGS	72,464	17,421	0.94	55,043	2.18	-
09 64 00 WOOD FLOORING	195,725	59,525	3.23	136,200	5.39	-
09 65 13 RESILIENT WALL BASE AND ACCESSORIES	5,621	1,782	0.10	3,839	0.15	-
09 65 19 RESILIENT TILE FLOORING	35,222	29,923	1.62	5,299	0.21	-
09 66 00 TERRAZZO	56,141	12,109	0.66	44,032	1.74	-
09 68 00 CARPET	44,949	-	0.00	44,949	1.78	-
09 90 00 PAINTING	84,375	28,868	1.57	55,507	2.20	-
10 14 00 SIGNS	36,000	10,750	0.58	14,250	0.56	11,000
10 21 13 TOILET COMPARTMENTS	16,375	5,700	0.31	10,675	0.42	-
10 22 26 OPERABLE PARTITIONS	86,112	-	0.00	86,112	3.41	-
10 28 00 TOILET AND BATH ACCESSORIES	13,600	5,555	0.30	8,045	0.32	-
10 44 00 FIRE-PROTECTION SPECIALTIES	1,950	900	0.05	1,050	0.04	-
10 51 00 METAL LOCKERS	15,300	15,300	0.83	-	0.00	-
11 40 00 FOOD SERVICE EQUIPMENT	15,000	-	0.00	15,000	0.59	-
11 66 00 ATHLETIC EQUIPMENT	80,500	80,500	4.37	-	0.00	-
12 60 00 MULTIPLE SEATING	-	-	0.00	-	0.00	-
14 20 00 ELEVATORS	75,000	75,000	4.07	-	0.00	-
21 00 00 FIRE PROTECTION	147,388	73,748	4.00	73,640	2.91	-
22 00 00 PLUMBING	316,750	129,875	7.04	186,875	7.40	-
23 00 00 HVAC	1,495,161	642,919	34.87	852,242	33.73	-
26 00 00 ELECTRICAL	1,094,218	359,521	19.50	659,697	26.11	75,000
27 50 00 A/V EQUIPMENT	20,000	-	0.00	20,000	0.79	-
31 20 00 EARTH MOVING	40,380	18,822	1.02	-	0.00	21,558
31 31 00 TERMITE CONTROL	3,022	3,022	0.16	-	0.00	-
32 12 16 ASPHALT PAVING	6,503	-	0.00	-	0.00	6,503
32 13 13 CEMENT CONCRETE PAVING	8,209	-	0.00	-	0.00	8,209
32 92 00 LAWN & GRASSES	2,098	-	0.00	-	0.00	2,098
32 93 00 EXTERIOR PLANTS	43,317	-	0.00	-	0.00	43,317
33 10 00 WATER DISTRIBUTION	14,000	-	0.00	-	0.00	14,000
33 30 00 SANITARY SEWERAGE	15,000	-	0.00	-	0.00	15,000
33 40 00 STORM DRAINAGE	50,000	-	0.00	-	0.00	50,000
33 46 16 FOUNDATION DRAINAGE SYSTEMS	4,972	-	0.00	-	0.00	4,972
subtotal	7,605,200	3,648,058	197.87	3,639,814	144.05	317,329
Contractor's Fee 6%	456,312	218,883	11.87	218,389	8.64	19,040
subtotal	8,061,512	3,866,941	209.74	3,858,203	152.69	336,369
Design/Estimate Contingency 15%	1,209,227	580,041	31.46	578,730	22.90	50,455
subtotal	9,270,739	4,446,982	241.20	4,436,933	175.59	386,824
Escalation to Mid-Point - 01/30/2017 5.3%	491,206	235,621	12.78	235,089	9.30	20,496
TOTAL	9,761,945	4,682,603	253.98	4,672,022	184.90	407,320

TREATMENT RECOMMENDATIONS

Intermediate Recommendations: (2-5 years)

OPTION C – New Community Center

New facility based upon a schematic program of spaces and general gross square footage for new facility on a site yet to be determined.

Schematic Facility Program Includes:

- Entry Lobby.
- Reception/Control Desk.
- Staff offices, break room, work area, small private conference room.
- Elevator and circulation stairs.
- Art Gallery.
 - Integration of the arts into the main corridors as well as the main conference rooms in addition to a separate art gallery space.
- Men's, Women's, Family Locker Rooms.
- Men's, Women's, Family Restrooms (similar to Option B quantities).
- Fitness/Weight Room.
- Aerobics rooms (2 rooms, one large and one medium sized). The larger aerobics room to have a folding acoustic fabric covered wall partition.
- Full Sized Multi-Purpose Gymnasium with raised mezzanine walking track.
 - Includes storage space.
 - Retractable bleacher seating.
 - Retractable and height adjustable basketball goals.
 - Volleyball station setup.
 - Digital Scoreboard.
 - Vinyl gymnasium divider.
 - A/V Sound System.
- Catering Kitchen.
 - Provide allowance for catering kitchen equipment and small commercial kitchen hood.
 - Includes space for minor food prep and storage.
 - Includes a small workspace for Meals on Wheels coordinator.
- Large Conference/Banquet Room – Occupancy of 300 people (approximately 5,500 square feet).
 - One (1) space.
 - Two (2) motorized folding acoustic partitions to divide the space into three (3) spaces.

TREATMENT RECOMMENDATIONS

- Separate storage closet for table and chair storage.
- Provide A/V allowance for three (3) projection screens and projectors, sound system.
- Medium Conference Room – Occupancy of 120 people (approximately 2,500 square feet).
 - One (1) room.
 - One (1) motorized folding acoustic partition to divide the space into two (2) spaces.
 - Separate storage closet for table and chair storage.
 - Provide A/V allowance for two (2) projection screens and projectors, sound system.
- Small Conference/Classrooms – Occupancy of 50 people (approximately 1,500 square feet).
 - Two (2) small classroom spaces.
 - Each room includes small counter with sink.
 - Each room includes separate storage closet for table and chair storage.
 - Provide A/V allowance for two (2) projection screens and projectors.
- Maintenance and mechanical spaces.

CIVIL

Site yet to be determined. Any land acquisition costs would need to be included in addition to the total cost for the building and infrastructure.

1. Install new utilities for the new facility.
 - Water, sewer, storm water, natural gas, electrical and communications.
2. Install new landscaping.
 - Assume trees, perennials, shrubs, grass, entry sculpture.
3. Install new parking, drives, sidewalks, site lighting and parking/street lights.
 - Assume asphalt paving, concrete curbs, concrete sidewalks, LED site lighting, parking lot lighting and street lights.
 - Includes parking lot striping, monumental signs at a quantity of two (2) and parking lot signage.

TREATMENT RECOMMENDATIONS

ARCHITECTURAL

- I. New Facility is to be a building of approximately 34,000 total gross square feet. Main building program is proposed to be all on one level with partial basement and gymnasium walking track accessed by elevator and stair.
 - Exterior materials include: concrete slab-on-grade with concrete grade beam foundation, cast-in-place concrete partial basement structure, anodized aluminum storefront windows and doors with operable awning windows, load bearing CMU with clear span bar joists and galvanized roof deck (gymnasium), steel frame structure with metal stud infill, TPO or EPDM membrane roofing and prefinished metal cap, metal stud furring, fiberglass batt insulation, gypsum board, rigid insulation, limestone veneer, brick veneer, prefinished metal panels, glass skylights and glass light monitor.
 - Building shall have drop-off entrance canopy and outdoor seating area.
 - Interior materials include:
 - Painted gypsum board, burnished CMU, ceramic tile for wet walls, plumbing fixtures and accessories, high density plastic and stainless steel toilet partitions, broadloom carpet, terrazzo flooring, rubber base, sport court composite athletic flooring for all fitness spaces, acoustic ceiling tile, metal lockers, cedar wood saunas, interior wayfinding signage, art gallery tackable wall surfaces and integrated art gallery picture rail system with stainless steel cabling, solid core wood veneer doors and painted hollow metal frames, brushed stainless steel hardware, plastic laminate casework, and solid surface counter tops.
 - Circulation: Assume one (1) elevator with 3 stops and two (2) fire rated egress stairs (minimum) and one (1) open stair connecting two levels.

MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION

- I. All new plumbing fixtures, piping and accessories, HVAC, electrical and fire suppression and fire alarm systems:
 - Assume facility is being designed per LEED sustainability guidelines to allow the City the option for pursuing LEED Certification.
 - Assume roof top Air Handling Units for heating and cooling.
 - Assume roof top Direct Outside Air System units for fresh air and exhaust system.
 - Assume 1000 MBS fiber internet with Voice Over IP phone system.
 - Assume new Public Address system.
 - Assume new 3-phase electrical system.

TREATMENT RECOMMENDATIONS

- Assume plumbing fixtures to be vitreous china with heavy duty chair carriers and dual 1.1/1.6 GPF flush valves and automatic controls.
 - Assume sinks are vitreous china drop in lavatories with automatic faucets in restrooms and lever handles in the locker rooms.
 - Assume shower heads are Powers or equal pressure balanced, anti-scald shower heads.
 - Assume plumbing faucets and bath accessories (soap, paper towels, hand dryers) to be automatic hard wired, recessed trash bins.
 - Assume new hot water heaters will be gas fired.
 - Assume all new light fixtures will be LED with dimmable capability in the conference rooms/rentable areas.
 - Install occupancy sensors and automatic time controls in compliance with IECC and/or ASRAE 90.1.
2. Direct Digital Control Building Automation System (DDC BAS) and Digital Thermostats throughout the building to allow for automated operation of the heating and cooling system with real-time system data and control.
 - Provide HVAC zones based upon room use and occupancy.
 3. Fire Alarm System for entire facility per building code.
 4. Fire Suppression System for fully sprinkled facility per building code.

TELECOMMUNICATIONS

1. Telecommunications wiring/cabling throughout the building, install with wire basket, cable tray and/or J-hooks above accessible ceilings.
 - Assume new Cat6 plenum cabling in conduit with voice/data outlets throughout the facility.
 - New Telephone System.
 - Separate system with the City of Merriam in order to provide a stand-alone public address system in the building.
2. Public Address (PA) system.
 - Install new speakers throughout the facility.
 - Assume: Quantity of one (1) new speaker per room, and two (2) in corridors.

TREATMENT RECOMMENDATIONS

3. New Security System.

- Assume complete intrusion alarm and access control system with panic button for control desk and motion sensors, door contacts, glass breaks sensors, CCTV security cameras throughout the facility.

OPTIONAL (not included in cost estimate)

1. Ground Source Heat Pumps.
2. Photovoltaic Solar Panel Array.
3. Solar Hot Water System (Evacuated Tubes).
4. Lightning protection system for entire building.

TREATMENT RECOMMENDATIONS

TREATMENT RECOMMENDATIONS

Short-Term Recommendations: (5-10 years)

Short-Term treatment recommendations have not been included in the cost estimates due to the following factors. An Intermediate option (Option A, B or C) will need to be chosen first and this decision can dramatically affect the items under the Short-Term Recommendations. Secondly, cost estimate data for potential construction projects beyond two years is very difficult to anticipate as the construction market can shift rapidly.

CIVIL

1. Asphalt paving
 - Fill cracks as needed to prevent water from entering the asphalt.
 - Seal coat every three to five years.
 - Restripe parking lot every three to five years.
2. General cleaning and maintenance of drainage systems.
 - Inspect and clean storm drains and inlets. Remove blockages as required.
 - Inspect and clean exterior building gutters, downspouts, foundation drains, sump pumps and window wells on a seasonal basis.
3. Replace exterior plantings as required.
 - The trees on site are matured. Their exact age is unknown. It is anticipated that they will require replacement in the future as they reach the end of their expected life-span. Street and ornamental trees in constricted areas typically have a life expectancy of 15-20 years before they begin to pose a threat to public safety.

ARCHITECTURAL

2. Install all new exterior windows and doors.
 - Assume dark bronze anodized thermally broken aluminum commercial grade storefront windows with operable sashes to match existing window configuration and function.
3. Replace existing inclined stair platform lift with new more compact lift.
4. Service elevator on an annual basis.
5. Renovate Second Floor Gallery Spaces with new interior finishes.
 - Refinish exposed original hardwood floors. Install new carpeting, paint existing gypsum board walls, install new tackable fabric wallcoverings.

TREATMENT RECOMMENDATIONS

6. Update the facility's comprehensive maintenance plan for care of materials and integration of technology and facility tracking software.
 - Update facility maintenance tracking software (optional).

MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION

7. Replacement of light fixtures with the latest energy efficient fixtures.
8. Consider installing an emergency back-up generator for the facility.
 - Generator to be located in close proximity to main electrical room on the north side of the building outside of the flood plane.
9. Conduct annual inspections of all fire alarm, fire suppression and security systems by a qualified professional.
10. Replacement of HVAC equipment should be assessed as it reaches the end of its service life.
 - Consult 2011 ASHRAE Service Life Estimates table for additional information. A copy of this table is included in the Maintenance Manual of this report.

TREATMENT RECOMMENDATIONS

Long-Term Recommendations: (10-20 years and Beyond)

Long-Term treatment recommendations have not been included in the cost estimates due to the following factors. An Intermediate option (Option A, B or C) will need to be chosen first and this decision can dramatically affect the items under the Long-Term Recommendations. Secondly, cost estimate data for potential construction projects beyond two years is very difficult to anticipate as the construction market can shift rapidly.

CIVIL

1. Asphalt paving.
 - Fill cracks as needed to prevent water from entering the asphalt.
 - Seal coat every three to five years.
 - Restripe parking lot every three to five years.
2. General cleaning and maintenance of drainage systems.
 - Inspect and clean storm drains and inlets. Remove blockages as required.
 - Inspect and clean exterior building gutters, downspouts, foundation drains, sump pumps and window wells on a seasonal basis.

ARCHITECTURAL

3. Exterior rehabilitation of building envelope and roofs.
 - Complete an exterior assessment of the building to determine level of materials deterioration. Repair materials as required:
 - Repointing masonry
 - Replace building control joint sealants.
 - Replace window and door sealants and hardware.
 - Replace membrane roofing and replacement of drainage system components.
4. Renovate and install new interior finishes in main public spaces.
 - Assume replacement in: Corridors, Gymnasium, meeting/conference room spaces, and Art Gallery areas.
 - Assume painting of all walls, installation of 50 percent new ceiling tiles, installation of new carpeting, toilet partitions, bath and plumbing, fittings and accessories.
5. Update the facility's comprehensive maintenance plan and integration of technology and facility tracking software.

TREATMENT RECOMMENDATIONS

6. Replace 1989-90 hydraulic elevator.
 - After twenty (20) to twenty-five (25) years of service, elevators (controls, rails, cabs) typically require modernization and/or complete replacement.

MECHANICAL, ELECTRICAL, PLUMBING & FIRE PROTECTION

7. Replace fire alarm panel.
 - Typical replacement of these panels is every 16 years.

8. Replacement of HVAC equipment as it reaches the end of its service life.
 - The following list of equipment which may need to be replaced. The information is from the 2011 ASHRAE Service Life Estimates table. A copy of this table is included in the Maintenance Manual of this report.
 - Boilers (21-30 years).
 - Diffusers, grilles and registers (27 years).
 - Variable Air Volume (VAV) and double-duct boxes (20 years).
 - Fan Coil Units (FCU) (20 years).
 - Furnaces (18 years).
 - Air Purifiers (17 years).
 - Ductwork (30 years).
 - Dampers (20 years).
 - Fans (15-25 years).
 - Coils (DX, water or steam) (20 years).
 - Heat Exchangers (24 years).
 - Reciprocating Compressors (20 years).
 - Packaged Centrifugal Chillers (25+ years).
 - Condensers (20 years).
 - HVAC Insulation (20-24 years).
 - Pumps (Base mounted) (20 years).
 - Sump Pumps and Well (10 years).
 - Electric Transformers (30 years).
 - Controls (Pneumatic) (20 years).
 - Controls (Electric/Electronic) (16 years).
 - Valve Actuators (Hydraulic) (15 years).
 - Valve Actuators (Pneumatic) (20 years).
 - Hot Water Heater (10-15 years).

TREATMENT RECOMMENDATIONS

Additional Investigation and Research Recommendations:

- Develop a pre-qualifications checklist and evaluation form for assessing contractor and subcontractor credentials and experience level for work on City of Merriam Parks and Recreation projects/facilities.
 - Solicit through Request for Qualifications (RFQ) for compiling a pre-qualified list of design professionals to perform work on Parks and Recreation facilities.
 - Solicit through Request for Qualifications (RFQ) for creation of a pre-qualified list of general and specialty contractors to perform work on Parks and Recreation facilities.
 - It is recommended that the RFQ include:
 - Years of experience.
 - Experience in the past five (5) years on similar type design and/or construction.
 - Performance criteria by discipline (general, sitework, masonry, windows/doors, roofing, mechanical, electrical, plumbing, telecommunications, etc.).
 - Resumes of Key Personnel designated to be managing and working on the project.
 - References for the Company.
 - Portfolio of Past Work to include:
 - Project Type.
 - Project Description.
 - Project Cost / Percentage of Change Orders.
 - Estimated time frame of availability to begin project.

TREATMENT RECOMMENDATIONS

TREATMENT RECOMMENDATIONS

Cost Estimates

The Design Team along with Construction Management Resources (CMR) has compiled probable construction cost estimates for the Immediate, Intermediate (Options A, B and C), Short-Term and Long-Term phases outlined within this section. These cost estimates include costs for general conditions (contractor fees, general requirements and mobilization costs), escalation of construction costs over the next 2 years (2015 to 2017) and a design/estimate contingency. The design/estimate contingency cost is included due to the conceptual nature of the plans associated with the study at this time. Once the final design direction and the potential future rehabilitation or new construction project is defined and construction documents are developed, the design contingency would be reduced or eliminated. The escalation of construction costs percentage is included in order to accommodate the rise of construction costs due to inflation, labor rate increases, and costs of materials over time. The detailed cost estimate for each of the three treatment options is included at the end of this report.

Hazardous materials abatement budgetary cost estimates were prepared by a qualified local contractor with design team input based upon the findings from the hazardous materials assessment and laboratory testing from samples taken in the field. The hazardous materials abatement cost has been incorporated into the overall budgetary cost estimate prepared by CMR

and the breakdown of the number is included at the end of this report.

Costs for soft costs including professional design fees have not been included in the construction cost estimates; typically these costs range from 10% to 15% of the total construction cost and will need to be added to the totals listed below.

It should be noted that the value for the Immediate treatment recommendations is assumed to be work that will be completed over the next two years prior to the Intermediate scope of work. The cost estimates for the Intermediate assume that the Immediate work has been completed. The Immediate scope of work is an additive value that is not reflected in the Intermediate Option A, B or C work.

Total Cost for Immediate Rehabilitation Work (0-2 years): \$ 372,753

Total Costs for Intermediate Option A - Rehabilitation of Existing Building (2-5 years): \$ 5,608,433

Total Costs for Intermediate Option B - Rehabilitation of Existing Building and New Addition (2-5 years): \$ 9,761,945

Total Costs for Intermediate Option C - New Community Center Building (Site yet to be determined) (2-5 years): \$ 15,393,035

TREATMENT RECOMMENDATIONS

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Immediate Actions Required			
Demo Walks	594 SF	1.00	594
Demo Curb & Gutter	29 LF	1.50	44
New Walks	594 SF	6.00	3,564
New Curb & Gutter	29 LF	20.00	580
Restripe Parking Lot	109 EA	25.00	2,725
Demo Outdoor Shower and Patch as needed	1 EA	500.00	500
Demo Topping Slab @ Old Coal Room	338 SF	5.00	1,688
Water Proofing @ Old Coal Room Lid	338 SF	8.00	2,701
New Topping	338 SF	10.00	3,376
Clean Out Storm Lines	1 LS	1,500.00	1,500
Clean Out Window Wells	1 LS	750.00	750
Install Infill Panel @ Guardrail	1 EA	150.00	150
New LED Wall Sconces	4 EA	500.00	2,000
Install Handrail Extensions	1 EA	100.00	100
Install New Hardware on Entry Doors	4 PR	2,000.00	8,000
Enlarge Scupper	3 EA	250.00	750
New Metal Conductor and Downspouts/Splash bl	5 EA	200.00	1,000
Install Sealant @ All windows	39 EA	125.00	4,875
Install New Building Control Joint	45 LF	50.00	2,250
Patch South Canopy	1 LS	500.00	500
Repoint Chimneys and Install New Cap	2 EA	2,500.00	5,000
Elevator Upgrades	1 EA	10,000.00	10,000
Upgrade Sum Pump	1 EA	3,500.00	3,500
Chemical Treat Chilled and Hot Water	1 LS	7,500.00	7,500
Install Glycol for Chiller	1 LS	6,500.00	6,500
Install Fire Dampers	6 EA	500.00	3,000
Fire Caulk	20 LF	10.00	200
Add Emergency Stop Button	1 EA	1,500.00	1,500
Cap leaking Abandoned Control Valve	1 EA	75.00	75
Insulate Chilled Water Pump	1 EA	150.00	150
Remove Transfer Grilles and Patch	2 EA	150.00	300
Install BFP	2 EA	3,000.00	6,000
Repair Exhaust System	1 EA	1,500.00	1,500
Replace FCU and Valves	1 EA	6,500.00	6,500
Replace Sewage Ejector and Piping	1 EA	15,000.00	15,000
Install Battery Backup at Sumps	3 EA	250.00	750
Install Pipe Insulation	20 LF	2.00	40
Replace Baseboard Heater	1 EA	3,500.00	3,500
Install ADA Trap and Supply Guards	10 EA	150.00	1,500
Rework Fire Sprinkler Drain	1 EA	500.00	500
Replace Broken Vent Piping	1 EA	65.00	65
Replace Waste Piping	1 EA	125.00	125
Replace Piping @ Drinking Fountain	1 EA	200.00	200
Install BFP on Water Service	1 EA	2,500.00	2,500
Replace Finned tube Radiator	1 EA	1,500.00	1,500
Install Emergency Egress Lighting	26 EA	350.00	9,100
Install New GFIC Outlet	28 EA	150.00	4,200
Install CO2 Sensor	1 EA	500.00	500
New Security System for Entire Building	31,983 SF	4.00	127,933
Rework Telephone Entrance	1 EA	1,250.00	1,250
Rework Cable TV Entrance	1 EA	1,250.00	1,250
			0
General Requirements	1 LS	31,114.18	31,114
	subtotal		290,399
	Contractor's Fee	6%	17,424
	subtotal		307,823
	Design/Estimate Contingency	15%	46,173
	subtotal		353,996
	Escalation to Mid-Point - 01/30/2017	5.3%	18,756
	TOTAL		372,753



CONSTRUCTION MANAGEMENT RESOURCES, LLC

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Irene B. French Community Center
 Merriam, KS
 Susan Richards Johnson & Associates
 Preliminary Estimate Estimate 05/05/2015

DESCRIPTION	TOTAL	Addition	0 SF		31,983 SF	
			\$/SF	Renovation	\$/SF	Site
Option A						
01 00 00 GENERAL CONDITIONS	468,144	-	0.00	444,324	13.89	23,819
02 41 00 DEMOLITION	191,281	-	0.00	183,574	5.74	7,707
02 50 00 HAZARDOUS MATERIAL ABATEMENT	6,244	-	0.00	6,244	0.20	-
03 30 00 CAST-IN-PLACE CONCRETE	36,307	-	0.00	36,307	1.14	-
04 01 20 MASONRY RESTORATION AND CLEANING	148,300	-	0.00	148,300	4.64	-
04 20 00 UNIT MASONRY	17,020	-	0.00	17,020	0.53	-
05 12 00 STRUCTURAL STEEL	32,851	-	0.00	16,439	0.51	16,412
06 10 00 ROUGH CARPENTRY	19,231	-	0.00	19,231	0.60	-
06 40 16 INTERIOR ARCHITECTURAL WOODWORK	118,529	-	0.00	118,529	3.71	-
07 13 00 SHEET WATERPROOFING	3,376	-	0.00	3,376	0.11	-
07 21 00 THERMAL INSULATION	-	-	0.00	-	0.00	-
07 50 00 MEMBRANE ROOFING	166,356	-	0.00	160,886	5.03	5,471
07 60 00 SHEET METAL FLASHING AND TRIM	4,049	-	0.00	1,967	0.06	2,082
07 92 00 JOINT SEALANTS	6,782	-	0.00	6,782	0.21	-
08 11 00 STEEL DOOR & FRAMES	2,750	-	0.00	2,750	0.09	-
08 11 73 SLIDING METAL DOORS	2,500	-	0.00	2,500	0.08	-
08 14 16 FLUSH WOOD DOORS	8,250	-	0.00	8,250	0.26	-
08 41 00 ALUMINUM ENTRANCES AND STOREFRONTS	34,977	-	0.00	34,977	1.09	-
08 51 13 ALUMINUM WINDOWS	2,275	-	0.00	2,275	0.07	-
08 71 00 DOOR HARDWARE	7,700	-	0.00	7,700	0.24	-
09 21 16 GYPSUM SYSTEMS	170,330	-	0.00	170,330	5.33	-
09 30 13 CERAMIC TILE	62,083	-	0.00	62,083	1.94	-
09 51 00 ACOUSTICAL PANEL CEILINGS	47,797	-	0.00	47,797	1.49	-
09 64 00 WOOD FLOORING	80,744	-	0.00	80,744	2.52	-
09 65 13 RESILIENT WALL BASE AND ACCESSORIES	6,193	-	0.00	6,193	0.19	-
09 65 19 RESILIENT TILE FLOORING	6,023	-	0.00	6,023	0.19	-
09 66 00 TERRAZZO	53,490	-	0.00	53,490	1.67	-
09 68 00 CARPET	33,276	-	0.00	33,276	1.04	-
09 90 00 PAINTING	56,433	-	0.00	56,433	1.76	-
10 11 00 VISUAL DISPLAY BOARDS	-	-	0.00	-	0.00	-
10 14 00 SIGNS	36,000	-	0.00	25,000	0.78	11,000
10 21 13 TOILET COMPARTMENTS	16,375	-	0.00	16,375	0.51	-
10 22 26 OPERABLE PARTITIONS	-	-	0.00	-	0.00	-
10 28 00 TOILET AND BATH ACCESSORIES	13,600	-	0.00	13,600	0.43	-
10 44 00 FIRE-PROTECTION SPECIALTIES	1,350	-	0.00	1,350	0.04	-
10 51 00 METAL LOCKERS	15,300	-	0.00	15,300	0.48	-
11 40 00 FOOD SERVICE EQUIPMENT	15,000	-	0.00	15,000	0.47	-
11 66 00 ATHLETIC EQUIPMENT	21,000	-	0.00	21,000	0.66	-
12 60 00 MULTIPLE SEATING	-	-	0.00	-	0.00	-
14 20 00 ELEVATORS	-	-	0.00	-	0.00	-
21 00 00 FIRE PROTECTION	93,785	-	0.00	93,785	2.93	-
22 00 00 PLUMBING	280,750	-	0.00	280,750	8.78	-
23 00 00 HVAC	1,100,206	-	0.00	1,100,206	34.40	-
26 00 00 ELECTRICAL	881,859	-	0.00	806,859	25.23	75,000
27 50 00 A/V EQUIPMENT	20,000	-	0.00	20,000	0.63	-
31 20 00 EARTH MOVING	12,960	-	0.00	-	0.00	12,960
31 31 00 TERMITE CONTROL	-	-	0.00	-	0.00	-
32 12 16 ASPHALT PAVING	6,503	-	0.00	-	0.00	6,503
32 13 13 CEMENT CONCRETE PAVING	8,209	-	0.00	-	0.00	8,209
32 92 00 LAWN & GRASSES	2,762	-	0.00	-	0.00	2,762
32 93 00 EXTERIOR PLANTS	31,417	-	0.00	-	0.00	31,417
33 10 00 WATER DISTRIBUTION	14,000	-	0.00	-	0.00	14,000
33 30 00 SANITARY SEWERAGE	-	-	0.00	-	0.00	-
33 40 00 STORM DRAINAGE	-	-	0.00	-	0.00	-
33 46 16 FOUNDATION DRAINAGE SYSTEMS	4,972	-	0.00	-	0.00	4,972
subtotal	4,369,340	-	0.00	4,147,025	129.66	222,315
Contractor's Fee 6%	262,160	-	0.00	248,822	7.78	13,339
subtotal	4,631,500	-	0.00	4,395,847	137.44	235,654
Design/Estimate Contingency 15%	694,725	-	0.00	659,377	20.62	35,348
subtotal	5,326,225	-	0.00	5,055,224	158.06	271,002
Escalation to Mid-Point - 01/30/2017 5.3%	282,207	-	0.00	267,849	8.37	14,359
TOTAL	5,608,433	-	0.00	5,323,072	166.43	285,361

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Parking Lot Option 2			
<i>Delete the Following:</i>			
Seal Coat	-2,549 SY	1.50	-3,823
Parking Striping	-2 EA	20.00	-40
<i>Add the Following:</i>			
Demo Asphalt Paving	2,549 SY	2.00	5,097
Demo Curb & Gutter	912 LF	1.75	1,597
New Asphalt Paving	2,655 SY	28.00	74,336
New Curb & Gutter	909 LF	15.00	13,640
Finish Grade Disturbed	524 SY	2.00	1,048
Sod Disturbed	524 SY	3.50	1,834
			0
General Requirements	1 LS	11,242.73	11,243
	subtotal		104,932
	Contractor's Fee	6%	6,296
	subtotal		111,228
	Design/Estimate Contingency	15%	16,684
	subtotal		127,912
	Escalation to Mid-Point - 01/30/2017	5.3%	6,777
	TOTAL		134,690

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option A			
02 41 00 DEMOLITION			
Demo Walks	1,250 SF	1.25 :	1,562
Demo Topping Slab @ Old Coal Room	338 SF	3.00 :	1,013
Demo Winow Well Walls	684 SF	7.50 :	5,132
Modify Concrete Opening in Basment	1 EA	1,500.00 :	1,500
Sawcut Floor for Mop Sink	1 EA	100.00 :	100
Demo Gyp Partitions	3,776 SF	1.50 :	5,663
Demo Ceiling	23,598 SF	0.50 :	11,799
Demo Flooring	23,598 SF	1.00 :	23,598
Demo Gym/Stage Flooring	4,329 SF	2.00 :	8,657
Demo Casework	109 LF	10.00 :	1,088
Demo Vanity	42 LF	10.00 :	419
Demo Ballet Bar	24 LF	2.00 :	47
Demo Lockers	20 LF	5.00 :	99
Salvage Toilet Partitions	6 EA	25.00 :	150
Salvage Urinal Screens	1 EA	25.00 :	25
Demo Toilet Partitions	17 EA	15.00 :	255
Demo Urinal Screens	5 EA	15.00 :	75
Demo RR Wall Tile	4,216 SF	0.50 :	2,108
Demo Door/Frame/Hardware	15 EA	100.00 :	1,500
Demo Exterior Door	1 PR	150.00 :	150
Demo Exterior Wall Brick Infill	74 SF	15.00 :	1,104
Demo Concrete Ramp/Stairs	123 SF	6.00 :	738
Demo Concrete Canopy	100 SF	5.00 :	502
Demo Entry Doors	2 PR	1,500.00 :	3,000
Demo Roofing	19,551 SF	2.00 :	39,102
Demo Entry Structure	159 SD	20.00 :	3,172
Demo Exterior Stair Handrail	7 LF	5.00 :	36
Demo Pass Thru Windows w/ rolling gates	2 EA	150.00 :	300
Demo Int Window	1 EA	25.00 :	25
Demo Plumbing Fixtures	68 EA	50.00 :	3,400
Demo Sump Pump and Mop Sink	1 EA	65.00 :	65
Demo Sewage Ejector Piping	1 LS	500.00 :	500
Demo Brick Incenerator	1 EA	350.00 :	350
Demo Overhead Pipng in Elev Room	1 LS	200.00 :	200
Demo Basketball Goals	2 EA	100.00 :	200
Demo Kitchen Hood	1 EA	200.00 :	200
Demo Kitchen Equipment	1 LS	1,000.00 :	1,000
Demo Lighting	27,926 SF	0.75 :	20,945
Demo Misc Electrical	27,926 SF	1.00 :	27,926
Temporary Partitions	1 LS	1,500.00 :	1,500
			0
Haul Off	883 CY	25.00 :	22,074

			191,281
02 50 00 HAZARDOUS MATERIAL ABATEMENT			
Costs by others	1 LS	6,244.00 :	6,244

			6,244

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option A			
03 30 00 CAST-IN-PLACE CONCRETE			
Patch Concrete @ Plumbing Demo	1 LS	1,500.00	1,500
New Concrete Topping Slab @ Coal Storage	338 SF	10.00	3,376
Grade Beam	16 CY	425.00	6,670
SOG @ Entry	448 SF	5.00	2,239
Column Footings for Canopy	4 EA	150.00	600
New Window Well Walls	684 SF	30.00	20,528
Patch Concrete Slab	30 SF	25.00	750
SOD @ Infill	107 SF	6.00	644

			36,307
04 01 20 MASONRY RESTORATION AND CLEANING			
Repoint Heads of all Window Lintels	1 LS	1,300.00	1,300
Misc Repointing and Cleaning	1 LS	147,000.00	147,000

			148,300
04 20 00 UNIT MASONRY			
Infill Opening @ Old Entry	84 SF	35.00	2,940
Limestone Veneer @ Canopy Columns	256 SF	55.00	14,080

			17,020
05 12 00 STRUCTURAL STEEL			
Floor Infill Structure/Deck @ Old Entry	107 SF	30.00	3,222
New Canopy @ Ramp (complete)	100 SF	65.00	6,500
New Entry Roof Structure/Deck	448 SF	15.00	6,717
New Canopy Roof Structure/Deck	547 SF	30.00	16,412

			32,851
06 10 00 ROUGH CARPENTRY			
Roof Blocking	540 BM	6.00	3,240
Miscellaneous Interior Blocking	31,983 SF	0.50	15,992

			19,231
06 40 16 INTERIOR ARCHITECTURAL WOODWORK			
Vanity	62 LF	250.00	15,413
Base Cabinet	122 LF	350.00	42,662
Wall Cabinet	69 LF	200.00	13,750
Reception Desk	20 LF	750.00	14,720
Miscellaneous Millwork ALLOW	31,983 SF	1.00	31,983

			118,529
07 13 00 SHEET WATERPROOFING			
Waterproofing Membrane @ Coal Storage Roof	338 SF	10.00	3,376

			3,376

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option A			
07 21 00 THERMAL INSULATION			0

			0
07 50 00 MEMBRANE ROOFING			
New Roofing @ Entry	448 SF	10.00 :	4,478
New Roofing @ Canopy	547 SF	10.00 :	5,471
New Roofing w/ Insulation	19,551 SF	8.00 :	156,407

			166,356
07 60 00 SHEET METAL FLASHING AND TRIM			
Sheet Metal Flashings @ Entry	98 LF	20.00 :	1,967
Sheet Metal Flashings @ Canopy	104 LF	20.00 :	2,082

			4,049
07 92 00 JOINT SEALANTS			
HM Frame	11 EA	35.00 :	385
Miscellaneous Interior	31,983 SF	0.20 :	6,397

			6,782
08 11 00 STEEL DOOR & FRAMES			
HM Frame 3x7	11 EA	250.00 :	2,750

			2,750
08 11 73 SLIDING METAL DOORS			
Sliding Door @ Class Room	1 PR	2,500.00 :	2,500

			2,500
08 14 16 FLUSH WOOD DOORS			
Wood Door	11 EA	750.00 :	8,250

			8,250
08 41 00 ALUMINUM ENTRANCES AND STOREFRONTS			
Aluminum Storefront @ New Entry	565 SF	52.00 :	29,377
Aluminum Entrance Door	2 PR	2,800.00 :	5,600

			34,977
08 51 13 ALUMINUM WINDOWS			
New Window @ Old Entry	1 EA	2,275.00 :	2,275

			2,275

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option A			
08 71 00 DOOR HARDWARE			
Door Hardware ALLOW	11 EA	700.00	7,700

			7,700
09 21 16 GYPSUM SYSTEMS			
3 5/8" MS Wall, GB OS, Batt	509 SF	6.50	3,308
3 5/8" MS Wall, GB BS, Batt	4,498 SF	8.00	35,986
Patch Existing Walls	23,042 SF	3.00	69,127
Gyp Board Ceiling	2,915 SF	12.00	34,985
Gyp Board Soffits	437 SF	15.00	6,560
Bulkhead - 2' or less	146 LF	30.00	4,373
Miscellaneous Gyp Construction	31,983 SF	0.50	15,992

			170,330
09 30 13 CERAMIC TILE			
Ceramic Wall Tile	4,347 SF	8.00	34,775
Ceramic Floor Tile	2,915 SF	8.00	23,323
Ceramic Tile Base	724 LF	5.50	3,985

			62,083
09 51 00 ACOUSTICAL PANEL CEILINGS			
2x2 ACT	13,656 SF	3.50	47,797

			47,797
09 64 00 WOOD FLOORING			
Refinish Wood Floor	4,735 SF	5.00	23,674
Stage Floor	672 SF	12.00	8,060
Gym Floor	3,501 SF	14.00	49,010

			80,744
09 65 13 RESILIENT WALL BASE AND ACCESSORIES			
Resilient Base	3,096 LF	2.00	6,193

			6,193
09 65 19 RESILIENT TILE FLOORING			
VCT	1,049 SF	2.50	2,623
Rubber Stair Treads	971 SF	3.50	3,400

			6,023
09 66 00 TERRAZZO			
Epoxy Terrazzo	4,458 SF	12.00	53,490

			53,490

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option A			
09 68 00 CARPET			
Carpet Tile	951 SY	35.00 :	33,276

			33,276
09 90 00 PAINTING			
Seal Concrete Floors	5,335 SF	1.00 :	5,335
Paint Gyp Board Walls	7,921 SF	0.90 :	7,129
Paint Existing Gyp Board Wall	23,042 SF	1.15 :	26,499
Paint Exterior Lintels/Columns	1 LS	5,000.00 :	5,000
Paint Exposed Structure	6,978 SF	1.10 :	7,676
Paint Gyp Board Ceiling	2,915 SF	1.25 :	3,644
Paint Gyp Board Soffits	437 SF	1.75 :	765
Paint HM Frames	11 EA	35.00 :	385

			56,433
10 11 00 VISUAL DISPLAY BOARDS			
			0

			0
10 14 00 SIGNS			
Parking Signage	5 EA	200.00 :	1,000
Building Signage ALLOW	1 LS	25,000.00 :	25,000
Entrance Signs	2 EA	5,000.00 :	10,000

			36,000
10 21 13 TOILET COMPARTMENTS			
Toilet Partitions	8 EA	750.00 :	6,000
ADA Toilet Partitions	8 EA	850.00 :	6,800
Urinal Screens	13 EA	275.00 :	3,575

			16,375
10 22 26 OPERABLE PARTITIONS			
			0

			0

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option A			
10 28 00 TOILET AND BATH ACCESSORIES			
Soap Disp	22 EA	45.00 :	990
Paper Towel Dispenser	8 EA	55.00 :	440
Mirror 1'11x5'	22 EA	250.00 :	5,500
TP Dispenser	22 EA	40.00 :	880
Grab Bars	16 EA	75.00 :	1,200
Grab Bars @ Shower Two Wall	6 EA	125.00 :	750
Sanitary Napkin Trash	16 EA	65.00 :	1,040
Sanitary Napkin Vendor	4 EA	100.00 :	400
Shower Curtain/ Rod	6 EA	100.00 :	600
ADA Shower Seat	6 EA	150.00 :	900
Diaper Changing Station	6 EA	150.00 :	900

			13,600
10 44 00 FIRE-PROTECTION SPECIALTIES			
FE	9 EA	150.00 :	1,350

			1,350
10 51 00 METAL LOCKERS			
Lockers - Double Tier	51 EA	300.00 :	15,300

			15,300
11 40 00 FOOD SERVICE EQUIPMENT			
Kitchen Equipment ALLOWANCE	1 LS	15,000.00 :	15,000

			15,000
11 66 00 ATHLETIC EQUIPMENT			
Basketball Goals, Electric	2 EA	5,500.00 :	11,000
Wall Pads	1 LS	10,000.00 :	10,000

			21,000
12 60 00 MULTIPLE SEATING			
			0

			0
14 20 00 ELEVATORS			
			0

			0
21 00 00 FIRE PROTECTION			
Fire Sprinklers	23,598 SF	3.00 :	70,793
Fire Sprinklers Gym/Stage	4,329 SF	2.50 :	10,822
Fire Sprinklers 3rd Floor/Mezz	4,057 SF	3.00 :	12,171

			93,785

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option A			
22 00 00 PLUMBING			
Water Closet	15 EA	2,900.00	43,500
ADA Water Closet	9 EA	2,950.00	26,550
Urinal	7 EA	2,900.00	20,300
Wall Hung Lavatory	1 EA	2,750.00	2,750
Countertop Sink	21 EA	2,750.00	57,750
Shower	6 EA	2,400.00	14,400
Service Sink	1 EA	2,400.00	2,400
Single Sink	3 EA	2,200.00	6,600
Floor Drain	4 EA	1,500.00	6,000
Electric Water Cooler	2 EA	2,500.00	5,000
Pressure Reducing Valve	1 EA	2,500.00	2,500
Backflow Preventer	1 EA	3,500.00	3,500
Hose Bibb	2 EA	1,500.00	3,000
Freezeproof Wall Hydrant	2 EA	1,750.00	3,500
Wall Cleanout	5 EA	500.00	2,500
Floor Cleanout	5 EA	500.00	2,500
Grease Interceptor	1 EA	3,500.00	3,500
Kitchen Hookup	1 EA	10,000.00	10,000
Sump Pump	3 EA	3,500.00	10,500
Roof Drain/Overflow	2 EA	2,000.00	4,000
Water Heating System	1 LS	50,000.00	50,000

			280,750
23 00 00 HVAC			
Demo FCU's/Ductwork/Piping	31,983 SF	2.00	63,966
Remove Boiler Stack Piping	3 EA	500.00	1,500
Install 4th Boiler and New Stacks for All Boilers	1 EA	75,000.00	75,000
New 85 Ton Chiller	1 EA	150,000.00	150,000
New Chilled Water Pumps	2 EA	7,500.00	15,000
New Hot Water Pumps	2 EA	7,500.00	15,000
DOAS Units	3 EA	50,000.00	150,000
Refurbish Gym unit	1 EA	15,000.00	15,000
Expansion Tank	1 EA	2,500.00	2,500
Pot Chemical Feeders	2 EA	8,500.00	17,000
Air Separators	2 EA	1,500.00	3,000
Chilled Water Piping	31,983 SF	4.00	127,933
Hot Water Piping	31,983 SF	4.00	127,933
New FCU' ALLOW	31 EA	3,500.00	108,500
Temperature Controls	31 EA	2,500.00	77,500
Ductwork/Grills/Registers	23,598 SF	5.00	117,988
Ductwork/Grills/Registers Gym/Stage	4,329 SF	2.00	8,657
Ductwork/Grills/Registers 3rd Floor/Mezz	4,057 SF	4.00	16,228
2000CFm Exhaust Fan	1 EA	7,500.00	7,500

			1,100,206

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option A			
26 00 00 ELECTRICAL			
Site			
LED Lighted Bollards	15 EA	5,000.00	75,000
Lighting			
Building	23,598 SF	10.00	235,976
Gym/Stage	4,329 SF	6.00	25,972
3rd Floor/Mezz	4,057 SF	7.00	28,398
Power			
Building	23,598 SF	5.00	117,988
Gym/Stage	4,329 SF	3.00	12,986
3rd Floor/Mezz	4,057 SF	4.00	16,228
Distribution			
	31,983 SF	4.25	135,929
Fire Alarm			
Building	23,598 SF	3.00	70,793
Gym/Stage	4,329 SF	3.00	12,986
3rd Floor/Mezz	4,057 SF	3.00	12,171
Telecommunications			
Building	23,598 SF	2.50	58,994
Gym/Stage	4,329 SF	1.00	4,329
3rd Floor/Mezz	4,057 SF	2.50	10,142
Security System			
Building	23,598 SF	2.00	47,195
Gym/Stage	4,329 SF	2.00	8,657
3rd Floor/Mezz	4,057 SF	2.00	8,114
			881,859
27 50 00 A/V EQUIPMENT			
Audio Visual Equipment ALLOWANCE	1 LS	20,000.00	20,000
			20,000
31 20 00 EARTH MOVING			
Regrade @ Perimeter	8,287 SF	1.50	12,431
Grade Sidewalks	1,194 SF	0.25	299
Backfill Curb and Gutter	153 LF	1.50	230
			12,960
31 31 00 TERMITE CONTROL			
			0
			0
32 12 16 ASPHALT PAVING			
Parking Striping	109 EA	20.00	2,180
ADA Striping	5 EA	100.00	500
Seal Coat	2,549 SY	1.50	3,823
			6,503

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option A			
32 13 13 CEMENT CONCRETE PAVING			
Sidewalk	1,194 SF	4.00 :	4,776
Curb & Gutter	153 LF	15.00 :	2,302
Concrete Ramp	113 SF	10.00 :	1,130

			8,209
32 92 00 LAWN & GRASSES			
Sod	921 SY	3.00 :	2,762

			2,762
32 93 00 EXTERIOR PLANTS			
Trees	17 EA	0.00 :	0
Shrubs	92 EA	100.00 :	9,167
Misc Plantings ALLOWANCE	300 SF	7.50 :	2,250
Entry Sculpture ALLOWANCE	1 LS	20,000.00 :	20,000

			31,417
33 10 00 WATER DISTRIBUTION			
New 2.5" Water Line (remove old) ALLOW	150 LF	50.00 :	7,500
BFP	2 EA	2,500.00 :	5,000
Connect to Existing	1 EA	1,500.00 :	1,500

			14,000
33 30 00 SANITARY SEWERAGE			
			0

			0
33 40 00 STORM DRAINAGE			
			0

			0
33 46 16 FOUNDATION DRAINAGE SYSTEMS			
Perimeter Foundation Drain	829 LF	6.00 :	4,972

			4,972



CONSTRUCTION MANAGEMENT RESOURCES, LLC

ESTIMATING • SCHEDULING • PROJECT MANAGEMENT • CONSULTING
5201 JOHNSON DRIVE, SUITE 330, MISSION, KANSAS 66205 (913) 262-6715 • FAX (913) 262-1380

Irene B. French Community Center
Merriam, KS
Susan Richards Johnson & Associates
Preliminary Estimate Estimate 05/05/2015

18,437 SF

25,268 SF

DESCRIPTION	TOTAL	Addition	\$/SF	Renovation	\$/SF	Site
Option B						
01 00 00 GENERAL CONDITIONS	814,843	390,863	21.20	389,980	15.43	34,000
02 41 00 DEMOLITION	240,338	-	0.00	232,631	9.21	7,707
02 50 00 HAZARDOUS MATERIAL ABATEMENT	6,244	-	0.00	6,244	0.25	-
03 30 00 CAST-IN-PLACE CONCRETE	244,601	198,457	10.76	46,144	1.83	-
04 01 20 MASONRY RESTORATION AND CLEANING	112,500	-	0.00	112,500	4.45	-
04 20 00 UNIT MASONRY	698,491	681,471	36.96	17,020	0.67	-
05 12 00 STRUCTURAL STEEL	612,244	513,814	27.87	82,019	3.25	16,412
06 10 00 ROUGH CARPENTRY	36,093	9,190	0.50	26,902	1.06	-
06 40 16 INTERIOR ARCHITECTURAL WOODWORK	95,757	18,437	1.00	77,320	3.06	-
07 13 00 SHEET WATERPROOFING	3,376	-	0.00	3,376	0.13	-
07 21 00 THERMAL INSULATION	565	565	0.03	-	0.00	-
07 50 00 MEMBRANE ROOFING	253,479	120,898	6.56	127,111	5.03	5,471
07 60 00 SHEET METAL FLASHING AND TRIM	17,835	13,786	0.75	1,967	0.08	2,082
07 92 00 JOINT SEALANTS	10,140	4,001	0.22	6,139	0.24	-
08 11 00 STEEL DOOR & FRAMES	12,850	10,100	0.55	2,750	0.11	-
08 11 73 SLIDING METAL DOORS	2,500	-	0.00	2,500	0.10	-
08 14 16 FLUSH WOOD DOORS	23,250	15,000	0.81	8,250	0.33	-
08 41 00 ALUMINUM ENTRANCES AND STOREFRONTS	69,007	34,030	1.85	34,977	1.38	-
08 51 13 ALUMINUM WINDOWS	2,275	-	0.00	2,275	0.09	-
08 71 00 DOOR HARDWARE	21,700	14,000	0.76	7,700	0.30	-
09 21 16 GYPSUM SYSTEMS	160,729	31,999	1.74	128,731	5.09	-
09 30 13 CERAMIC TILE	71,029	20,205	1.10	50,824	2.01	-
09 51 00 ACOUSTICAL PANEL CEILINGS	72,464	17,421	0.94	55,043	2.18	-
09 64 00 WOOD FLOORING	195,725	59,525	3.23	136,200	5.39	-
09 65 13 RESILIENT WALL BASE AND ACCESSORIES	5,621	1,782	0.10	3,839	0.15	-
09 65 19 RESILIENT TILE FLOORING	35,222	29,923	1.62	5,299	0.21	-
09 66 00 TERRAZZO	56,141	12,109	0.66	44,032	1.74	-
09 68 00 CARPET	44,949	-	0.00	44,949	1.78	-
09 90 00 PAINTING	84,375	28,868	1.57	55,507	2.20	-
10 14 00 SIGNS	36,000	10,750	0.58	14,250	0.56	11,000
10 21 13 TOILET COMPARTMENTS	16,375	5,700	0.31	10,675	0.42	-
10 22 26 OPERABLE PARTITIONS	86,112	-	0.00	86,112	3.41	-
10 28 00 TOILET AND BATH ACCESSORIES	13,600	5,555	0.30	8,045	0.32	-
10 44 00 FIRE-PROTECTION SPECIALTIES	1,950	900	0.05	1,050	0.04	-
10 51 00 METAL LOCKERS	15,300	15,300	0.83	-	0.00	-
11 40 00 FOOD SERVICE EQUIPMENT	15,000	-	0.00	15,000	0.59	-
11 66 00 ATHLETIC EQUIPMENT	80,500	80,500	4.37	-	0.00	-
12 60 00 MULTIPLE SEATING	-	-	0.00	-	0.00	-
14 20 00 ELEVATORS	75,000	75,000	4.07	-	0.00	-
21 00 00 FIRE PROTECTION	147,388	73,748	4.00	73,640	2.91	-
22 00 00 PLUMBING	316,750	129,875	7.04	186,875	7.40	-
23 00 00 HVAC	1,495,161	642,919	34.87	852,242	33.73	-
26 00 00 ELECTRICAL	1,094,218	359,521	19.50	659,697	26.11	75,000
27 50 00 A/V EQUIPMENT	20,000	-	0.00	20,000	0.79	-
31 20 00 EARTH MOVING	40,380	18,822	1.02	-	0.00	21,558
31 31 00 TERMITE CONTROL	3,022	3,022	0.16	-	0.00	-
32 12 16 ASPHALT PAVING	6,503	-	0.00	-	0.00	6,503
32 13 13 CEMENT CONCRETE PAVING	8,209	-	0.00	-	0.00	8,209
32 92 00 LAWN & GRASSES	2,098	-	0.00	-	0.00	2,098
32 93 00 EXTERIOR PLANTS	43,317	-	0.00	-	0.00	43,317
33 10 00 WATER DISTRIBUTION	14,000	-	0.00	-	0.00	14,000
33 30 00 SANITARY SEWERAGE	15,000	-	0.00	-	0.00	15,000
33 40 00 STORM DRAINAGE	50,000	-	0.00	-	0.00	50,000
33 46 16 FOUNDATION DRAINAGE SYSTEMS	4,972	-	0.00	-	0.00	4,972
subtotal	7,605,200	3,648,058	197.87	3,639,814	144.05	317,329
Contractor's Fee 6%	456,312	218,883	11.87	218,389	8.64	19,040
subtotal	8,061,512	3,866,941	209.74	3,858,203	152.69	336,369
Design/Estimate Contingency 15%	1,209,227	580,041	31.46	578,730	22.90	50,455
subtotal	9,270,739	4,446,982	241.20	4,436,933	175.59	386,824
Escalation to Mid-Point - 01/30/2017 5.3%	491,206	235,621	12.78	235,089	9.30	20,496
TOTAL	9,761,945	4,682,603	253.98	4,672,022	184.90	407,320

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Parking Lot Option 2			
<i>Delete the Following:</i>			
Seal Coat	-2,549 SY	1.50	-3,823
Parking Striping	-2 EA	20.00	-40
<i>Add the Following:</i>			
Demo Asphalt Paving	2,549 SY	2.00	5,097
Demo Curb & Gutter	912 LF	1.75	1,597
New Asphalt Paving	2,655 SY	28.00	74,336
New Curb & Gutter	909 LF	15.00	13,640
Finish Grade Disturbed	524 SY	2.00	1,048
Sod Disturbed	524 SY	3.50	1,834
			0
General Requirements	1 LS	11,242.73	11,243
	subtotal		104,932
	Contractor's Fee	6%	6,296
	subtotal		111,228
	Design/Estimate Contingency	15%	16,684
	subtotal		127,912
	Escalation to Mid-Point - 01/30/2017	5.3%	6,777
	TOTAL		134,690

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option B			
02 41 00 DEMOLITION			
Demo Walks	1,250 SF	1.25 :	1,562
Demo Topping Slab @ Old Coal Room	338 SF	3.00 :	1,013
Demo Window Well Walls	684 SF	7.50 :	5,132
Modify Concrete Opening in Basement	1 EA	1,500.00 :	1,500
Sawcut Floor for Mop Sink	1 EA	100.00 :	100
Demo Gyp Partitions	3,776 SF	1.50 :	5,663
Demo Ceiling	16,883 SF	0.50 :	8,441
Demo Flooring	16,883 SF	1.00 :	16,883
Demo Gym/Stage Flooring	4,329 SF	2.00 :	8,657
Demo Casework	109 LF	10.00 :	1,088
Demo Vanity	42 LF	10.00 :	419
Demo Ballet Bar	24 LF	2.00 :	47
Demo Lockers	20 LF	5.00 :	99
Salvage Toilet Partitions	6 EA	25.00 :	150
Salvage Urinal Screens	1 EA	25.00 :	25
Demo Toilet Partitions	17 EA	15.00 :	255
Demo Urinal Screens	5 EA	15.00 :	75
Demo RR Wall Tile	4,216 SF	0.50 :	2,108
Demo Door/Frame/Hardware	15 EA	100.00 :	1,500
Demo Exterior Door	1 PR	150.00 :	150
Demo Exterior Wall Brick Infill	74 SF	15.00 :	1,104
Demo Concrete Ramp/Stairs	123 SF	6.00 :	738
Demo Concrete Canopy	100 SF	5.00 :	502
Demo Entry Doors	2 PR	1,500.00 :	3,000
Demo Roofing	15,329 SF	2.00 :	30,658
Demo Entry Structure	159 SD	20.00 :	3,172
Demo Exterior Stair Handrail	7 LF	5.00 :	36
Demo Pass Thru Windows w/ rolling gates	2 EA	150.00 :	300
Demo Int Window	1 EA	25.00 :	25
Demo Plumbing Fixtures	68 EA	50.00 :	3,400
Demo Sump Pump and Mop Sink	1 EA	65.00 :	65
Demo Sewage Ejector Piping	1 LS	500.00 :	500
Demo Brick Incinerator	1 EA	350.00 :	350
Demo Overhead Piping in Elev Room	1 LS	200.00 :	200
Demo Basketball Goals	2 EA	100.00 :	200
Demo Kitchen Hood	1 EA	200.00 :	200
Demo Kitchen Equipment	1 LS	1,000.00 :	1,000
Demo Lighting	21,211 SF	0.75 :	15,908
Demo Misc Electrical	21,211 SF	1.00 :	21,211
Demo Building Complete	8,193 SF	8.00 :	65,540
Temporary Partitions	1 LS	1,500.00 :	1,500
			0
Haul Off	717 CY	50.00 :	35,859

			240,338
02 50 00 HAZARDOUS MATERIAL ABATEMENT			
Costs by others	1 LS	6,244.00 :	6,244

			6,244

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option B			
03 30 00 CAST-IN-PLACE CONCRETE			
Patch Concrete @ Plumbing Demo	1 LS	1,500.00	1,500
New Concrete Topping Slab @ Coal Storage	338 SF	10.00	3,376
Grade Beam	16 CY	425.00	6,670
Grade Beam @ Addition	112 CY	425.00	47,391
SOG @ Entry	448 SF	5.00	2,239
Column Footings for Canopy	4 EA	150.00	600
New Window Well Walls	684 SF	30.00	20,528
Patch Concrete Slab	30 SF	25.00	750
SOG 4" w/4" Cr. Rock Base	15,112 SF	5.00	75,561
Basement Wall Footing	93 LF	250.00	23,307
Basement Wall	1,119 SF	30.00	33,562
SOD @ Infill	107 SF	6.00	644
SOD @ Running Track	3,325 SF	3.50	11,637
SOD @ Existing Gym Infill	3,279 SF	3.00	9,837
Elevator Pit	1 LS	5,000.00	5,000
Pan Stair Fill	2 FL	1,000.00	2,000

			244,601
04 01 20 MASONRY RESTORATION AND CLEANING			
Repoint Heads of all Window Lintels	1 LS	500.00	500
Misc Repointing and Cleaning	1 LS	112,000.00	112,000

			112,500
04 20 00 UNIT MASONRY			
Infill Opening @ Old Entry	84 SF	35.00	2,940
8" CMU Backup	13,088 SF	18.00	235,592
Brick Veneer	13,088 SF	27.00	353,388
Limestone Veneer @ Canopy Columns	256 SF	55.00	14,080
8" CMU Partition Wall	3,901 SF	17.00	66,314
Insulation - Rigid	13,088 SF	2.00	26,177

			698,491
05 12 00 STRUCTURAL STEEL			
Floor Infill Structure/Deck @ Old Entry	107 SF	30.00	3,222
New Canopy @ Ramp (complete)	100 SF	65.00	6,500
New Entry Roof Structure/Deck	448 SF	15.00	6,717
New Canopy Roof Structure/Deck	547 SF	30.00	16,412
High Roof Deck/Structure @ Gym	8,589 SF	20.00	171,786
Low Roof Deck/Structure	6,523 SF	18.00	117,412
Running Track Deck/Structure	3,325 SF	45.00	149,616
Infill Existing Gym Deck/Structure	3,279 SF	20.00	65,580
Misc Steel	1 LS	75,000.00	75,000

			612,244
06 10 00 ROUGH CARPENTRY			
Roof Blocking	2,378 BM	6.00	14,268
Roof Blocking @ Addition	1,838 BM	5.00	9,190
Miscellaneous Interior Blocking	25,268 SF	0.50	12,634

			36,093

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option B			
06 40 16 INTERIOR ARCHITECTURAL WOODWORK			
Vanity	32 LF	250.00	7,947
Base Cabinet	66 LF	350.00	23,187
Wall Cabinet	31 LF	200.00	6,198
Reception Desk	20 LF	750.00	14,720
Miscellaneous Millwork ALLOW	43,705 SF	1.00	43,705

			95,757
07 13 00 SHEET WATERPROOFING			
Waterproofing Membrane @ Coal Storage Roof	338 SF	10.00	3,376

			3,376
07 21 00 THERMAL INSULATION			
Rigid Insulation at Perimeter SOG	282 SF	2.00	565

			565
07 50 00 MEMBRANE ROOFING			
New Roofing @ Entry	448 SF	10.00	4,478
New Roofing @ Canopy	547 SF	10.00	5,471
New Roofing w/ Insulation	15,329 SF	8.00	122,633
New Roofing w/ Insulation	15,112 SF	8.00	120,898

			253,479
07 60 00 SHEET METAL FLASHING AND TRIM			
Sheet Metal Flashings @ Entry	98 LF	20.00	1,967
Sheet Metal Flashings @ Canopy	104 LF	20.00	2,082
Sheet Metal Flashings @ Addition	689 LF	20.00	13,786

			17,835
07 92 00 JOINT SEALANTS			
HM Frame	31 EA	35.00	1,085
Miscellaneous Interior	25,268 SF	0.20	5,054
Miscellaneous Interior	18,437 SF	0.15	2,766
Miscellaneous Exterior	353 LF	3.50	1,236

			10,140
08 11 00 STEEL DOOR & FRAMES			
HM Frame 3x7	31 EA	250.00	7,750
HM Frame 6'x7'	17 EA	300.00	5,100

			12,850
08 11 73 SLIDING METAL DOORS			
Sliding Door @ Class Room	1 PR	2,500.00	2,500

			2,500
08 14 16 FLUSH WOOD DOORS			
Wood Door	31 EA	750.00	23,250

			23,250

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option B			
08 41 00 ALUMINUM ENTRANCES AND STOREFRONTS			
Aluminum Storefront @ New Entry	565 SF	52.00	29,377
Aluminum Storefront @ Addition ALLOW	654 SF	52.00	34,030
Aluminum Entrance Door	2 PR	2,800.00	5,600

			69,007
08 51 13 ALUMINUM WINDOWS			
New Window @ Old Entry	1 EA	2,275.00	2,275

			2,275
08 71 00 DOOR HARDWARE			
Door Hardware ALLOW	31 EA	700.00	21,700

			21,700
09 21 16 GYPSUM SYSTEMS			
3/8" MS Wall, GB OS, Batt	509 SF	6.50	3,308
3/8" MS Wall, GB BS, Batt	3,930 SF	8.00	31,443
Patch Existing Walls	12,221 SF	3.00	36,664
Gyp Board Ceiling	4,283 SF	12.00	51,399
Gyp Board Soffits	642 SF	15.00	9,637
Bulkhead - 2' or less	214 LF	30.00	6,425
Miscellaneous Gyp Construction	43,705 SF	0.50	21,853

			160,729
09 30 13 CERAMIC TILE			
Ceramic Wall Tile	4,123 SF	8.00	32,983
Ceramic Floor Tile	4,283 SF	8.00	34,266
Ceramic Tile Base	687 LF	5.50	3,779

			71,029
09 51 00 ACOUSTICAL PANEL CEILINGS			
2x2 ACT	20,704 SF	3.50	72,464

			72,464
09 64 00 WOOD FLOORING			
Refinish Wood Floor	4,735 SF	5.00	23,674
Stage Floor	0 SF	12.00	0
Aerobics Floor	3,968 SF	15.00	59,525
Gym Floor	8,038 SF	14.00	112,525

			195,725
09 65 13 RESILIENT WALL BASE AND ACCESSORIES			
Resilient Base	2,810 LF	2.00	5,621

			5,621
09 65 19 RESILIENT TILE FLOORING			
VCT	1,049 SF	2.50	2,623
Rubber Stair Treads	764 SF	3.50	2,675
Rubber Floor @ Running Track	3,325 SF	9.00	29,923

			35,222

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option B			
09 66 00 TERRAZZO			
Epoxy Terrazzo	4,678 SF	12.00	56,141

			56,141
09 68 00 CARPET			
Carpet Tile	1,284 SY	35.00	44,949

			44,949
09 90 00 PAINTING			
Seal Concrete Floors	4,056 SF	1.00	4,056
Paint Gyp Board Walls	6,975 SF	0.90	6,277
Paint Existing Gyp Board Wall	12,221 SF	1.15	14,055
Paint Exterior Lintels/Columns	1 LS	5,000.00	5,000
Paint Interior CMU Walls	20,890 SF	1.00	20,890
Paint Exposed Structure	8,145 SF	1.10	8,959
Paint Exposed Structure @ Gym	8,038 SF	2.00	16,075
Paint Gyp Board Ceiling	4,283 SF	1.25	5,354
Paint Gyp Board Soffits	642 SF	1.75	1,124
Paint HM Frames	31 EA	35.00	1,085
Paint Stairs	2 FL	750.00	1,500

			84,375
10 14 00 SIGNS			
Parking Signage	5 EA	200.00	1,000
Building Signage ALLOW	1 LS	25,000.00	25,000
Entrance Signs	2 EA	5,000.00	10,000

			36,000
10 21 13 TOILET COMPARTMENTS			
Toilet Partitions	8 EA	750.00	6,000
ADA Toilet Partitions	8 EA	850.00	6,800
Urinal Screens	13 EA	275.00	3,575

			16,375
10 22 26 OPERABLE PARTITIONS			
Operable Wall	1,914 SF	45.00	86,112

			86,112
10 28 00 TOILET AND BATH ACCESSORIES			
Soap Disp	22 EA	45.00	990
Paper Towel Dispenser	8 EA	55.00	440
Mirror 1'11x5'	22 EA	250.00	5,500
TP Dispenser	22 EA	40.00	880
Grab Bars	16 EA	75.00	1,200
Grab Bars @ Shower Two Wall	6 EA	125.00	750
Sanitary Napkin Trash	16 EA	65.00	1,040
Sanitary Napkin Vendor	4 EA	100.00	400
Shower Curtain/ Rod	6 EA	100.00	600
ADA Shower Seat	6 EA	150.00	900
Diaper Changing Station	6 EA	150.00	900

			13,600
10 44 00 FIRE-PROTECTION SPECIALTIES			
FE	13 EA	150.00	1,950

			1,950

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option B			
10 51 00 METAL LOCKERS			
Lockers - Double Tier	51 EA	300.00 :	15,300

			15,300
11 40 00 FOOD SERVICE EQUIPMENT			
Kitchen Equipment ALLOWANCE	1 LS	15,000.00 :	15,000

			15,000
11 66 00 ATHLETIC EQUIPMENT			
Gymnasium Scoreboard	1 EA	3,500.00 :	3,500
Volleyball Sets	2 EA	4,500.00 :	9,000
Basketball Goals, Electric	6 EA	5,500.00 :	33,000
Gymnasium Curtain, Electric	1 EA	25,000.00 :	25,000
Wall Pads	1 LS	10,000.00 :	10,000

			80,500
12 60 00 MULTIPLE SEATING			
			0

			0
14 20 00 ELEVATORS			
Hydraulic Passenger Elevator - 3 Stops	1 EA	75,000.00 :	75,000

			75,000
21 00 00 FIRE PROTECTION			
Fire Sprinklers	16,883 SF	3.00 :	50,648
Fire Sprinklers Gym/Stage	4,329 SF	2.50 :	10,822
Fire Sprinklers 3rd Floor/Mezz	4,057 SF	3.00 :	12,171
Fire Sprinklers Addition	18,437 SF	4.00 :	73,748

			147,388
22 00 00 PLUMBING			
Water Closet	15 EA	2,900.00 :	43,500
ADA Water Closet	9 EA	2,950.00 :	26,550
Urinal	7 EA	2,900.00 :	20,300
Wall Hung Lavatory	1 EA	2,750.00 :	2,750
Countertop Sink	21 EA	2,750.00 :	57,750
Shower	6 EA	2,400.00 :	14,400
Service Sink	1 EA	2,400.00 :	2,400
Single Sink	3 EA	2,200.00 :	6,600
Floor Drain	4 EA	1,500.00 :	6,000
Electric Water Cooler	2 EA	2,500.00 :	5,000
Pressure Reducing Valve	1 EA	2,500.00 :	2,500
Backflow Preventer	1 EA	3,500.00 :	3,500
Hose Bibb	2 EA	1,500.00 :	3,000
Freezeproof Wall Hydrant	2 EA	1,750.00 :	3,500
Wall Cleanout	5 EA	500.00 :	2,500
Floor Cleanout	5 EA	500.00 :	2,500
Grease Interceptor	1 EA	3,500.00 :	3,500
Kitchen Hookup	1 EA	10,000.00 :	10,000
Sump Pump	3 EA	3,500.00 :	10,500
Roof Drain/Overflow	20 EA	2,000.00 :	40,000
Water Heating System	1 LS	50,000.00 :	50,000

			316,750

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option B			
23 00 00 HVAC			
Demo FCU's/Ductwork/Piping	25,268 SF	2.00 :	50,536
Remove Boiler Stack Piping	3 EA	500.00 :	1,500
New Boiler 400 MBH	3 EA	75,000.00 :	225,000
New 85 Ton Chiller	0 EA	150,000.00 :	0
115 Ton Air Cooled Screw Compressor	1 EA	200,000.00 :	200,000
9000 CFM RTU	1 EA	72,000.00 :	72,000
New Chilled Water Pumps	2 EA	7,500.00 :	15,000
New Hot Water Pumps	2 EA	7,500.00 :	15,000
DOAS Units	3 EA	50,000.00 :	150,000
Refurbish Gym unit	EA	15,000.00 :	0
Expansion Tank	EA	2,500.00 :	0
Pot Chemical Feeders	EA	8,500.00 :	0
Air Separators	EA	1,500.00 :	0
Chilled Water Piping	43,705 SF	4.00 :	174,821
Hot Water Piping	43,705 SF	4.00 :	174,821
New FCU' ALLOW	31 EA	3,500.00 :	108,500
Temperature Controls	34 EA	2,500.00 :	85,000
Ductwork/Grills/Registers	16,883 SF	5.00 :	84,413
Ductwork/Grills/Registers Gym/Stage	4,329 SF	2.00 :	8,657
Ductwork/Grills/Registers 3rd Floor/Mezz	4,057 SF	4.00 :	16,228
Ductwork/Grills/Registers Addition	18,437 SF	5.00 :	92,185
2000CFM Exhaust Fan	1 EA	7,500.00 :	7,500
1250CFM Exhaust Fan	2 EA	5,000.00 :	10,000
1000CFM Exhaust Fan	1 EA	4,000.00 :	4,000

			1,495,161
26 00 00 ELECTRICAL			
Site			
LED Lighted Bollards	15 EA	5,000.00 :	75,000
Lighting			
Renovation	21,211 SF	10.00 :	212,113
Gym/Stage	SF	6.00 :	0
3rd Floor/Mezz	4,057 SF	7.00 :	28,398
Addition	18,437 SF	8.00 :	147,496
Power			
Renovation	21,211 SF	5.00 :	106,056
Gym/Stage	SF	3.00 :	0
3rd Floor/Mezz	4,057 SF	4.00 :	16,228
Addition	18,437 SF	4.00 :	73,748
Distribution			
	25,268 SF	4.25 :	107,390
Fire Alarm			
Renovation	21,211 SF	3.00 :	63,634
Gym/Stage	SF	3.00 :	0
3rd Floor/Mezz	4,057 SF	3.00 :	12,171
Addition	18,437 SF	3.00 :	55,311
Telecommunications			
Renovation	21,211 SF	2.50 :	53,028
Gym/Stage	SF	1.00 :	0
3rd Floor/Mezz	4,057 SF	2.50 :	10,142
Addition	18,437 SF	2.50 :	46,092
Security System			
Renovation	21,211 SF	2.00 :	42,423
Gym/Stage	SF	2.00 :	0
3rd Floor/Mezz	4,057 SF	2.00 :	8,114
Addition	18,437 SF	2.00 :	36,874

			1,094,218

DESCRIPTION	QUANTITY	UNIT \$	TOTAL
Option B			
27 50 00 A/V EQUIPMENT			
Audio Visual Equipment ALLOWANCE	1 LS	20,000.00	20,000

			20,000
31 20 00 EARTH MOVING			
Regrade @ Perimeter	6,294 SF	1.50	9,441
Clear Site	0.4 AC	5,000.00	1,984
Site Cut/Fill ALLOW	1,921 CY	5.00	9,604
Grade Sidewalks	1,194 SF	0.25	299
Backfill Curb and Gutter	153 LF	1.50	230
Grade Building	15,112 SF	0.75	11,334
Foundation Excavation	464 CY	9.00	4,173
Foundation Backfill	331 CY	10.00	3,315

			40,380
31 31 00 TERMITE CONTROL			
Building	15,112 SF	0.20	3,022

			3,022
32 12 16 ASPHALT PAVING			
Parking Striping	109 EA	20.00	2,180
ADA Striping	5 EA	100.00	500
Seal Coat	2,549 SY	1.50	3,823

			6,503
32 13 13 CEMENT CONCRETE PAVING			
Sidewalk	1,194 SF	4.00	4,776
Curb & Gutter	153 LF	15.00	2,302
Concrete Ramp	113 SF	10.00	1,130

			8,209
32 92 00 LAWN & GRASSES			
Sod	699 SY	3.00	2,098

			2,098
32 93 00 EXTERIOR PLANTS			
Trees	17 EA	700.00	11,900
Shrubs	92 EA	100.00	9,167
Misc Plantings ALLOWANCE	300 SF	7.50	2,250
Entry Sculpture ALLOWANCE	1 LS	20,000.00	20,000

			43,317
33 10 00 WATER DISTRIBUTION			
New 2.5" Water Line (remove old) ALLOW	150 LF	50.00	7,500
BFP	2 EA	2,500.00	5,000
Connect to Existing	1 EA	1,500.00	1,500

			14,000
33 30 00 SANITARY SEWERAGE			
6" Ø PVC Sanitary Sewer ALLOW	250 LF	60.00	15,000

			15,000

DESCRIPTION	QUANTITY	UNIT	UNIT \$	TOTAL
Option B				
33 40 00 STORM DRAINAGE				
Storm ALLOW	1	LS	50,000.00	50,000

				50,000
33 46 16 FOUNDATION DRAINAGE SYSTEMS				
Perimeter Foundation Drain	829	LF	6.00	4,972

				4,972

Gerken Environmental's - BUDGET NUMBERS - IRENE B FRENCH COMMUNITY CENTER

ACM PRICING				
Material	QTY	Unit Price	Extended Total	NOTES
12" Floor tile & mastic	36 SF	\$ 5.00	\$ 180.00	Small quantity results in higher per square foot pricing
Residual mastic on concrete	500 SF	\$ 1.25	\$ 625.00	
Package Boiler	1 EA	N/A	N/A	Boiler was Assumed ACM. If ACM, likely entire unit would be removed from building.
Mirror mastic	1 SF	\$ 2.50	\$ 4.00	Mastic was Assumed ACM. If ACM, disposal includes mirror, scraping mastic from substrate or substrate removal. Tectum was Assumed ACM. If ACM, abatement contractor will need to visit the site to determine how to access / remove material.
Tectum panels	N/A	N/A	N/A	
9" Floor tile & mastic	1500 SF	\$ 2.25	\$ 3,375.00	Material was Assumed (no access into interior). If material is ACM, will need to visit the site to determine how to access
Incinerator Chimney	N/A	N/A	N/A	/ remove material.
Roof flashing	15 SF	\$ 10.00	\$ 150.00	
Fire Doors	EA	\$ 100.00	\$ -	Doors were Assumed ACM. Unit rate is typical for 'standard sized' doors.
ACM Abatement - Total of Priced Items			\$ 4,334.00	

Lead Based Paint Pricing

Option 1: DEMO & REPLACE. Lead painted items can be removed and disposed by the demolition contractor as long as the LBP is firmly adhered. The demo waste is NOT regulated.
Option 2: STABILIZATION: A Lead Abatement contractor can remove the loose and flaking LBP, and apply a primer over the scraped wood. The paint chips must be collected and disposed as hazardous waste.
Option 3: ENCAPSULATION: Applying a lead barrier coating over items that are NOT friction surfaces. Properly applied, these carry a long term warranty.
Option 4: TOTAL REMOVAL: Expensive and time consuming. Only practical when dealing with rare and expensive originals and / or historic preservation situations.

Material	QTY	Unit Price	Extended Total	NOTES
DOT Drum	1	\$ 85.00	\$ 85.00	
Waste Profiling	1	\$ 200.00	\$ 200.00	
Haz Waste Transportation	1	\$ 175.00	\$ 175.00	
Haz Waste Disposal	1	\$ 200.00	\$ 200.00	
LBP Disposal - 1 container			\$ 660.00	
Door Jamb	1	\$ 50.00	\$ 50.00	Option 1 or Option 2 (Plus waste disposal)
Door Jamb	1	\$ 250.00	\$ 250.00	Option 4 (plus waste disposal)
Stairs steps	10	\$ 10.00	\$ 100.00	Option 1 or Option 2 (Plus waste disposal)
Stairs steps	10	\$ 100.00	\$ 1,000.00	Option 4 (plus waste disposal)
LBP Abatement - Option 1 or 2			\$ 810.00	
LBP Abatement - Option 4			\$ 1,910.00	

B&R Insulation's - BUDGET NUMBERS - IRENE B FRENCH COMMUNITY CENTER

NOTE: There are a lot of factors that go into pricing a removal job so we made some assumptions. The first being that we would have free go of the place, there is no Davis Bacon wages, and that this is a remodel not a demolition, and we would not be responsible for new finishes.

Budget Number: a) floor tile and mastic removal less than \$5000.00; b) roof flashing approximately \$200. Assumed Materials: a) fire doors are approximately \$50.00 each; b) sectional boiler if it was found to have asbestos packing could cost less than \$4000.; c) mirror mastic is harder to figure, estimate \$50.-\$100. per mirror; d) tectum panels (if ACM) would be unscrewed and disposed of at approx. \$100 each panel and may be closer to \$50/panel; e) the incinerator is an unknown until access can be assessed.

For the lead, a site visit to bid the project would be more accurate. For budgeting the stairs and the door jamb, approximately \$1000. to stabilize.

TREATMENT RECOMMENDATIONS

PRELIMINARY ENERGY MODELING AND ANALYSIS

Overview

Included as part of the final treatment recommendations for the existing community center, the design team was tasked with looking at the building in terms of energy consumption and how a future rehabilitation would affect energy consumption in the future. The MEP engineer took into consideration the existing building's exterior wall construction, current window sizes, HVAC equipment and current utility bills for the past two years. Using the existing building as a base line, the community center conditions were input into special software and an energy consumption report was generated for different scenarios for a 12 month weather cycle. The following information is a analysis of the energy modeling findings. A full breakdown of the energy modeling is included at the end of this section.

Option A – Rehabilitate Existing Community Center

Under Option A new fan coil units are used to condition most all of the spaces except Jenks Gymnasium and its associated stage and storage spaces. Those spaces are to continue to be served by the existing self-contained DX cooling and natural gas heating rooftop unit that will be refurbished and the existing ductwork cleaned. As stated in the Option A scope of work, ventilation and pressurization air will be supplied to the areas conditioned by three (3) DOAS units. The peak cooling load is estimated to be around 99 tons with 66 tons of that provided by the air cooled chiller and the remainder of the cooling

load provided by the Jenks Gymnasium RTU and the DOAS energy recovery wheels and DX cooling coils. The overall heating load for the building is estimated to be 1063 MBH with 505 MBH of that being supplied by the boilers and the remainder of the heating load being provided by the existing rooftop unit and the ventilation heating load being provided by the DOAS units energy recovery wheels, hot gas bypass and auxiliary electric heating coils.

The estimated annual energy costs will be approximately \$58,100 per year for the 30,915 sq. ft. conditioned area of the building.

Option B – Rehabilitate Existing Community Center & New Addition

Under Options B & B1 the conditioned area of the building increases from 30,915 sq. ft. to 36,885 sq. ft. As noted in the Option B scope of work most areas will remain to be conditioned by fan coil units with the exception of the original Jenks Gymnasium and support spaces and the new addition on the site of the 1951 addition. Jenks Gymnasium will become Jenks Conference Center under Option B and will be served by an indoor variable air volume (VAV) multi-zone air handling unit (AHU) in lieu of fan coil units (FCU's). The new Fitness Room, Aerobics Room and the associated Locker Rooms will be served by a similar unit with the new Gymnasium will be served by a single zone VAV AHU. The new chiller in Option B will provide cooling for all the systems with the exception of the FCU ventilation loads that will be cooled by the self-contained DOAS units for the 1911 building and the 1938 building. The total anticipated cooling load is estimated to be 103 tons with 93 of that

TREATMENT RECOMMENDATIONS

being chiller load and the remainder from the self-contained DOAS units. The heating load is estimated to be approximately 1033 BTU with 792 MBH being provided by the boiler serving not only the fan coil units but also the air handling units.

The remaining ventilation load will be picked up by the DOAS units. The estimated annual energy costs of the expanded facility will be approximately \$61,000 per year.

Option B1 is very similar to Option B except the areas served by FCU's in Option B will now be served by VAV AHU's with VAV box terminal units with reheat coils. One VAV AHU will serve the 1911 & 1989 buildings while the second one will serve the entire 1938 building including the Jenks Conference Center. The AHU's noted to serve the addition in Option B would remain the same in Option B1. In this scenario, all the ventilation and pressurization air will be provided by the associated AHU's and the DOAS units would not be required. This would eliminate the advantage of heat recovery for the ventilation air but will allow for "free cooling" in economizer mode from the AHU's in mild temperatures in lieu of utilizing the chiller. The new peak cooling load is the same as the Option B cooling load as expected with all the cooling load coming from the new chiller. The estimated peak heating load of 1030 MBH is very similar to the load in Option B except all the load will be supplied by the boilers in this Option.

The estimated annual energy costs for Option B1 will be around \$56,600 per year. This anticipated energy costs for this Option are less than Option

B but the initial installation costs for this Option will likely higher than Option B.

SYSTEM SUMMARY

DESIGN AIRFLOW QUANTITIES

By W. L. Cassell

MAIN SYSTEM

System Description	System Type	MAIN SYSTEM			Auxiliary System		Room	
		Outside Airflow cfm	Cooling Airflow cfm	Heating Airflow cfm	Return Airflow cfm	Exhaust Airflow cfm	Supply Airflow cfm	Exhaust Airflow cfm
Alternative 1								
1911 Basement	Fan Coil	200	1,747	1,747	1,785	239	0	100
1989 Basement	Fan Coil	40	695	695	695	40	0	130
1951 Basement	Fan Coil	700	3,883	3,883	3,973	790	0	600
1911 First Floor	Fan Coil	900	2,241	2,241	2,274	933	0	750
1989 First Floor	Fan Coil	100	1,062	1,062	1,085	123	0	0
1951 First Floor	Fan Coil	900	4,712	4,712	4,740	928	0	1,000
1938 First Floor	Fan Coil	600	5,621	5,621	5,719	698	0	1,125
1911 Mezzanine	Fan Coil	40	637	637	644	47	0	60
1911 Second Floor	Fan Coil	900	4,307	4,307	4,409	1,002	0	0
1989 Second Floor	Fan Coil	0	190	190	190	0	0	0
1938 Gym	Single Zone	1,000	6,356	6,356	6,356	6,356	0	0
Totals		5,380	31,451	31,451	31,870	11,155	0	3,765

Alternative 2								
1911 Basement	Fan Coil	200	1,747	1,747	1,785	239	0	100
1989 Basement	Fan Coil	40	695	695	695	40	0	130
1911 First Floor	Fan Coil	900	2,241	2,241	2,274	933	0	750
1989 First Floor	Fan Coil	100	1,062	1,062	1,085	123	0	0
1938 First Floor	Fan Coil	600	5,621	5,621	5,719	698	0	1,125
1911 Mezzanine	Fan Coil	40	637	637	644	47	0	60
1911 Second Floor	Fan Coil	900	4,307	4,307	4,409	1,002	0	0
1989 Second Floor	Fan Coil	0	190	190	190	0	0	0
1938 Gym	Rooftop Multizone VAV	1,000	6,356	1,907	6,356	6,356	0	0
Addition - Gym	Single Zone Variable Air Volume	1,000	4,020	1,206	4,020	4,020	0	0
Addition - East	Rooftop Multizone VAV	1,000	6,591	1,977	6,591	6,591	0	0
Totals		5,780	33,467	21,590	33,768	20,048	0	2,165

Alternative 3								
1938 AHU	Variable Volume Reheat (30% Min Flow Default)	1,740	14,935	4,697	15,055	14,935	0	1,255
Addition - Gym	Single Zone Variable Air Volume	1,000	4,020	1,206	4,020	4,020	0	0
Addition - East	Rooftop Multizone VAV	1,000	6,591	1,977	6,591	6,591	0	0
1911 AHU	Variable Volume Reheat (30% Min Flow Default)	2,040	9,912	3,032	10,093	9,912	0	910
Totals		5,780	35,458	10,913	35,759	35,458	0	2,165

Note: Airflows on this report are not additive because they are each taken at the time of their respective peaks. To view the balanced system design airflows, see the appropriate Checksums report (Airflows section).

SYSTEM SUMMARY DESIGN COOLING CAPACITIES

By W.L. Cassell

Alternative 1

Building Airside Systems and Plant Capacities

Plant System	Peak Plant Loads											Block Plant Loads													
	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1			Stg 2			Base Utility ton	Peak Total ton	Time Peak mo/hr	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1			Stg 2			Base Utility ton	Block Total ton
					Desic Cond								Desic Cond	Desic Cond											
Chiller	65.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.8	7/15	65.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.6	
1911 Basement	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	7/15	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	
1989 Basement	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	7/15	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	
1951 Basement	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	7/15	9.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2	
1911 First Floor	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	7/15	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4	
1989 First Floor	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	7/15	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	
1951 First Floor	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	7/15	14.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	
1938 First Floor	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	7/15	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2	
1911 Mezzanine	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	7/15	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	
1911 Second Floor	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	7/15	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	
1989 Second Floor	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	7/15	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	
Gym Rooftop Unit-C	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	7/16	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	
1938 Gym	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	7/16	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.8	
DOAS-1-C	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	7/15	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	
1911 Basement	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	7/15	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	
1989 Basement	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	7/15	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
1911 First Floor	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7/15	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	
1989 First Floor	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	7/15	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	
1911 Mezzanine	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	7/15	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	
1911 Second Floor	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7/15	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	
DOAS-2-C	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	7/15	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	
1951 Basement	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	7/15	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	
1951 First Floor	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	7/15	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	
DOAS-3-C	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	7/15	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	
1938 First Floor	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	7/15	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	
Building totals	83.6	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.8	7/15	83.4	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	98.5	

Building peak load is 98.8 tons.

Building maximum block load of 98.1 tons occurs in July at hour 15 based on system simulation.

Alternative 2

Building Airside Systems and Plant Capacities

Plant System	Peak Plant Loads										Block Plant Loads									
	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1 Desic Cond ton	Stg 2 Desic Cond ton	Base Utility ton	Peak Total ton	Time Of Peak mo/hr	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1 Desic Cond ton	Stg 2 Desic Cond ton	Base Utility ton	Block Total ton			
																		93.0	0.0	0.0
Chiller	93.0	0.0	0.0	0.0	0.0	0.0	93.0	7/16	92.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	92.2			
1911 Basement	3.7	0.0	0.0	0.0	0.0	0.0	3.7	7/16	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7			
1989 Basement	1.3	0.0	0.0	0.0	0.0	0.0	1.3	7/16	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2			
1911 First Floor	7.4	0.0	0.0	0.0	0.0	0.0	7.4	7/16	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.4			
1989 First Floor	2.6	0.0	0.0	0.0	0.0	0.0	2.6	7/16	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3			
1938 First Floor	14.2	0.0	0.0	0.0	0.0	0.0	14.2	7/16	14.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.2			
1911 Mezzanine	1.2	0.0	0.0	0.0	0.0	0.0	1.2	7/16	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2			
1911 Second Floor	11.6	0.0	0.0	0.0	0.0	0.0	11.6	7/16	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6			
1989 Second Floor	0.5	0.0	0.0	0.0	0.0	0.0	0.5	7/16	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5			
1938 Gym	17.8	0.0	0.0	0.0	0.0	0.0	17.8	7/16	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.6			
Addition - Gym	14.5	0.0	0.0	0.0	0.0	0.0	14.5	7/16	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3			
Addition - East	18.3	0.0	0.0	0.0	0.0	0.0	18.3	7/16	18.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3			
DOAS-1-C	0.0	0.0	7.5	0.0	0.0	0.0	7.5	7/15	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	7.5			
1911 Basement	0.0	0.0	0.7	0.0	0.0	0.0	0.7	7/15	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7			
1989 Basement	0.0	0.0	0.1	0.0	0.0	0.0	0.1	7/15	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1			
1911 First Floor	0.0	0.0	3.1	0.0	0.0	0.0	3.1	7/15	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1			
1989 First Floor	0.0	0.0	0.3	0.0	0.0	0.0	0.3	7/15	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3			
1911 Mezzanine	0.0	0.0	0.1	0.0	0.0	0.0	0.1	7/15	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1			
1911 Second Floor	0.0	0.0	3.1	0.0	0.0	0.0	3.1	7/15	0.0	0.0	3.1	0.0	0.0	0.0	0.0	0.0	3.1			
DOAS-3-C	0.0	0.0	2.1	0.0	0.0	0.0	2.1	7/15	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	2.1			
1938 First Floor	0.0	0.0	2.1	0.0	0.0	0.0	2.1	7/15	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	2.1			
Building totals	93.0	0.0	9.6	0.0	0.0	0.0	102.6	7/16	92.2	0.0	9.6	0.0	0.0	0.0	0.0	0.0	101.8			

Building peak load is 102.6 tons.

Building maximum block load of 101.4 tons occurs in July at hour 15 based on system simulation.

Alternative 3

Building Airside Systems and Plant Capacities

Plant System	Peak Plant Loads										Block Plant Loads									
	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1 Desic Cond ton	Stg 2 Desic Cond ton	Base Utility ton	Peak Total ton	Time Of Peak mo/hr	Main Coil ton	Aux Coil ton	Opt Vent Coil ton	Misc Load ton	Stg 1 Desic Cond ton	Stg 2 Desic Cond ton	Base Utility ton	Block Total ton			
																		103.8	0.0	0.0
Chiller	103.8	0.0	0.0	0.0	0.0	0.0	103.8	7/16	103.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4			
1938 AHU	39.7	0.0	0.0	0.0	0.0	0.0	39.7	7/16	39.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.5			
Addition - Gym	14.5	0.0	0.0	0.0	0.0	0.0	14.5	7/16	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3			
Addition - East	18.3	0.0	0.0	0.0	0.0	0.0	18.3	7/16	18.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.3			
1911 AHU	31.4	0.0	0.0	0.0	0.0	0.0	31.4	7/16	31.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.4			
Building totals	103.8	0.0	0.0	0.0	0.0	0.0	103.8	7/16	103.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	103.4			

Building peak load is 103.8 tons.

Building maximum block load of 103.4 tons occurs in July at hour 16 based on system simulation.

SYSTEM SUMMARY

DESIGN HEATING CAPACITIES

By W.L. Cassell

Alternative 1

System Coil Capacities

System Description	System Type	Main System		Aux System		Humid. Btu/h	Optional Vent Btu/h	Stg 1		Stg 2		Stg 1		Stg 2		Heating Totals Btu/h
		Btu/h	System Btu/h	Btu/h	System Btu/h			Preheat Btu/h	Reheat Btu/h	Desic Regen Btu/h	Desic Regen Btu/h	Prevention Btu/h	Frost Btu/h	Prevention Btu/h	Frost Btu/h	
1911 Basement	Fan Coil	-34,287	0	0	0	0	-17,339	0	0	0	0	0	0	0	0	-51,625
1989 Basement	Fan Coil	-1,934	0	0	0	0	-3,468	0	0	0	0	0	0	0	0	-5,401
1951 Basement	Fan Coil	-54,560	0	0	0	0	-60,685	0	0	0	0	0	0	0	0	-115,245
1911 First Floor	Fan Coil	-45,768	0	0	0	0	-78,024	0	0	0	0	0	0	0	0	-123,792
1989 First Floor	Fan Coil	-15,105	0	0	0	0	-8,669	0	0	0	0	0	0	0	0	-23,774
1951 First Floor	Fan Coil	-89,037	0	0	0	0	-78,024	0	0	0	0	0	0	0	0	-167,061
1938 First Floor	Fan Coil	-154,798	0	0	0	0	-52,016	0	0	0	0	0	0	0	0	-206,814
1911 Mezzanine	Fan Coil	-12,074	0	0	0	0	-3,468	0	0	0	0	0	0	0	0	-15,542
1911 Second Floor	Fan Coil	-92,295	0	0	0	0	-78,024	0	0	0	0	0	0	0	0	-170,319
1989 Second Floor	Fan Coil	-4,916	0	0	0	0	0	0	0	0	0	0	0	0	0	-4,916
1938 Gym	Single Zone	-178,609	0	0	0	0	0	0	0	0	0	0	0	0	0	-178,609
Totals		-683,383	0	0	0	0	-379,717	0	0	0	0	0	0	0	0	-1,063,100

Building Plant Capacities

Plant System	Peak Loads												
	Main Coil MBh	Preheat Coil MBh	Reheat Coil MBh	Humid. Coil MBh	Aux Coil MBh	Opt Vent Coil MBh	Misc Load MBh	Stg 1 Desic. Regen. MBh	Stg 2 Desic. Regen. MBh	Stg 1 Frost Prev. MBh	Stg 2 Frost Prev. MBh	Base Utility MBh	Absorption Load MBh
Boiler	505	0	0	0	0	0	0	0	0	0	0	0	0
1911 Basement	34	0	0	0	0	0	0	0	0	0	0	0	0
1989 Basement	2	0	0	0	0	0	0	0	0	0	0	0	0
1951 Basement	55	0	0	0	0	0	0	0	0	0	0	0	0
1911 First Floor	46	0	0	0	0	0	0	0	0	0	0	0	0
1989 First Floor	15	0	0	0	0	0	0	0	0	0	0	0	0
1951 First Floor	89	0	0	0	0	0	0	0	0	0	0	0	0
1938 First Floor	155	0	0	0	0	0	0	0	0	0	0	0	0
1911 Mezzanine	12	0	0	0	0	0	0	0	0	0	0	0	0
1911 Second Floor	92	0	0	0	0	0	0	0	0	0	0	0	0
1989 Second Floor	5	0	0	0	0	0	0	0	0	0	0	0	0
DOAS-1-H	0	0	0	0	0	189	0	0	0	0	0	0	0
1911 Basement	0	0	0	0	0	17	0	0	0	0	0	0	0
1989 Basement	0	0	0	0	0	3	0	0	0	0	0	0	0

ENGINEERING CHECKS

By W.L. Cassell

System Zone Room	Type	Floor Area ft ²	COOLING				HEATING						
			% OA	cfm/ft ²	cfm/ton	ft ² /ton	Btu/hr-ft ²	% OA	cfm/ft ²	Btu/hr-ft ²			
Alternative 1													
1911 Basement	Zone	2,080	11.45	0.84	394.3	469.4	25.56	11.45	0.84	24.82			
1911 Basement	System - Fan Coil	2,080	11.45	0.84	394.3	469.4	25.56	11.45	0.84	-24.82			
1911 First Floor	Zone	3,100	40.16	0.72	213.5	295.3	40.64	40.16	0.72	-39.93			
1911 First Floor	System - Fan Coil	3,100	40.16	0.72	213.5	295.3	40.64	40.16	0.72	-39.93			
1911 Mezzanine	Zone	635	6.28	1.00	494.1	492.3	24.38	6.28	1.00	-24.48			
1911 Mezzanine	System - Fan Coil	635	6.28	1.00	494.1	492.3	24.38	6.28	1.00	-24.48			
1911 Second Floor	Zone	3,225	20.90	1.34	293.7	219.9	54.56	20.90	1.34	-52.81			
1911 Second Floor	System - Fan Coil	3,225	20.90	1.34	293.7	219.9	54.56	20.90	1.34	-52.81			
1938 First Floor	Zone	5,670	10.67	0.99	345.2	348.2	34.46	10.67	0.99	-36.48			
1938 First Floor	System - Fan Coil	5,670	10.67	0.99	345.2	348.2	34.46	10.67	0.99	-36.48			
1938 First Floor Gymnasium	Zone	4,700	15.73	1.35	356.7	263.8	45.50	15.73	1.35	-38.00			
1938 Gym	System - Single Zone	4,700	15.73	1.35	356.7	263.8	45.50	15.73	1.35	-38.00			
1951 Basement	Zone	4,640	18.03	0.84	334.2	399.4	30.05	18.03	0.84	-24.84			
1951 Basement	System - Fan Coil	4,640	18.03	0.84	334.2	399.4	30.05	18.03	0.84	-24.84			
1951 First Floor	Zone	4,790	19.10	0.98	272.7	277.1	43.30	19.10	0.98	-34.88			
1951 First Floor	System - Fan Coil	4,790	19.10	0.98	272.7	277.1	43.30	19.10	0.98	-34.88			
1989 Basement	Zone	750	5.76	0.93	499.2	538.9	22.27	5.76	0.93	-7.20			
1989 Basement	System - Fan Coil	750	5.76	0.93	499.2	538.9	22.27	5.76	0.93	-7.20			
1989 First Floor	Zone	1,040	9.42	1.02	362.2	354.9	33.82	9.42	1.02	-22.86			
1989 First Floor	System - Fan Coil	1,040	9.42	1.02	362.2	354.9	33.82	9.42	1.02	-22.86			
1989 Second Floor	Zone	285	0.00	0.67	352.8	528.2	22.72	0.00	0.67	-17.25			
1989 Second Floor	System - Fan Coil	285	0.00	0.67	352.8	528.2	22.72	0.00	0.67	-17.25			

HEATING

COOLING

Floor Area
ft²

System Zone Room	Type	% OA	cfm/ft ²	cfm/ton	ft ² /ton	Btu/hr-ft ²	% OA	cfm/ft ²	Btu/hr-ft ²
Alternative 2									
1911 Basement	Zone	11.45	0.84	394.3	469.4	25.56	11.45	0.84	-24.82
1911 Basement	System - Fan Coil	11.45	0.84	394.3	469.4	25.56	11.45	0.84	-24.82
1911 First Floor	Zone	40.16	0.72	213.5	295.3	40.64	40.16	0.72	-39.93
1911 First Floor	System - Fan Coil	40.16	0.72	213.5	295.3	40.64	40.16	0.72	-39.93
1911 Mezzanine	Zone	6.28	1.00	494.1	492.3	24.38	6.28	1.00	-24.48
1911 Mezzanine	System - Fan Coil	6.28	1.00	494.1	492.3	24.38	6.28	1.00	-24.48
1911 Second Floor	Zone	20.90	1.34	293.7	219.9	54.56	20.90	1.34	-52.81
1911 Second Floor	System - Fan Coil	20.90	1.34	293.7	219.9	54.56	20.90	1.34	-52.81
1938 First Floor	Zone	10.67	0.99	345.2	348.2	34.46	10.67	0.99	-36.48
1938 First Floor	System - Fan Coil	10.67	0.99	345.2	348.2	34.46	10.67	0.99	-36.48
1938 First Floor Gymnasium	Zone	15.73	1.35	357.7	264.5	45.36	52.45	0.41	-36.35
1938 Gym	Rooftop Multizone VAV	15.73	1.35	357.7	264.5	45.36	52.45	0.41	-36.35
1989 Basement	Zone	5.76	0.93	499.2	538.9	22.27	5.76	0.93	-7.20
1989 Basement	System - Fan Coil	5.76	0.93	499.2	538.9	22.27	5.76	0.93	-7.20
1989 First Floor	Zone	9.42	1.02	362.2	354.9	33.82	9.42	1.02	-22.86
1989 First Floor	System - Fan Coil	9.42	1.02	362.2	354.9	33.82	9.42	1.02	-22.86
1989 Second Floor	Zone	0.00	0.67	352.8	528.2	22.72	0.00	0.67	-17.25
1989 Second Floor	System - Fan Coil	0.00	0.67	352.8	528.2	22.72	0.00	0.67	-17.25
Option B East Half	Zone	15.17	0.87	360.5	415.7	28.87	50.57	0.26	-17.60
Addition - East	Rooftop Multizone VAV	15.17	0.87	360.5	415.7	28.87	50.57	0.26	-17.60
Option B - Gym	Zone	24.88	0.52	276.9	537.4	22.33	82.92	0.15	-16.16
Addition - Gym	System - Single Zone Variable Air Volume	24.88	0.52	276.9	537.4	22.33	82.92	0.15	-16.16
Alternative 3									
1911 Basement	Zone	10.87	0.88	411.9	465.7	25.77	36.24	0.27	-28.54
1911 First Floor	Zone	30.85	0.94	272.7	289.8	41.40	100.00	0.28	-38.82
1911 Mezzanine	Zone	6.46	0.97	480.4	492.8	24.35	21.54	0.29	-29.34
1911 Second Floor	Zone	19.02	1.47	317.1	216.1	55.52	63.41	0.44	-48.05
1911 AHU	System - Variable Volume Reheat (30% Min Flow Default)	20.58	1.10	316.2	288.4	41.61	66.46	0.34	-39.08
1938 First Floor	Zone	9.81	1.08	376.4	349.0	34.38	32.71	0.32	-31.81
1938 First Floor Gymnasium	Zone	14.23	1.50	387.3	259.0	46.33	47.42	0.45	-40.83
1989 Basement	Zone	4.99	1.07	554.9	519.1	23.12	16.63	0.32	-16.47
1989 First Floor	Zone	6.82	1.41	525.3	372.4	32.22	22.72	0.42	-27.71
1989 Second Floor	Zone	0.00	0.86	433.5	505.2	23.75	0.00	0.26	-17.72
1938 AHU	System - Variable Volume Reheat (30% Min Flow Default)	11.65	1.20	376.4	313.7	38.26	37.04	0.38	-33.53
Option B East Half	Zone	15.17	0.87	360.5	415.7	28.87	50.57	0.26	-17.60
Addition - East	Rooftop Multizone VAV	15.17	0.87	360.5	415.7	28.87	50.57	0.26	-17.60
Option B - Gym	Zone	24.88	0.52	276.9	537.4	22.33	82.92	0.15	-16.16
Addition - Gym	System - Single Zone Variable Air Volume	24.88	0.52	276.9	537.4	22.33	82.92	0.15	-16.16

ENERGY CONSUMPTION SUMMARY

By W.L. Cassell

	Elect Cons. (kWh)	Gas Cons. (kBtu)	% of Total Building Energy	Total Building Energy (kBtu/yr)	Total Source Energy* (kBtu/yr)
Alternative 1					
Primary heating					
Primary heating		460,691	20.0 %	460,691	484,938
Other Htg Accessories	396		0.1 %	1,351	4,054
Heating Subtotal	396	460,691	20.1 %	462,043	488,992
Primary cooling					
Cooling Compressor	144,949		21.5 %	494,712	1,484,284
Tower/Cond Fans	10,223		1.5 %	34,892	104,685
Condenser Pump			0.0 %	0	0
Other Ctg Accessories	1,164		0.2 %	3,971	11,915
Cooling Subtotal...	156,336		23.2 %	533,574	1,600,883
Auxiliary					
Supply Fans	123,759		18.4 %	422,388	1,267,292
Pumps	11,909		1.8 %	40,646	121,951
Stand-alone Base Utilities			0.0 %	0	0
Aux Subtotal....	135,668		20.1 %	463,035	1,389,243
Lighting					
Lighting	247,135		36.6 %	843,471	2,530,665
Receptacle					
Receptacles			0.0 %	0	0
Cogeneration					
Cogeneration			0.0 %	0	0
Totals					
Totals**	539,534	460,691	100.0 %	2,302,122	6,009,783

* Note: Resource Utilization factors are included in the Total Source Energy value.

** Note: This report can display a maximum of 7 utilities. If additional utilities are used, they will be included in the total.

ENERGY CONSUMPTION SUMMARY

By W.L. Cassell

	Elect Cons. (kWh)	Gas Cons. (kBtu)	% of Total Building Energy	Total Building Energy (kBtu/yr)	Total Source Energy* (kBtu/yr)
Alternative 2					
Primary heating					
Primary heating		322,631	14.0 %	322,631	339,612
Other Htg Accessories	791		0.1 %	2,698	8,096
Heating Subtotal	791	322,631	14.1 %	325,330	347,708
Primary cooling					
Cooling Compressor	156,025		23.1 %	532,514	1,597,703
Tower/Cond Fans	9,922		1.5 %	33,864	101,602
Condenser Pump			0.0 %	0	0
Other Ctg Accessories	734		0.1 %	2,506	7,519
Cooling Subtotal...	166,682		24.7 %	568,885	1,706,825
Auxiliary					
Supply Fans	101,689		15.1 %	347,065	1,041,300
Pumps	17,101		2.5 %	58,367	175,118
Stand-alone Base Utilities			0.0 %	0	0
Aux Subtotal....	118,791		17.6 %	405,432	1,216,418
Lighting					
Lighting	294,859		43.6 %	1,006,353	3,019,360
Receptacle					
Receptacles			0.0 %	0	0
Cogeneration					
Cogeneration			0.0 %	0	0
Totals					
Totals**	581,122	322,631	100.0 %	2,305,999	6,290,310

* Note: Resource Utilization factors are included in the Total Source Energy value.

** Note: This report can display a maximum of 7 utilities. If additional utilities are used, they will be included in the total.

ENERGY CONSUMPTION SUMMARY

By W.L. Cassell

	Elect Cons. (kWh)	Gas Cons. (kBtu)	% of Total Building Energy	Total Building Energy (kBtu/yr)	Total Source Energy* (kBtu/yr)
Alternative 3					
Primary heating					
Primary heating		220,043	10.6 %	220,043	231,625
Other Htg Accessories	2,589		0.4 %	8,838	26,516
Heating Subtotal	2,589	220,043	11.0 %	228,881	258,141
Primary cooling					
Cooling Compressor	151,312		24.8 %	516,427	1,549,435
Tower/Cond Fans	9,411		1.5 %	32,119	96,368
Condenser Pump			0.0 %	0	0
Other Ctg Accessories	254		0.0 %	868	2,603
Cooling Subtotal...	160,977		26.4 %	549,414	1,648,406
Auxiliary					
Supply Fans	76,430		12.5 %	260,856	782,646
Pumps	11,613		1.9 %	39,634	118,913
Stand-alone Base Utilities			0.0 %	0	0
Aux Subtotal....	88,043		14.4 %	300,489	901,559
Lighting					
Lighting	294,859		48.3 %	1,006,353	3,019,360
Receptacle					
Receptacles			0.0 %	0	0
Cogeneration					
Cogeneration			0.0 %	0	0
Totals					
Totals**	546,468	220,043	100.0 %	2,085,137	5,827,465

* Note: Resource Utilization factors are included in the Total Source Energy value.

** Note: This report can display a maximum of 7 utilities. If additional utilities are used, they will be included in the total.

Energy Cost Budget / PRM Summary

By W.L. Cassell

Project Name: Merriam Community Center	Date: May 04, 2015
City: Merriam KS	
Weather Data: Kansas City, Missouri	

Note: The percentage displayed for the "Proposed/ Base %" column of the base case is actually the percentage of the total energy consumption.

* Denotes the base alternative for the ECB study.

	* Alt-1 Option A		Alt-2 Option B		Alt-3 Option B1	
	Energy 10 ^{^6} Btu/yr	Proposed / Base Peak kBTuh	Energy 10 ^{^6} Btu/yr	Proposed / Base Peak kBTuh	Energy 10 ^{^6} Btu/yr	Proposed / Base Peak kBTuh
Lighting - Conditioned	843.5	37	211	119	252	252
Space Heating	1.4	0	3	200	4	5
	460.7	20	1,023	70	885	756
Space Cooling	498.7	22	421	107	448	449
Pumps	40.6	2	10	144	14	16
Heat Rejection	34.9	2	32	97	29	27
Fans - Conditioned	422.4	18	105	82	118	142
Total Building Consumption	2,302.1			2,306.0		2,085.1

	* Alt-1 Option A	Alt-2 Option B	Alt-3 Option B1
Total	153 634	99 634	222 0
Number of hours heating load not met			
Number of hours cooling load not met			

	* Alt-1 Option A	Alt-2 Option B	Alt-3 Option B1
Electricity	Energy 10 ^{^6} Btu/yr	Energy 10 ^{^6} Btu/yr	Energy 10 ^{^6} Btu/yr
	1,841.4	1,983.4	1,865.1
	460.7	322.6	220.0
Total	2,302	2,306	2,085

MONTHLY UTILITY COSTS

By W.L. Cassell

Utility	Monthly Utility Costs												Total
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
Alternative 1													
Electric													
On-Pk Cons. (\$)	3,384	3,089	3,648	3,860	5,366	5,849	6,753	6,187	4,994	4,004	3,499	3,318	53,953
Gas													
On-Pk Cons. (\$)	891	788	661	168	4	0	0	0	9	162	386	1,078	4,146
Monthly Total (\$):	4,275	3,878	4,308	4,028	5,371	5,849	6,753	6,187	5,003	4,166	3,886	4,396	58,100
Building Area =	30,915 ft ²												
Utility Cost Per Area =	1.88 \$/ft ²												

Alternative 2													
Electric													
On-Pk Cons. (\$)	3,415	3,113	3,652	4,159	5,959	6,528	7,529	6,931	5,519	4,301	3,642	3,364	58,112
Gas													
On-Pk Cons. (\$)	629	551	455	113	3	0	0	0	5	107	277	763	2,904
Monthly Total (\$):	4,044	3,664	4,107	4,273	5,962	6,528	7,529	6,931	5,524	4,408	3,920	4,127	61,016
Building Area =	36,885 ft ²												
Utility Cost Per Area =	1.65 \$/ft ²												

MONTHLY UTILITY COSTS

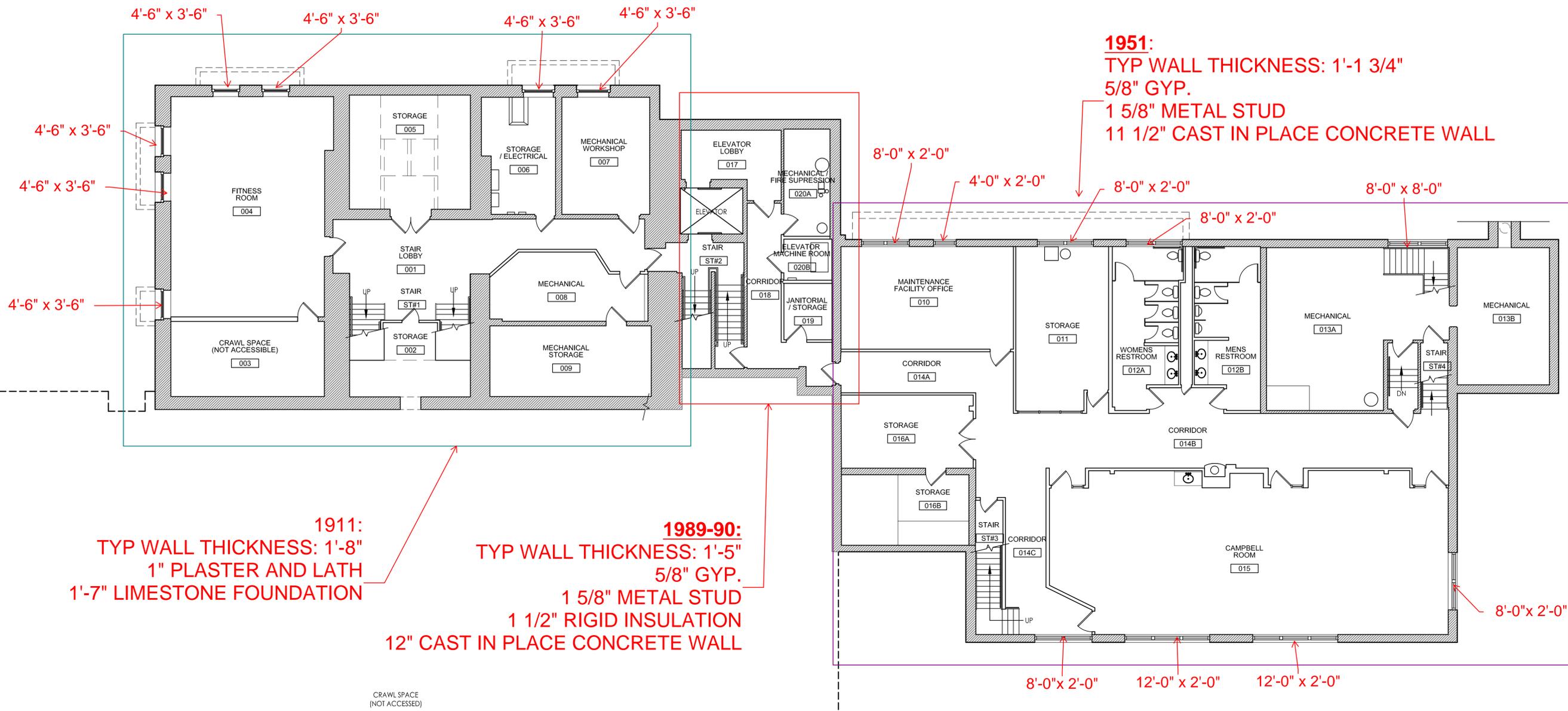
By W.L. Cassell

Utility	Monthly Utility Costs												Total
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	
Alternative 3													
Electric													
On-Pk Cons. (\$)	2,867	2,611	3,014	3,649	5,949	6,614	7,724	7,063	5,448	3,764	3,100	2,842	54,647
Gas													
On-Pk Cons. (\$)	505	426	257	6	0	0	0	0	0	10	105	672	1,980
Monthly Total (\$):	3,372	3,037	3,271	3,655	5,949	6,614	7,724	7,063	5,448	3,774	3,205	3,515	56,627

Building Area = 36,885 ft²
 Utility Cost Per Area = 1.54 \$/ft²

All drawings and written information appearing herein shall not be duplicated, disclosed or otherwise used without the written consent of the architect.

DATE: MAY 5, 2015
 REVISION & DATE:



1911:
 TYP WALL THICKNESS: 1'-8"
 1" PLASTER AND LATH
 1'-7" LIMESTONE FOUNDATION

1989-90:
 TYP WALL THICKNESS: 1'-5"
 5/8" GYP.
 1 5/8" METAL STUD
 1 1/2" RIGID INSULATION
 12" CAST IN PLACE CONCRETE WALL

1951:
 TYP WALL THICKNESS: 1'-1 3/4"
 5/8" GYP.
 1 5/8" METAL STUD
 11 1/2" CAST IN PLACE CONCRETE WALL

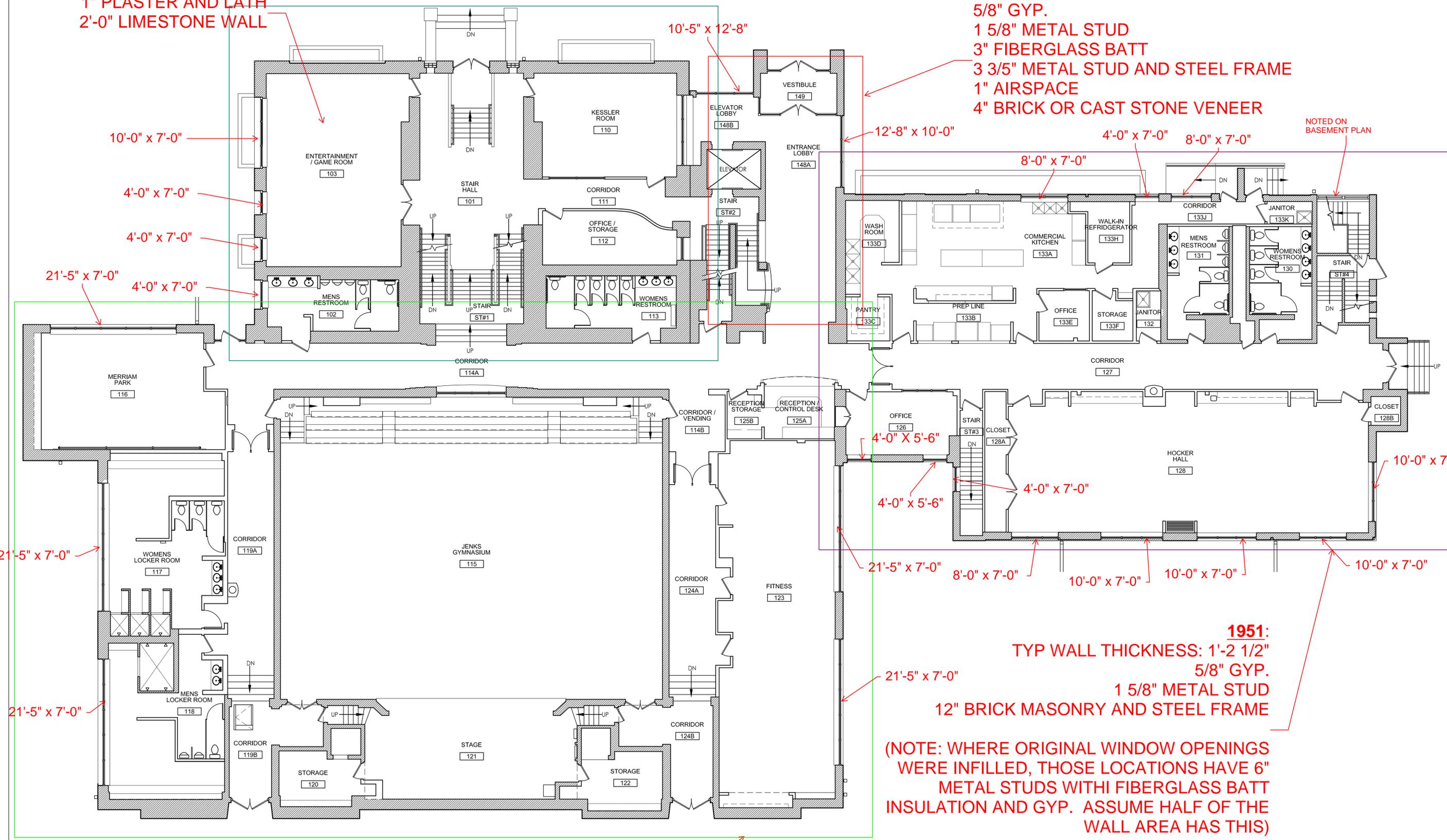
B EXISTING BASEMENT FLOOR PLAN

Scale: 1/8" = 1'-0"



1911:
 TYP WALL THICKNESS: 2'-1 3/4"
 1" PLASTER AND LATH
 2'-0" LIMESTONE WALL

1989-90:
 TYP WALL THICKNESS: 1'-2 3/8"
 5/8" GYP.
 1 5/8" METAL STUD
 3" FIBERGLASS BATT
 3 3/5" METAL STUD AND STEEL FRAME
 1" AIRSPACE
 4" BRICK OR CAST STONE VENEER



21'-5" x 7'-0"
 21'-5" x 7'-0"
 21'-5" x 7'-0"

1951:
 TYP WALL THICKNESS: 1'-2 1/2"
 5/8" GYP.
 1 5/8" METAL STUD
 12" BRICK MASONRY AND STEEL FRAME
 (NOTE: WHERE ORIGINAL WINDOW OPENINGS WERE INFILLED, THOSE LOCATIONS HAVE 6" METAL STUDS WITH FIBERGLASS BATT INSULATION AND GYP. ASSUME HALF OF THE WALL AREA HAS THIS)

1938:
 TYP WALL THICKNESS: 1'-5"
 1" PLASTER AND LATH
 1'-4" LIMESTONE WALL

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Susan Richards Johnson & Associates, Inc.
 Missouri State Certificate of Authority #2007024864

IRENE B. FRENCH COMMUNITY CENTER
EXISTING CONDITIONS
 5701 MERRIAM DRIVE
 MERRIAM, KANSAS 66203

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DATE: MAY 5, 2015
 REVISION & DATE:

FIRST FLOOR PLAN
 SHEET NUMBER:

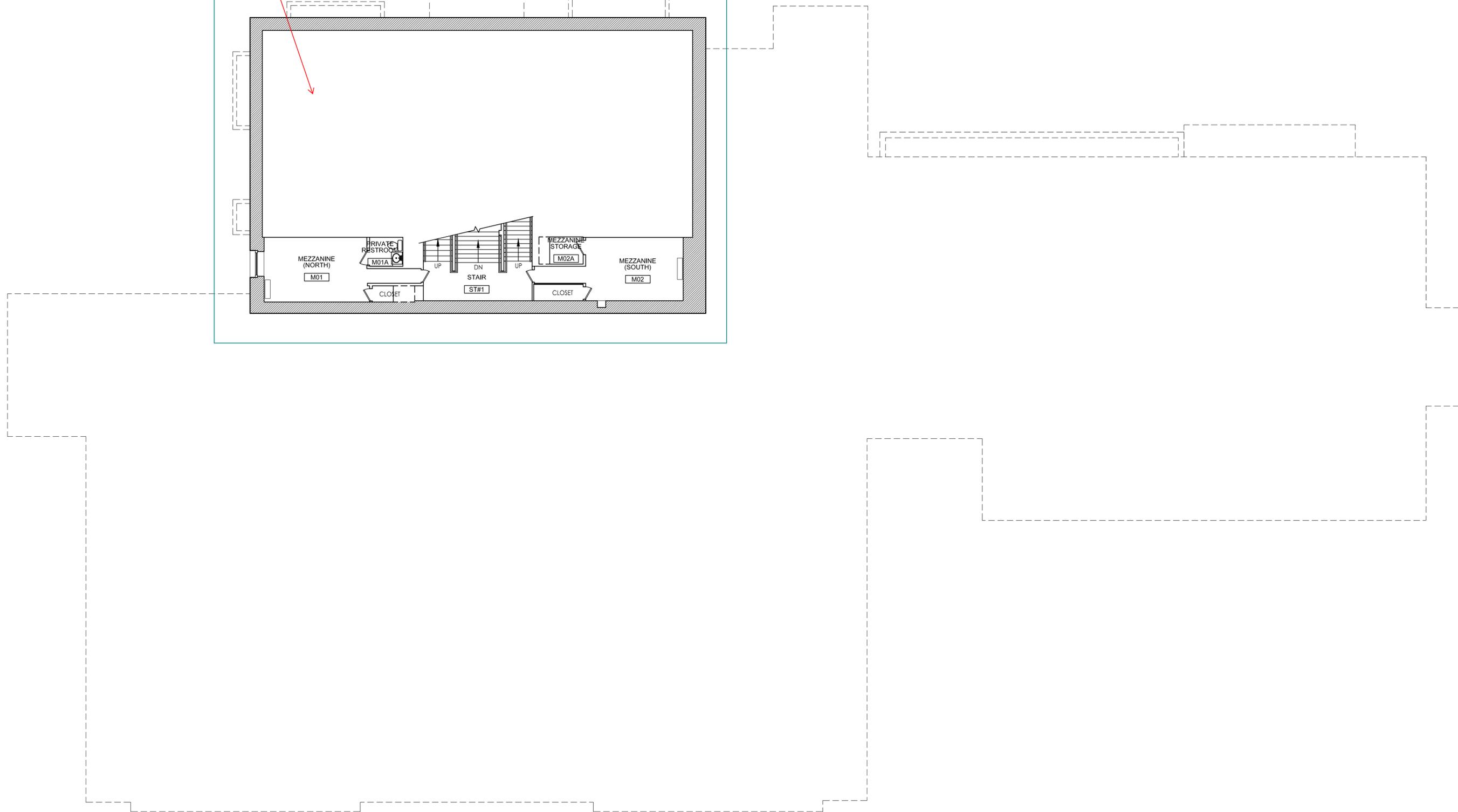
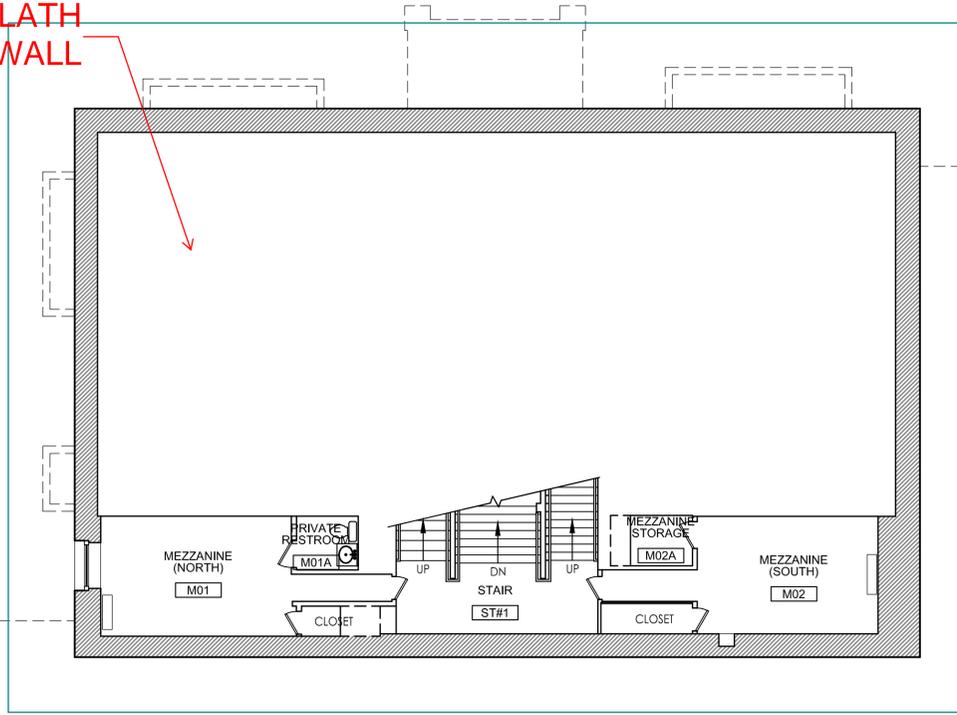
XA1

1 EXISTING FIRST FLOOR PLAN

Scale: 1/8" = 1'-0"



1911:
 TYP WALL THICKNESS: 2'-0"
 1" PLASTER AND LATH
 1'-11" LIMESTONE WALL



1a EXISTING MEZZANINE FLOOR PLAN

Scale: 1/8" = 1'-0"



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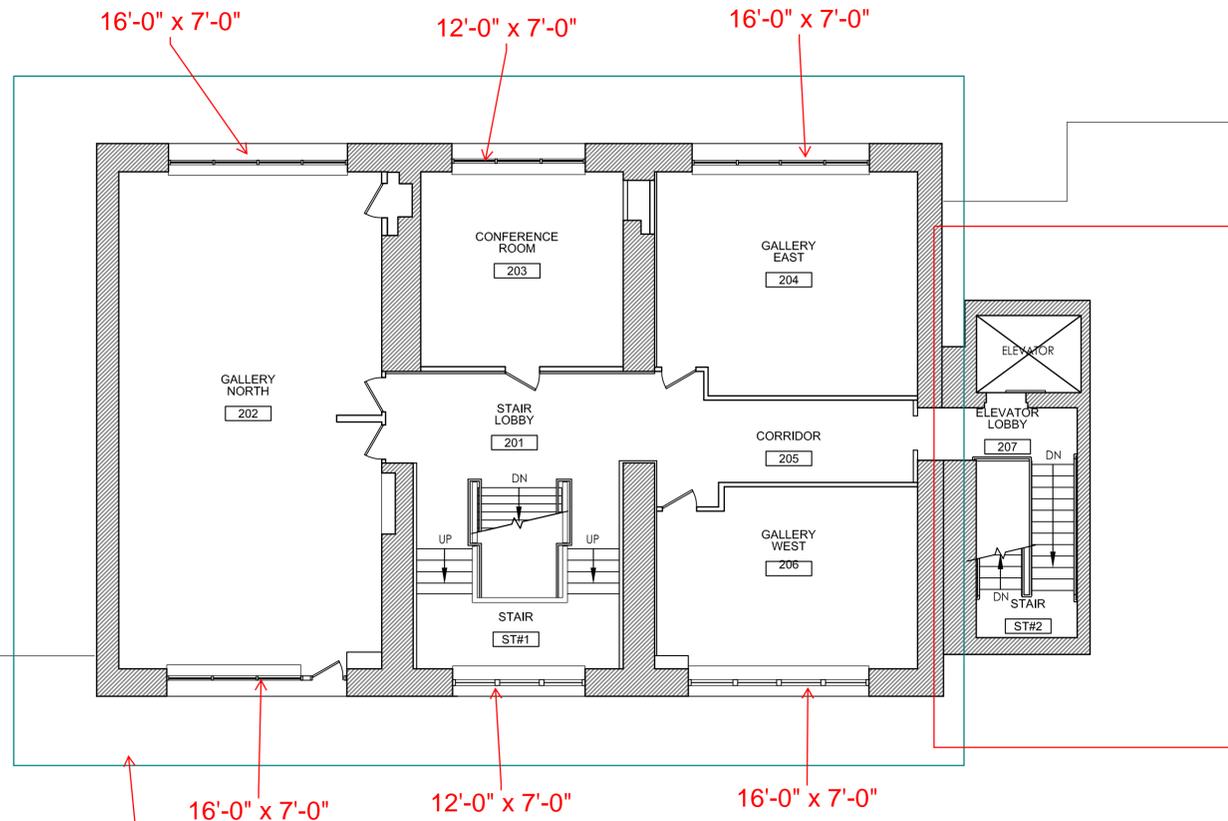
IRENE B. FRENCH COMMUNITY CENTER
EXISTING CONDITIONS
 5701 MERRIAM DRIVE
 MERRIAM, KANSAS 66203

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DATE: MAY 5, 2015
 REVISION & DATE:

MEZZANINE FLOOR PLAN
 SHEET NUMBER:

XA1a



1989-90:
 TYP WALL THICKNESS: 1'-2 3/8"
 5/8" GYP.
 1 5/8" METAL STUD
 3" FIBERGLASS BATT
 3 3/5" METAL STUD AND STEEL FRAME
 1" AIRSPACE
 4" BRICK OR CAST STONE VENEER

1911:
 TYP WALL THICKNESS: 2'-5"
 1" PLASTER AND LATH
 1'-11" LIMESTONE WALL
 3 5/8" METAL STUD FURRING
 1" PLYWOOD OR 5/8" GYP (VARIES)
 FABRIC WALLCOVERING

SUSAN RICHARDS JOHNSON & ASSOCIATES, INC.
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DATE: MAY 5, 2015
 REVISION & DATE:

SECOND FLOOR PLAN

SHEET NUMBER:

XA2

