ARCHITECTURAL DESIGN PROGRAM NARRATIVEFOR IMPROVEMENTS TO EXISTING BUILDINGS IN GILLELAND CREEK, PFLUGER, AND HERITAGE PARKS

FLOODPLAIN CONSIDERATIONS

Significant areas of both Gilleland Creek and Pfluger Parks lie within the 100-year floodplain of Gilleland Creek. Heritage Park is not within a designated floodplain.

.

Base flood elevations (BFE's) in the area of Gilleland Creek and Pfluger Parks are established by FEMA FIRM (Flood Insurance Rate Map) Panel Number 4810280280J, (effective date June 16, 1993, revision date August 18, 2014). The facilities within Gilleland Creek Park include an existing pool house, constructed between 1964 and 1967 and existing locker rooms, constructed between 1985 and 2004. The facility within Pfluger Park is a park restroom building, constructed between 1973 and 1985.

MWM estimated finished floor elevations (FFE) for each facility from one-foot contour interval topography, based on Google Earth aerial imagery, according to the TX83-CF coordinate system. We estimated BFE's at each facility location from information graphically depicted on the FIRM Panel.

Because the facilities were constructed prior to the latest FEMA map revision date, the floodplain model likely accounts for the obstruction created by the facilities. Therefore, re-construction of the facilities in the same location, at the same elevations and to the same dimensions will likely not result in an increased water surface elevation. Blake Overmyer, Floodplain Administrator for the City of Pflugerville, concurred with this conclusion. Any increase in the calculated flood elevation would require FEMA approval and would possibly expose the City to liability from other property owners detrimentally impacted by the increase. Given the number of developed properties within the floodplain of Gilleland Creek, including significant numbers of single-family residences, MWM DesignGroup recommends against any changes to the calculated water surface elevation except in the context of a larger project of floodplain modification and/or land acquisition.

The City of Pflugerville requires the finished floor of new conventional (non flood-resistant) structures to have 2 feet of freeboard above the BFE, in accordance with the requirements of the International Building Code.

Gilleland Creek Park Facilities (Pool House and Locker Rooms)

The finished floor elevation of the existing pool house and existing locker rooms appears to be approximately 693.5 and 692.0, respectively. The BFE at this location appears to be approximately 695. Both structures appear to be within the FEMA floodway (the 25-year floodplain).

We have identified four potential options for reconstructing these facilities, although hybrid solutions, combining one or more of these options, may also be feasible.

Option #1 - Rebuild the existing buildings in their present locations and at their present elevations using flood-resistant construction. This option could be presumed to have no impact to the BFE without further analysis; however, it may not address the desired program for the pool house.

Option #2 - Rebuild the existing structures in a new location beyond the 100-yr floodplain. Since the pool house must remain next to the pool and neither the pool house nor the pool can feasibly be relocated within this park above the floodplain, this option is not viable.

Option #3 - Rebuild the existing structures in its present location with a new finished floor set above the 100-yr flood elevation, and construct ramps or other means of vertical access that do not impede flood flows. The facilities would have to be raised to an approximate elevation of 697.0 to be lifted above the BFE. For this option, the local flood plain administrator may require an adverse impact analysis to confirm that the proposed improvements do not impact the BFE.

Option #4 - Rebuild the existing structures in their present location with a new finished floor set above the 100-yr flood elevation, and re-grade the site to match the proposed finished floor. In order for the buildings to be relocated above the floodplain and for the site to be re-graded to match the proposed finished floors, the facilities must be raised to an approximate elevation of 697.0 and additional fill material must be brought in to accomplish the re-grading. For this option, the floodplain model must be modified, and a Conditional Letter of Map Revision (CLOMR) must be approved by FEMA prior to construction. Although technically feasible, the extent of earthwork required to raise the site in the area of the pool buildings, preserving access to these buildings from the pool, the park, and the existing parking lot, and corresponding earthwork required to mitigate the impact of the proposed regrading on the calculated floodplain, would be incommensurable with the limited benefits relative to Option 3. It appears that this solution would only be viable if undertaken in the context of a much larger project for the reconfiguration of the floodway.

Pfluger Park Facility (Park Restrooms)

The finished floor elevation of the existing park restroom appears to be approximately 694.5. The BFE in this location appears to be approximately 700.0. The structure appears to be within the floodway (the 25-year floodplain).

We have identified four potential options for reconstructing this facility, although hybrid solutions, combining one or more of these options, may also be feasible.

Option #1 - Rebuild the existing restroom in its present location and at its present elevation using flood-proof construction. This option could be presumed to have no impact to the BFE without further analysis. The facility re-design should comply with FEMA and flood-resistant building code regulations.

Option #2 - Rebuild the existing restroom in a new location beyond the 100-yr floodplain. The restroom can be relocated to a few locations within the park that are above the 100-yr flood elevation. This option could be presumed to have no impact to the BFE without further analysis; it would be necessary to demonstrate that the relocated restroom is beyond the 100-yr floodplain.

Option #3 - Rebuild the existing restroom in its present location with a new finished floor set above the 100-yr flood elevation, and construct ramps or other means of vertical access that do not impede flood flows. If the City desires for the facility to be reconstructed within the floodplain, the facility must be raised to an approximate elevation of 702.0. For this option, the local flood plain administrator may require an adverse impact analysis to confirm that the proposed improvements do not impact the BFE.

Option #4 - Rebuild the existing restroom in its present location with a new finished floor set above the 100-yr flood elevation, and re-grade the site to match the proposed finished floor. If the City desires for the facilities to be reconstructed within the floodplain and for the site to be re-graded to match the proposed finished floor, the facilities must be raised to an approximate elevation of 702.0 and additional fill material must be brought in to accomplish the re-grading. For this option, the floodplain model must be modified, and a Conditional Letter of Map Revision (CLOMR) must be approved by FEMA prior to construction. Although technically feasible, the extent of earthwork required to raise the site in the area of the restroom, and corresponding earthwork required to mitigate the impact of the proposed regrading on the calculated floodplain, would be incommensurable with the limited benefits relative to Option 3.

Floodplain Recommendations

MWM recommends a variant of Option #3 for the Gilliland Creek facilities (with the multipurpose buildings raised above the floodplain and the locker rooms rebuilt at their present elevations) and Option #1 for the Pfluger Park facilities. Compared to other options assessed, the recommended options minimize construction costs, maintain access similar to existing conditions, and minimize potential impacts to the floodplain BFE. MWM recommends that an adverse impact analysis be performed to demonstrate that the proposed improvements have negligible impact to the floodplain BFE.

The proposed recommendations have the existing benefit of minimizing detrimental impacts on existing natural features of the two parks, specifically the existing trees in the vicinity of the pool house, including both the specimen pecan tree behind the pool house and the stand of trees between this building and the locker rooms.

ARCHITECTURAL RECOMMENDATIONS FOR GILLELAND CREEK PARK

For Gilleland Creek Park, MWM proposed to Blake Overmyer (Building Official and Floodplain Administrator) that the existing locker rooms be reconstructed at its present elevation, and that the multipurpose building be raised above the 100-year floodplain, as follows:

Since the existing locker rooms have an imperative functional association with the pool deck, and moreover by their nature are inherently robust and water-resistant facilities, the most economical option for this building would be to reconstruct it at its present location and elevation. Mr. Overmyer concurred with this solution, noting that the rebuilt building should reproduce the approximate size and orientation of the existing structure and should be designed to withstand flood loads in accordance with IBC requirements. In terms of sound design practice (even where not required by code) wherever possible building systems and appurtenances, specifically including electrical gear, water heaters, and similar features, should be located above the 100-year floodplain.

The proposed plan for the locker room building is attached. In general, and in accordance with the limitations associated with the building area, it reproduces the features of the existing locker rooms. The most significant changes are associated with compliance with current accessibility standards. In addition, it is proposed that a third, non-gender-specific changing and shower room be provided in addition to the standard men's and women's facilities. Such features are increasingly common in parks facilities, and offer obvious benefits in terms (for example) of accommodation for families and for provision of continuous services (shower and toilet facilities) when either of the gender-specific locker rooms may be unavailable due to cleaning or maintenance.

The existing multipurpose building is not as directly related to the pool deck elevation as the locker rooms. Accordingly it is recommended that the majority of the functions associated with this building be elevated above the 100-year floodplain on a raised foundation 30" - 36" high. Under this strategy the foundation itself would have to be designed to resist flood loads, as shown below with different masonry veneers, but the building could be conventional construction. Although ramps would be required to accommodate the change in elevation, it is believed that these changes in elevation could be designed as an amenity rather than a detrimental feature. For example, on the side of the multipurpose building facing the monumental pecan tree this elevation change could be accommodated with terraces, creating an exterior venue for educational or recreational uses or to allow for overflow from the proposed multipurpose room (e.g. to allow for larger events than the multipurpose room alone could accommodate). Likewise embankments could be provided on the pool side of the multipurpose building, allowing for spectator seating for swimming events.

Those elements of the multipurpose building directly associated with the pool, namely the admissions and concession facilities, should not be elevated. This would result in a split-level design for the multipurpose building, albeit with no internal circulation between levels (i.e. to permit independent operation of the pool admissions and concession windows and the offices and multipurpose room). Although the admissions and concession facilities would have to be of entirely flood-proof construction, they could be designed such that all building services, specifically HVAC and electrical systems, were provided above the flood elevation from the adjacent multipurpose building, resulting in an ideal compromise between conventional and flood proof construction.

Again Mr. Overmyer concurred with this solution, with the same provisions applicable to the locker room building. A plan of this option is included at the conclusion of this report.

ARCHITECTURAL RECOMMENDATIONS FOR PFLUGER PARK

Like the Gilleland Creek Park locker rooms, the Pfluger Park restroom is functionally constrained to its existing elevation. MWM proposed to Mr. Overmyer that this building be reconstructed at its present location and elevation, in flood-resistant construction compliant with IBC requirements. He concurred with this approach.

By eliminating the storage room, MWM proposes an enlargement of the existing toilet room (and an increase in the number of fixtures provided) without increasing the overall size of the building. The one change that MWM is proposing is the provision of self-contained single user accessible facilities on both the men's and women's sides, in addition to the multi-occupant toilet rooms. By doing so, the accessible rooms can remain open all year round, but the larger facilities closed and secured during periods of limited demand. This solution would help in the management of operations, supply and maintenance costs, as well as providing flexibility in the number of toilets available for the use of park visitors.

A plan of this option is included at the conclusion of this report.

AESTHETIC CONSIDERATIONS APPLICABLE TO GILLELAND CREEK AND PFLUGER PARKS

Reinforced CMU construction has proven the most economical means of achieving the flood-resistance requirements of the IBC for buildings located below the 100-year flood elevations. For the toilet rooms in Gilleland Creek and Pfluger Parks, MWM is proposing CMU construction wherever patrons might touch it (i.e. to a height of approximately 8' above the floor). In order to lessen the severe visual characteristics of this construction type; we are proposing an aesthetic veneer of either brick (consistent with Pflugerville's history) or limestone (a less-expensive alternative) for the building exteriors. There would be considerable discretion available in the detailing of a brick veneer, or in the specification of coursed or un-coursed limestone ashlar, at the client's discretion. There are also options for the combination of brick and limestone elements, per iconic Pflugerville buildings such as Immanuel Lutheran Church, although it should be noted that this level of architectural embellishment would impact the ultimate project cost.

Portions of the buildings above this 8' elevation will be constructed from western red cedar, including roof framing members. This material is resistant to decay and does not require paint or stain. This wood-framed element of the building exteriors will include continuous clerestory openings to provide both cross-ventilation and natural light. Although experience has demonstrated the need to include insect screens in such openings, which does impose a maintenance obligation, the natural light and ventilation are enormously beneficial in terms of the public perception of parks restroom facilities.

MWM proposes that the multipurpose building employ the same materials and details as the restroom and locker rooms in order to help establish a consistent aesthetic vocabulary for Gilleland Creek and Pfluger Parks. We suggest that the multipurpose building, specifically the large multipurpose room, reflect a traditional lodge aesthetic, with open-trussed roof, broad porches, and large French doors. In conjunction with the adjacent area under the large pecan tree, such a multipurpose room will provide, relatively economically, a spectacular venue both for City events and for private functions.


Gilleland Creek Park Pool House
Brick Veneer


Gilleland Creek Park Pool House
Coursed Ashlar Veneer


Gilleland Creek Park Pool House
Un-coursed Ashlar Veneer

ARCHITECTURAL RECOMMENDATIONS FOR THE BOHLS HOUSE IN HERITAGE PARK

Renovation of the historic House to provide office space for the Parks Department will be a relatively straightforward process. However it must be acknowledged that the existing house represents only the exterior shell and interior finishes of a future office building and that envelope insulation and mechanical, electrical and plumbing systems will have to be new construction.

It will be possible to insulate the existing exterior walls and shore up the existing floor framing of the house for its intended use without damaging the existing interiors, and with only minimal disturbance of the building exterior to permit insulation to be blown into the existing stud cavities. Although such an approach is not an ideal situation, due to difficulties in providing uniform fill, particularly where horizontal framing members exist, this approach would allow a significant improvement in the thermal performance of the building envelope. It is not apparent that a more invasive approach (either by removing portions of the historic interior finishes or larger area of the structural diagonal sheathing on the building exterior) would offer a reasonable return, given the detrimental impacts necessary to achieve an incremental increase in overall insulation value by these means.

The existing second floor (attic) of the house appears to be ad-hoc construction, incorporating spoils and salvaged materials, and would not be suitable for any future use in its present condition. However dismantling the existing attic would not represent a total loss, since doing so will facilitate the efficient construction of new mechanical and electrical infrastructure for the first floor below, the provision of adequate sound attenuation insulation in the floor cavities (an important consideration for what will inevitably be a relatively “squeaky” office building by the standards of contemporary commercial construction) and the deliberate construction of new second floor spaces.

The existing stair is too steep and too narrow to comply with current code requirements, and is clearly unsafe. Replacing this stair with a usable one will be the greatest change required to the first floor, in addition to the provision of accessible toilets.

The installation of new building systems, the reinforcement of the ground floor framing (if required) and the construction of a new attic and access stair can all be accomplished without significantly altering the historic character of the Bohls house or the destruction of the historic interiors.

The greatest changes to the building will be necessitated by the need to improve accessibility in accordance with the Texas Accessibility Standards, specifically in the context of restroom facilities. Fortunately the proposed second floor is small enough that it will not need to be made fully-accessible, as long as no functions are proposed for the second floor that are not (also) accommodated on the accessible ground floor. Per the Building Code, the Bohls House will only require one means of egress, meaning that although the front door must be made accessible the existing back door does not (necessarily) need to be brought into compliance.

It should be noted that the age of the existing house indicates the likely presence of lead-based paint throughout the building, and the presence of asbestos-containing materials. It is recommend that the building be tested for hazardous materials and an abatement and containment plan be developed as the first stage of any proposed redevelopment.

Plans for the Bohls House are included at the conclusion of this report.

SITE IMPROVEMENTS FOR HERITAGE PARK

Renovation of the Bohls house for office use will trigger compliance with the Texas Accessibility Standards. This will necessitate designation of accessible parking spaces serving the building, and of an accessible route between these parking spaces, the building entrance, and the public right of way (the Heritage Loop Trail). Limited regrading of the area between the Bohls and Heritage Houses could be undertaken to provide an at-grade accessible route to both buildings, resulting in a more aesthetically sympathetic and considerably less maintenance-intensive solution than the timber ramps presently existing.

Attached plans illustrate a comprehensive scope of site improvements including the paving of the entire parking area serving the Bohls and Heritage Houses and the reconstruction of the driveway connection to the Old Austin-Hutto Road (Option 1) and the minimum extent of site improvements required for compliance with the Texas Accessibility Standards (Option 2).

There are clear advantages to the more comprehensive scope, specifically in the contexts of a cost/benefit projection. Although the present caliche parking lot may be viable for the intermittent usage associated with the Heritage House, caliche has not historically proved satisfactory (in Central Texas) for daily usage as expected for the proposed Parks offices due to its susceptibility to erosion and concomitant maintenance burdens.

PROJECTED CONSTRUCTION COSTS

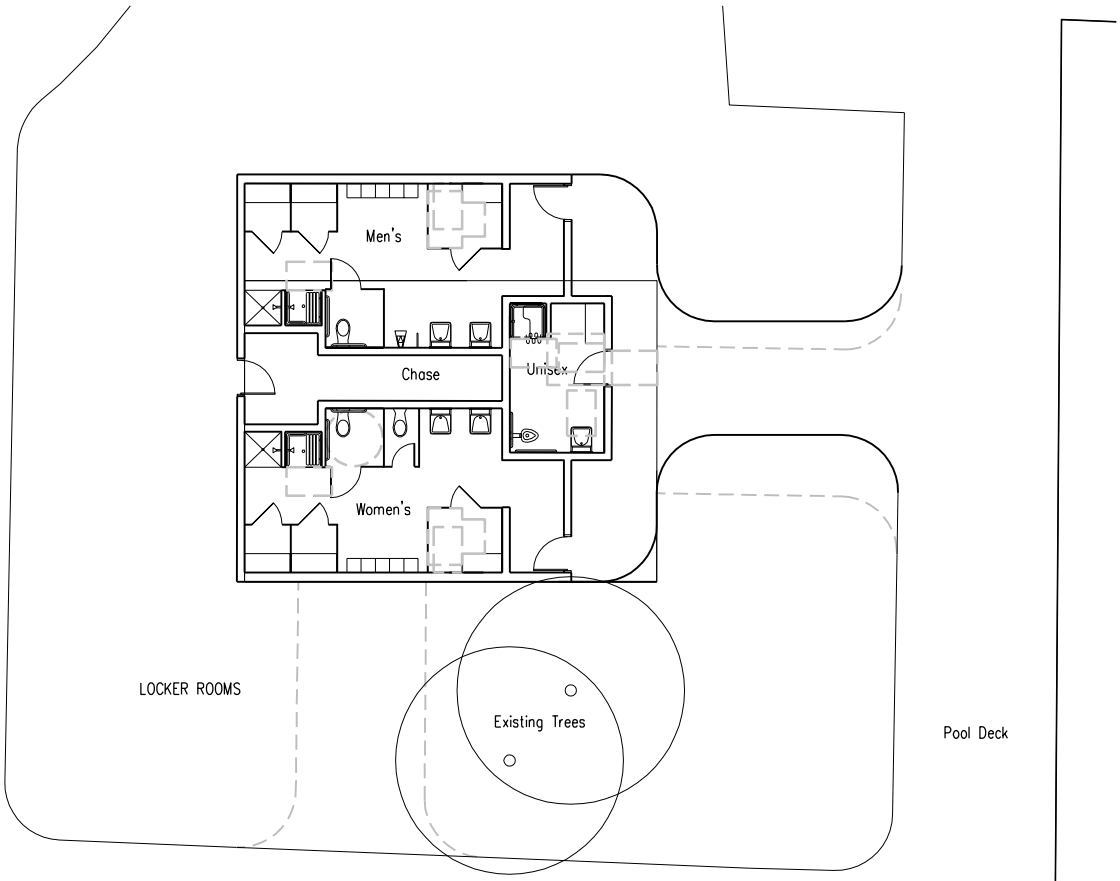
Draft plans and a preliminary opinion of construction costs are attached. These projections are derived from bid tabulations for recent Central Texas parks projects of similar scope and complexity, and given the current preliminary stage of the design they incorporate a significant contingency factor. These numbers should be considered representative for current cost of a comparable project, although it should be recognized that for projects such as these the standards represented in the fixtures and finishes will have a significant impact on the final cost of the project. It is also worth nothing that the structure of a future project will impact the cost of the various elements, for example if the work in Pfluger and Gilleland Creek Parks is bid as a single project and the General Contractor allowed to stage his efforts efficiently, the cost for the individual building elements would be less than would be expected if each building were bid a separate, stand-alone project.

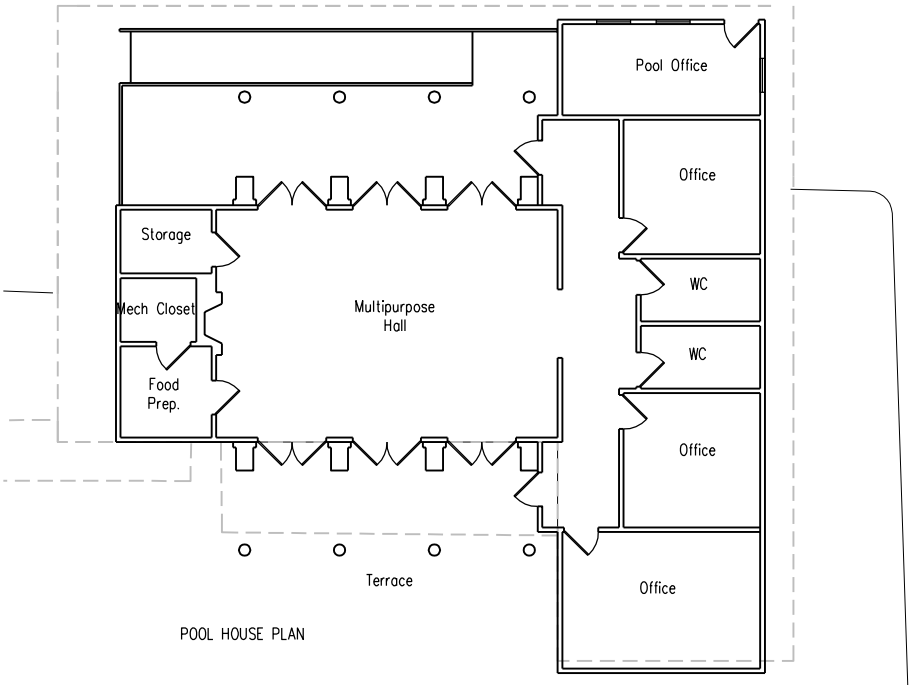
The projected costs for the proposed building improvements (including contingency) are:

Locker Rooms (Demolition and Replacement)	$ 355,842.35
Pool House (Demolition and Replacement)	$ 378,038.32
Park Restrooms (Demolition and Replacement)	$ 281,258.82
Bohls House (Renovation and Adaptive Reuse)	$ 271,307.72
TOTAL	$ 1,286,443.91

The projected costs for the Heritage Park civil improvements (including contingency) will range between $19,000.00 and $177,000.00, depending on the scope of work undertaken.

A detailed cost projection is provided at the conclusion of this report.





POOL HOUSE PLAN

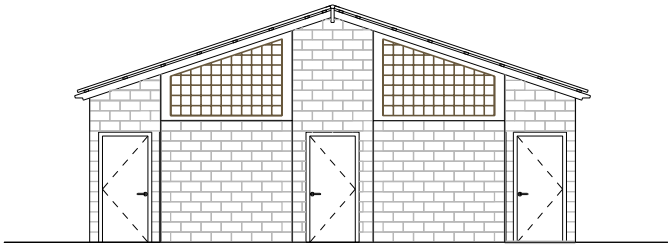
mwm Design Group
305 East Huntland Drive
Suite 200
Austin, Texas 78752
p: 512.453.0767
f: 512.453.1734

0 1/2"
The bar above measures one-half inch on the original drawing. Adjust scales accordingly.

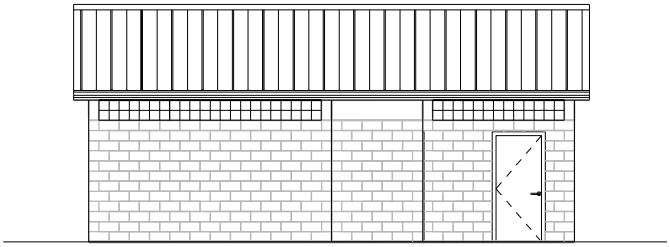
POOL HOUSE AND LOCKER ROOMS PLANS

GILLELAND CREEK PARK

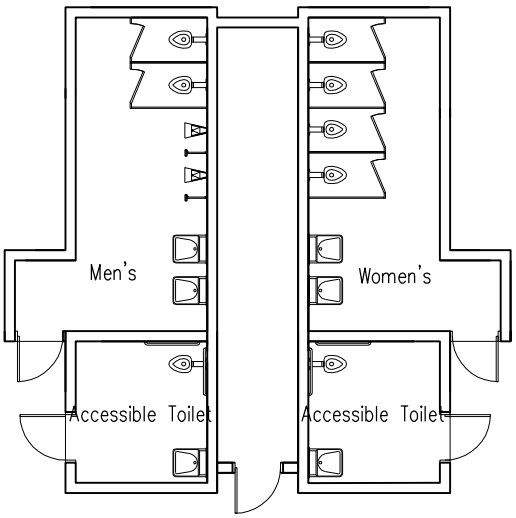
DATE: 16 January 2015
JOB NO:
FILE:



FRONT ELEVATION



SIDE ELEVATION



RESTROOM PLAN

mwm Design Group
305 East Huntland Drive
Suite 200
Austin, Texas 78752
p: 512.453.0767
f: 512.453.1734

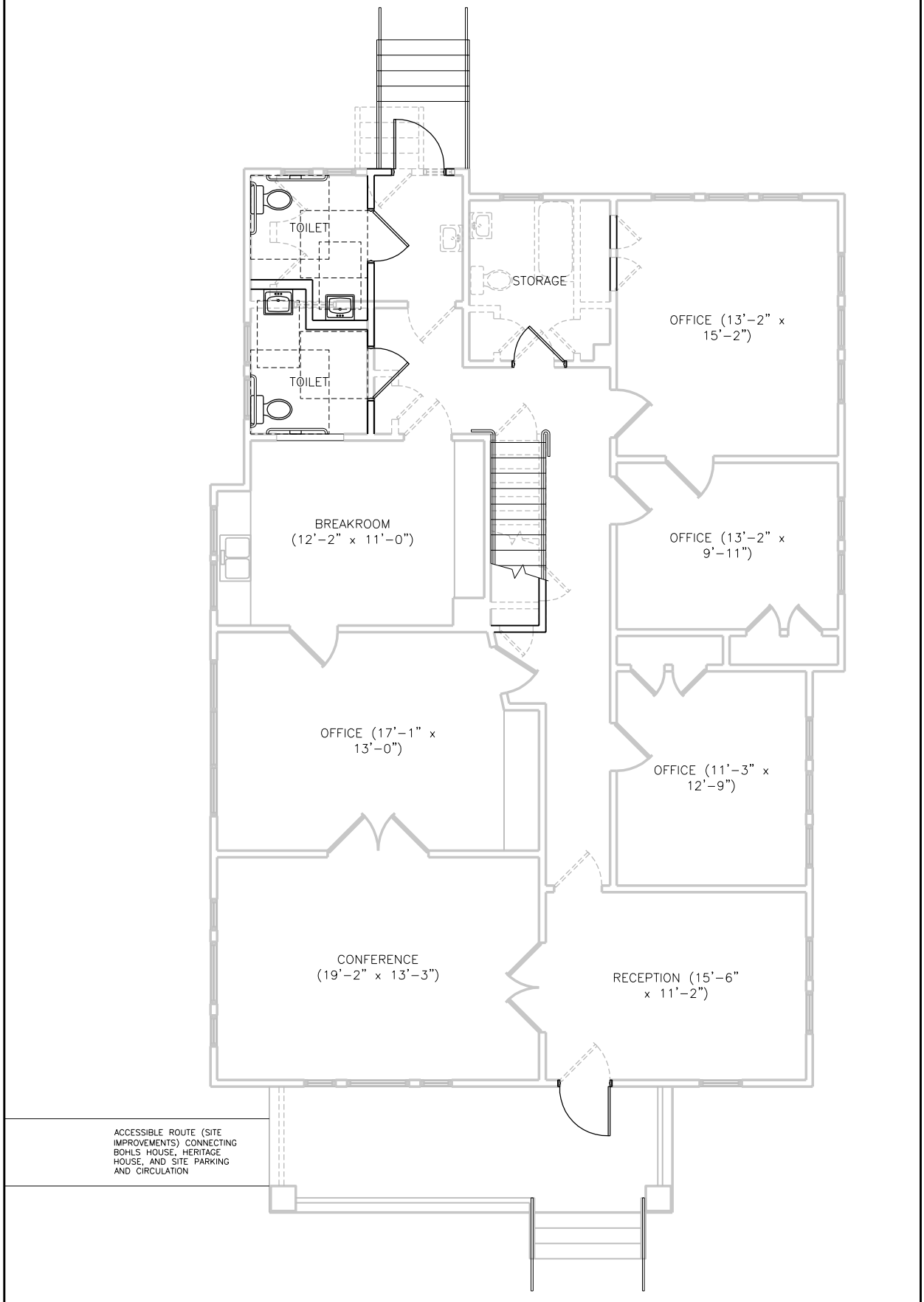
0 1/2"
The bar above measures one-half inch on the original drawing. Adjust scales accordingly.

PARK RESTROOM

PLAN AND ELEVATIONS

PFLUGER PARK

DATE: 16 January 2015
JOB NO:
FILE:



mwm Design Group
305 East Huntland Drive
Suite 200
Austin, Texas 78752
p: 512.453.0767
f: 512.453.1734

0 1/2"
The bar above measures one-half inch on the original drawing. Adjust scales accordingly.

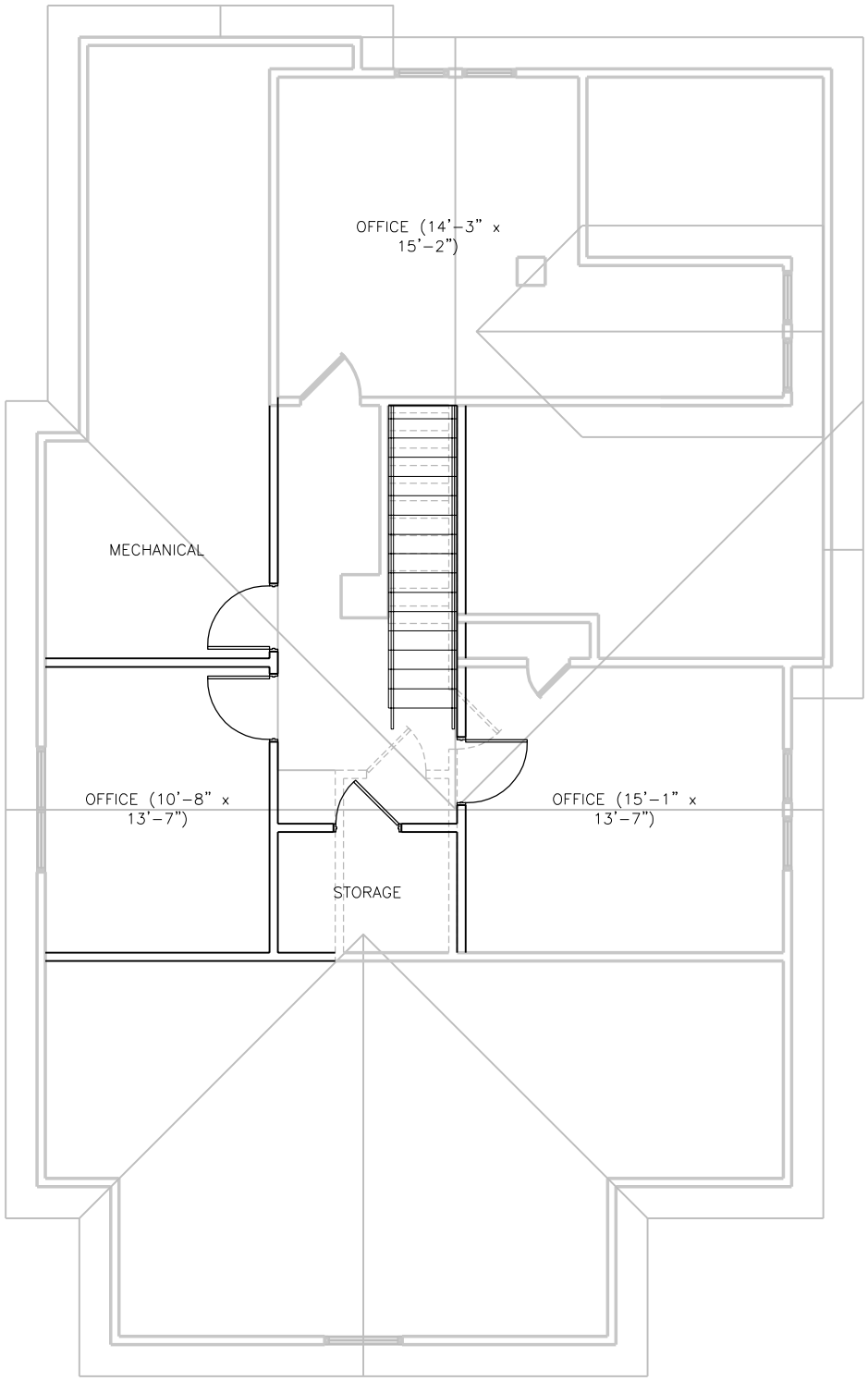
BOHLS HOUSE

FIRST FLOOR PLAN

CITY OF PFLUGERVILLE
PARKS AND RECREATION DEPARTMENT

DATE: 16 January 2015
JOB NO: 375-01
FILE: xxx-xxx.dwg

___ OF ___



mwm Design Group
305 East Huntland Drive
Suite 200
Austin, Texas 78752
p: 512.453.0767
f: 512.453.1734

0 1/2"
The bar above measures one-half inch on the original drawing. Adjust scales accordingly.

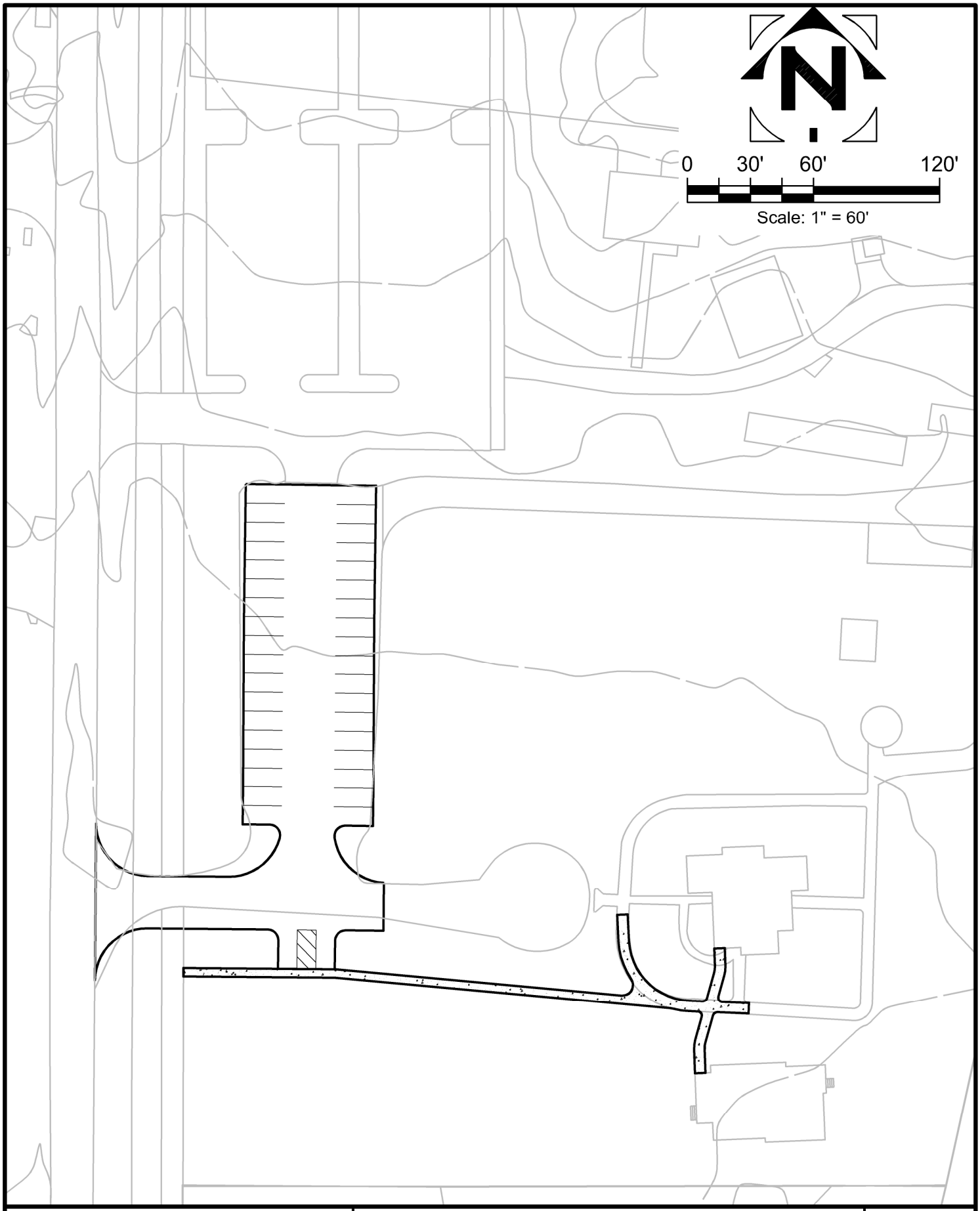
BOHLS HOUSE

SECOND FLOOR PLAN

CITY OF PFLUGERVILLE
PARKS AND RECREATION DEPARTMENT

DATE: 16 January 2015
JOB NO: 375-01
FILE: xxx-xxx.dwg

___ OF ___



mwm DesignGroup
305 East Huntland Drive
Suite 200
Austin, Texas 78752
p: 512.453.0767
f: 512.453.1734
TBPLS FIRM REGISTRATION NO:
10065600

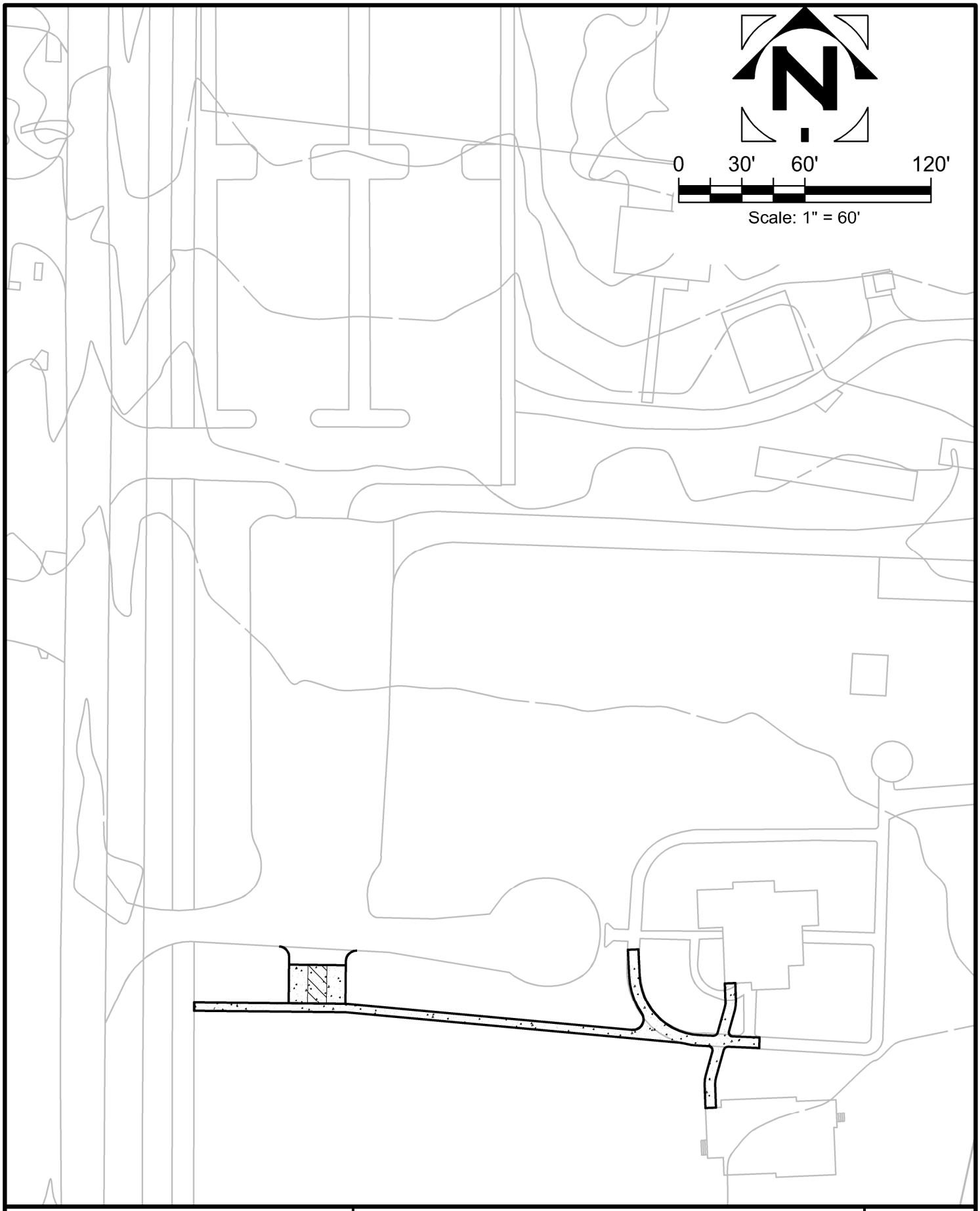
OPTION 1
NEW PARKING LAYOUT

HERITAGE PARK
PFLUGERVILLE TEXAS

DATE: 1/21/2015
JOB NO: 37502
FILE: OPTION 1 & 2

OP 1

File:Y:\375-02_Pflugerville_Parks_Buildings\CAD\Exhibits\OPTION 1&2.dwg



mwm DesignGroup
305 East Huntland Drive
Suite 200
Austin, Texas 78752
p: 512.453.0767
f: 512.453.1734
TBPLS FIRM REGISTRATION NO:
10065600

OPTION 2
NEW PARKING LAYOUT

HERITAGE PARK
PFLUGERVILLE TEXAS

DATE: 1/21/2015
JOB NO: 37502
FILE: OPTION 1 & 2

OP 2

File:Y:\375-02_Pflugerville_Parks_Buildings\CAD\Exhibits\OPTION 1&2.dwg

Pflugerville Parks Buildings
Opinions of Construction Value - Initial (Preliminary Design) Projections
MWM DesignGroup
16 January 2015

	Parks Restroom	Locker Room	Pool House	Bohls House Renovation
Building Area (Ground Floor) SF	855.00	1,101.00	2,010.00	1705.00
Building Area (Second Floor) SF				951.00
Division 1 - General				
General Conditions	$ 34,055.52	$ 43,086.32	$ 45,773.51	$ 32,850.65
Division 2 - Site				
Selective Building Demolition	$ 2,800.00	$ 3,920.00	$ 4,500.00	$ 5,000.00
Division 3 - Concrete				
Slab/Floor	$ 21,225.34	$ 21,865.82	$ 35,641.54	$ -
Division 4 - Masonry				
Building Masonry	$ 63,244.23	$ 81,440.82	$ 21,105.00	$ -
Division 6 - Wood and Plastics				
Structural Wood Components	$ 19,870.20	$ 25,587.24	$ 41,707.50	$ 19,733.25
Trellis	$ 15,413.42	$ 19,848.16	$ -	$ -
Millwork			$ 5,000.00	$ 5,000.00
Ramps and Steps			$ -	$ 10,639.27
Division 7 - Thermal and Moisture Protection				
Metal Roofing and Flashing	$ 4,381.61	$ 5,642.28	$ 9,196.99	$ -
Insulation Retrofit			$ -	$ 7,500.00
Division 8 - Doors and Windows				
Doors and Windows	$ 14,626.36	$ 18,834.64	$ 34,953.90	$ 5,000.00
Division 9 - Finishes				
Finishes (New Construction)	$ 1,793.86	$ 2,309.99	$ 23,316.00	$ 11,031.60
Finishes (Remodel - Allowance)			$ -	$ 30,000.00
Division 10 - Specialties				
Specialties (e.g. Toilet Accessories)	$ 6,558.90	$ 8,446.03	$ 4,000.00	$ 2,000.00
Division 20 - Landscaping				
Landscaping	$ 1,680.00	$ 2,800.00	$ 2,500.00	$ 10,000.00
Division 22 - Plumbing				
Plumbing	$ 29,055.95	$ 37,415.90	$ 22,335.00	$ 22,335.00
Division 23 - HVAC				
Mechanical			$ 35,000.00	$ 35,000.00
Division 24 - Electrical				
Electrical (Building)	$ 19,676.71	$ 25,338.08	$ 30,000.00	$ 30,000.00
Subtotal in 2015 Dollars per Comparable Bid Data	$ 234,382.10	$ 296,535.29	$ 315,029.44	$ 226,089.77
Subtotal including 20% Contingency	**$ 281,258.52**	**$ 355,842.35**	**$ 378,035.32**	**$ 271,307.72**

www.mwmdesigngroup.com

305 East Huntland Drive
Suite 200, Austin, Texas 78752
P: 512.453.0767 f: 512.453.1734

Project: Pflugerville Parks Buildings - Heritage Parking Site Improvements
Owner: City of Pflugerville
Client: Parks and Recreation Department
Design Engineer: Brandon E. Hammann, PE (#107368)
ENGINEER'S COST ESTIMATE FOR CIVIL IMPROVEMENTS

Date: January 23, 2015
MWM Job #: 375-02

Bid Item	Item Description	Unit	Engineer's Estimate		
	BASE BID		Qty	Price	Total
DEMOLITION					
1	REMOVE CALICHE BASE	CY	670	$15.00	$10,050.00
2	REMOVE CURB AND GUTTER	LF	6	$4.00	$24.00
	SUBTOTAL - DEMOLITION				**$10,074.00**
PAVING					
1	2" HMAC TYPE D	SY	1,670	$20.00	$33,400.00
2	8" FLEXIBLE BASE	SY	1,670	$18.00	$30,060.00
3	8" LIME STABILIZED SUBGRADE	SY	1,670	$15.00	$25,050.00
4	TYPE II CONCRETE DRIVEWAY	SF	1,100	$7.50	$8,250.00
5	4" CONCRETE SIDEWALK	SF	1,800	$4.50	$8,100.00
6	6" CURB AND GUTTER	LF	700	$15.00	$10,500.00
7	SIGNAGE AND STRIPING	LS	1	$4,000.00	$4,000.00
8	WHEELSTOPS	EA	2	$100.00	$200.00
	SUBTOTAL - PAVING				**$119,560.00**
EROSION/SEDIMENTATION CONTROL, AND TREE PROTECTION		**LS**	**1**	**$5,000.00**	**$5,000.00**
EARTHWORK		**LS**	**1**	**4,000.00**	**$ 4,000.00**
LANDSCAPING (NEW TREES, IRRIGATION)		**LS**	**1**	**$ 4,000.00**	**$ 4,000.00**
TRAFFIC CONTROL		**LS**	**1**	**$ 3,000.00**	**$ 5,000.00**
TOTAL (CONSTRUCTION)					**$147,634.00**
20% CONTINGENCY					**$29,526.80**
ESTIMATED TOTAL					**$177,000.00**

This opinion of construction value was compiled from record information pertaining to completed projects of similar character and scope. Since ENGINEER has no control over the cost of labor, materials, equipment, services furnished by others, over the Contractor(s) methods of determining prices, over competitive bidding or market conditions, ENGINEER opinion of probable Total Project costs and construction cost (U.S. $) provided for herein are to be made on the basis of ENGINEER'S experience and qualifications and represents ENGINEER'S judgment as an experienced and qualified Professional Engineer, familiar with the Construction Industry, and ENGINEER cannot and does not guarantee that proposals, bids or actual Total Project Construction Costs will not vary from opinions of probable cost prepared.

www.mwmdesigngroup.com

305 East Huntland Drive
Suite 200, Austin, Texas 78752
P: 512.453.0767 f: 512.453.1734

Project: Pflugerville Parks Buildings - Heritage Parking Site Improvements
Owner: City of Pflugerville
Client: Parks and Recreation Department
Design Engineer: Brandon E. Hammann, PE (#107368)
ENGINEER'S COST ESTIMATE FOR CIVIL IMPROVEMENTS

Date: January 23, 2015
MWM Job #: 375-02

Bid Item	Item Description	Unit	Engineer's Estimate		
	BASE BID		Qty	Price	Total
PAVING					
1	6" CONCRETE PAVING	SY	30	$75.00	$2,250.00
2	4" CONCRETE SIDEWALK	SF	1,800	$4.50	$8,100.00
3	SIGNAGE AND STRIPING	LS	1	$1,500.00	$1,500.00
4	WHEELSTOPS	EA	2	$100.00	$200.00
	SUBTOTAL - PAVING				**$9,800.00**
EROSION/SEDIMENTATION CONTROL, AND TREE PROTECTION		**LS**	**1**	**$3,000.00**	**$3,000.00**
EARTHWORK		**LS**	**1**	**3,000.00**	**$ 3,000.00**
TOTAL (CONSTRUCTION)					**$15,800.00**
20% CONTINGENCY					**$3,160.00**
ESTIMATED TOTAL					**$19,000.00**

This opinion of construction value was compiled from record information pertaining to completed projects of similar character and scope. Since ENGINEER has no control over the cost of labor, materials, equipment, services furnished by others, over the Contractor(s) methods of determining prices, over competitive bidding or market conditions, ENGINEER opinion of probable Total Project costs and construction cost (U.S. $) provided for herein are to be made on the basis of ENGINEER'S experience and qualifications and represents ENGINEER'S judgment as an experienced and qualified Professional Engineer, familiar with the Construction Industry, and ENGINEER cannot and does not guarantee that proposals, bids or actual Total Project Construction Costs will not vary from opinions of probable cost prepared.