

STAFF REPORT
Planning Commission Meeting September 25, 2017
Updated for December 18, 2017

AGENDA ITEM NO.: 2

PROJECT NUMBER / TITLE: Application # 17-08

REQUEST: Preliminary Site Development Plan for Martway Mixed Use Development

LOCATION: 6005-6045 Martway Street

APPLICANT: Christian Arnold, Clockwork Architecture + Design

PROPERTY OWNER: Martway Officeworks LLC
423 Delaware St, Ste 102
Kansas City, MO 64105

STAFF CONTACT: Danielle Sitzman

ADVERTISEMENT: 9/5/17 and 11/28/2017-The Legal Record newspaper

PUBLIC HEARING: Planning Commission meetings, 9/25/17 and 12/18/17



Property Information:

The subject property is occupied by three small office buildings with a total footprint of approximately 34,000 square feet. They were constructed in the mid 1960's. In 2014, the land was platted for the first time into three lots known as the Martway Office Buildings Subdivision in anticipation by the then owner to offer them for sale. The property is zoned Main Street District

2 “MS2”. It is located in the Downtown District and subject to the *Mission, Kansas Design Guidelines for the Johnson Drive Corridor*. “MS2” was assigned to this property at the time of the City initiated rezoning of entire downtown in 2006. The District was designed to reinforce and encourage the existing character within the core of the downtown.

Surrounding properties are zoned and developed as follows:

North/East/West: “MS2” Main Street District 2-municipal community center, multi-family housing, small office, auto-bank.

South: “R-1” Single-Family Residential District-Municipal Offices, Police Department, Outdoor City Pool, Parkland, single-family homes.

Comprehensive Plan Future Land Use Recommendation for this area:

The Comprehensive Plan indicates this area is appropriate for Medium-Density Mixed Use, Parks, and Office. This area should be composed of a pedestrian-friendly mix of mostly housing and limited office and retail uses at medium densities. Such districts typically serve as a transition zone between low to moderate density residential neighborhoods and areas of higher intensity commercial activity. This category primarily consists of an intermix of low to moderate density attached residential housing types, such as row housing, townhomes, condominiums, duplexes, triplexes, and fourplexes, and multiplex and apartment/condo dwellings. Residential densities may vary throughout the neighborhoods and are typically higher than low-density residential areas. The ground floor is appropriate for offices or limited retail stores with upper floors including housing units.

The proposed project is in conformance with the intent of the Comprehensive Plan to provide a mix of residential densities and uses located in proximity to the higher commercial intensity uses near Johnson Drive. It also addresses the Comprehensive Plan Goals of downtown floodplain redevelopment, supports multi-modal travel, and contributes to the economy of the downtown.

Project Background:

The applicant recently purchased all three office building properties. At this time the applicant, Christian Arnold of Clockwork Architecture + Design, is requesting a preliminary site plan approval for redevelopment of the site into a 5-story mixed use building consisting of retail and parking on the ground floor with apartments above.

Update: The revised plan is for a 4-story mixed use building with the same mix and arrangement of uses.

Plan Review

The applicant is proposing a 5-story mixed use building containing apartments and retail space on a 1.8 acre infill site in the downtown on the southside of Martway Street roughly between Beverly Avenue and Dearborn Street. The project is bounded by the Rock Creek Trail along its southern border. The main building would be raised on a concrete podium to allow for parking beneath the structure, floodproofing, and clearance for fire district vehicles. The ground floor retail/office space would be comprised of two enclosed building sections flanking the entrances on the northside of the building. The remaining upper floors would contain 156 rental dwelling units.

Update: The proposed building is now 4-stories with 117 dwelling units. All other site plan details remain the same. The preliminary plan submitted for review by the Planning Commission includes the following total planned square footage by use which has been

updated:

	Use	Approx. Area 9.25.17	<u>Approx. Area 12.18.17</u>
Commercial	Office/retail	3,491 S.F. (ground floor)	<u>3,491 S.F.</u> (ground floor)
Residential	Apartments	155,908 S.F. (floors 2-5)	<u>116,931 S.F.</u> (floors 2-4)
	Total	159,399 S.F.	<u>120,422 S.F.</u>

Planned District Deviations Requested

The Main Street District 2 is a planned zoning district and therefore eligible for consideration of deviations from the prescribed zoning standards. A planned district is a zoning technique that is intended to create additional flexibility in the application of zoning standards such as, but not limited to, setbacks and height. Conventional zoning, which relies on rigid dimensional standards, does not easily accommodate innovative development especially where mixed-use or infill projects are proposed. In addition, conventional zoning relief requires changing the zoning code standards on a project by project basis or through the consideration of variances. In the case of the former, changing zoning district standards often would create non-conformities as the new rules are then applied to all existing developed property within the same zoning district. On the other hand, variances are difficult to justify as the criteria used for evaluation rely on the demonstration of a unique hardship related to the physical characteristics of the property. The merits of a particular development concept alone are not a proper reason to grant a variance.

The adoption of planned zoning in Mission was a precursor to the development of other innovative zoning techniques such as mixed use zoning districts like the Main Street District 1 & 2 districts and other overlay zones. It is a valuable tool as it allows for deviations from conventional zoning standards on a case by case basis upon review of specific development proposals. The stated intent of the City of Mission's planned district code is to encourage quality development by permitting deviations from the conventional zoning district to encourage large-scale developments, efficient development of smaller tracts, innovative and imaginative site planning, conservation of natural resources, and minimum waste of land.

Many of the requested deviations discussed below relate to the special challenges of infill redevelopment. Infill refers to the development of vacant or underutilized parcels within previously built areas. These areas are already served by public infrastructure, such as transportation, water, wastewater, and other utilities.

Redevelopment describes converting an existing built property into another use. Ideally, redevelopment aims for better use of the property that provides an economic return to the community. In this case, conversion of several small offices in need of repair and renovation constrained by the nearby floodplain to a mixed-use development that combines residential and commercial uses.

Infill redevelopment optimizes prior infrastructure investments and consumes less land that is otherwise available. Infill redevelopment can result in:

- Efficient utilization of land resources
- More compact patterns of land use and development
- Reinvestment in areas that are targeted for growth and have existing infrastructure

- like the downtown
- More efficient delivery of quality public services such as transit

As a community where most land has already been developed, most, if not all, redevelopment in Mission will be infill redevelopment in nature. Therefore, in order to fulfill the long-range goals of the Comprehensive Plan to provide a mix of residential densities and uses located in proximity to the higher commercial intensity uses near Johnson Drive, redevelopment of the downtown floodplain, support of multi-modal travel, and enhancement of the downtown economy, additional flexibility is an important element of plan review.

The applicant is requesting the following deviations:

- 1) Update: This deviation is no longer needed as the required number of on-site parking stalls will be provided. The table below has been updated. No action is required on this item.

On-Site Parking. The “MS2” zoning standard requires a minimum of 4 parking spaces per 1,000 square feet of commercial gross floor area and 1 space per efficiency and one bedroom apartments. 2 spaces are required for two bedroom apartments (410.250). The proposed mix development contains the following mix on site:

Use	Number	Base Code Requirement	Proposed On-Site 12.18.17	Proposed Off-Site	Reduction
Retail	3,491 S.F.	14 spaces	0	0	0
Efficiency/One Bedroom Units	87 Units (18/69)	87 spaces		0	0
Two Bedroom Units	30 Units	60 spaces			
	Total	161	166	0	0

Use	Number	Base Code Requirement	Proposed On-Site 9.25.17	Proposed Off-Site	Reduction
Retail	3,491 S.F.	14 spaces	0	0	14
Efficiency/One Bedroom Units	116 Units (24/92)	116 spaces	166	10	20
Two Bedroom Units	40 Units	80 spaces			
	Total	210	166	10	34

The applicant is requesting a permission to provide 166 spaces on site with the option to lease

10 additional spaces from adjacent properties for a total reduction of 34 spaces

The applicant states in the project narrative (attached) that the full number of parking spaces will not be needed due to the anticipated 5% normal vacancy rate of the apartments and shared parking between the retail and housing uses which will have different periods of demand. In addition, the applicant proposes securing agreements for leasing nearby off-site parking spaces. The intent is to reduce the amount of land devoted to under utilized or unneeded parking and to allow for a more efficient use of land.

Staff Notes-The number of parking spaces needed is related to the proposed uses of the site. In this case, primarily the number of apartment units. The City's parking ratios are based on conservative estimates of the average demand expected by a typical use. The intent is to ensure that the impact of vehicles generated by private activities such as housing and commercial activity do not overrun public facilities like the street network. The developer is proposing to provide parking ratios tailored to the character of their project. They indicate the number of apartments proposed is necessary to make the project financially feasible and sustainable over time. Costs unique to infill projects can come from demolition of existing structures, odd or obsolete site shapes and sizes, existing facilities like trails and street right-of-ways, and floodplains. In exchange for this allowance the project generates 44 additional bedrooms thus increasing the population density. Additional density is a more efficient use of land than a smaller scale development. Additional density and, therefore, additional rents offsets costs and results in potentially higher property values and a better quality project.

There are several well developed alternative modes of travel immediately available to the site which may reduce vehicle travel demand. This includes a network of sidewalks, the Rock Creek multi-modal trail, and several KCATA bus routes which travel between two enhanced bus stops at the community center and the Mission Transit Center hub on Johnson Drive.

The applicant's estimate of rates of parking demand for housing are similar to other observed conditions at similar apartment developments like those operated by EPC Real Estate. This would likely be sufficient to meet the needs for residential parking without building unnecessary stalls that would remain unused.

In regard to retail parking demand, the applicant's traffic study does not consistently identify the nature of the commercial space as either retail or office. Therefore the City's consulting engineer has asked for revisions to the study to clarify this. This is a relatively small total area of the building and is not anticipated to alter or to generate pass-by traffic. Pass-by traffic are those drivers who happened to be driving by on their way to something else and stop in because it is convenient before resuming their original trip. Also, it could be possible for the commercial tenants to share parking with the residential units as they operate at different peak hours. However, while the study appears to indicate traffic impacts will not require additional roadway improvements, without the correct data, staff would prefer to defer making a recommendation on the parking deviation. This deviation could be considered at the time of final site plan review when a revised traffic impact analysis report has been received and reviewed.

- 2) Rear Yard Setbacks. The "MS2" zoning standard requires properties adjacent to those zoned "R-1" Single-Family Residential District to provide a twenty-five foot (25) building setback between them. Otherwise no setbacks are required. (410.240). The applicant

is requesting permission to waive this setback.

In the project narrative the applicant indicates that the Rock Creek drainage tract, creek channel, and Victor X Andersen Park provide an equivalent if not larger setback from any surrounding single-family homes.

Staff Notes-The overall separation of structures intended by the code is a minimum of 45 feet (subject setback of 25'+ 20' rear yard setback of SF home). The only qualifying "R-1" zoned property adjacent to the proposed project is that of the City Hall building, outdoor pool, and Victor X Andersen Park. These areas are unlikely to redevelop into single family dwelling units and do not require a buffer from the proposed development which is a less intense use. Also, the city properties easily fit the definition of office or recreational zoning districts which if so designated would remove the need for any setback. The intent of the required setback has been met by the creek channel, Tract A, and the open space of the park. Granting this deviation allows for a more efficient use of land by removing an unnecessary buffer.

- 3) *Update: The applicant is requesting a maximum height allowance of 4 stories and / or 56' 3". This is one less story and 10' 9" shorter than previously proposed. Staff's notes on the project remain otherwise unchanged.*

Building Height. The "MS2" zoning standard limits a building's maximum height to 3 stories and or forty-five feet (45'). (410.240) The applicant is requesting a maximum height allowance of 5 stories and / or sixty-seven feet (67').

The applicant is requesting the height deviation so that additional apartment units can be included in the design. The project narrative explains that the building's height is also affected by a larger clearance on the ground floor to accommodate parking due to the floodplain and fire district access. The applicant points out the sloping topography which puts the site 10'-20' lower than many surrounding properties of similar height or of the nearest single-family homes.

Staff Notes-As stated earlier, the number of apartments proposed is necessary to make the project financially feasible and sustainable over time. Infill projects face additional site design challenges and costs. In exchange for this allowance, the project generates an additional 77,950 square feet of development. Half of this offsets the loss of ground floor development area due to the floodplain impacts. Additional density is a more efficient use of land than a smaller scale development. Additional density and therefore additional rents offsets costs and results in potentially higher property values and a better quality project.

- 4) *Update: The revised plan contains 39 fewer dwelling units and therefore increases the amount of lot area per dwelling. The new unit count is 117 and the new density calculation is 658 square feet/unit or 66.21 units per acre. The intent is to allow 117 units or approximately 116,931 square feet of residential development. The density table attachment has been updated. The project is now less dense than the Mission Trails project on Johnson Drive. Staff's notes on the project remain otherwise unchanged.*

Minimum Lot Area per Dwelling Unit. The "MS2" zoning standard requires 1,245 square feet of lot area per dwelling unit or a maximum of 35 units per acre (410.240). The applicant is requesting permission to reduce the lot area per dwelling unit to fit their proposed design to allow for the 156 units or 155,908 square feet of residential development in a mixed use

building. This is approximately 493 square feet or 88.64 units per acre. Note: the exact lot area or unit density calculation may fluctuate if the amount of land dedicated on the final plat for changes the site area. The intent is to allow 156 or approximately 155,908 square feet of residential development. This is not dwelling unit size.

The applicant states in the project narrative that the project has been designed in response to current market trends for increased density and to make the project economically feasible. They also indicate that the proposed density brings customers within walking distance of the main commercial district of the city.

Staff Notes-The proposed lot area per unit is comparable with many of the current apartment development projects underway in northeast Johnson County especially those in and around Downtown Overland Park (See attached density table). The baseline density contained in the "MS2" zoning district reflects the existing apartment development in the area which were constructed 35-60 years ago. All existing apartment complexes in the downtown predate the newly created zoning districts "MS1", "MS2" or "DND". If the baseline density was not altered, approximately 62 units would be allowed on site. Likely only 40 of these could be constructed due to the floodplain impacts to the ground floor because of the proximity to Rock Creek. That would result in a lot area per unit of 1,925 square feet which is lower than any other downtown multi-family property. Modern, market-driven, high quality infill requires flexibility to be built on this site.

- 5) Parking Lot Setback. The "MS2" zoning standard prohibits newly constructed paved surface parking areas from being closer than 6' from a street or property line (410.250). The applicant is requesting permission to waive this requirement for the west property line only.

The applicant states in the project narrative that the purpose of the request is to maximize on-site parking while avoiding placing incompatible features along the adjacent property. They point out that the adjacent development to the west also contains a surface parking lot. The applicant stated they will look for opportunities to create landscape buffers where feasible with the development of the final site plan.

Staff Notes-The intent of this code section is to provide screening and buffering from undesirable areas (surface parking lots) and the public way or adjacent properties. No side yard setback is required between the building and the west property line except for the parking lot. The proposed site plan otherwise meets the requirements for parking lot setbacks and the bulk of the surface parking lot is behind or under the proposed building which is a highly desired feature. A stipulation should be made that this deviation is for the west property line only and that alternate screening of this area should be provided for consideration with the final site plan.

- 6) Parking Lot Buffer. The *Mission, Kansas Design Guidelines for the Johnson Drive Corridor* requires parking lots abutting an interior property line to maintain a minimum of 4' of green space (3.2). The applicant is requesting permission to waive this requirement for the entire site.

Staff Notes-This requirement is similar to that of #5 but more strict in its applicability to all interior property lines regardless of what they abut. The proposed project is lined by the Rock Creek along the entire southern property boundary and a 6' buffer is shown along the east boundary. Granting the #5 deviation to the west boundary with stipulations will ensure proper

buffering of surrounding properties.

- 7) Site Tree. The supplemental landscaping requirements of the Municipal Code require site trees to be planting in the parking lot at a rate of 1 tree per every 20 parking spaces (415.090). The applicant is requesting permission to waive this requirement.

The applicant states in the project narrative that this deviation is requested to maximize on-site parking and that the location of the surface parking lot under and behind the proposed building screens and shades the parking area.

Staff Notes-The intent of this code section is to visually soften parking lots from the view from other areas, provide shade, ground water recharge, air purification, and enhance the quality appearance of the site. This development has proposed a building design in which parking is located under or behind the building. This is an acceptable or superior design and therefore buffering the parking area with site trees is not needed.

- 8) Parking Lot Interior Open Space. The supplemental landscaping requirements of the Municipal Code require site trees to be planting in the parking lot at a rate of 1 tree per every 20 parking spaces (415.110). The applicant is requesting permission to waive this requirement.

The applicant states in the project narrative that this deviation is requested to maximize on-site parking and that the location of the surface parking lot under and behind the proposed building screens and shades the parking area. Quality landscaping where feasible on the site will be explored with the development of the final site plan

Staff Notes-Again,the intent of this code section is the same as #7 above. This development has proposed a building design in which parking is located under or behind the building. This is an acceptable or superior design and therefore provided open space in the parking field is not needed.

Code Review: Standards of Development (405.090)

The Planning Commission, in the process of approving preliminary site development plans, may approve deviations upon a finding that all of the following conditions have been met:

1. The granting of the deviation will not adversely affect the rights of adjacent property owners.

-The requested deviations, with stipulations where noted, do not infringe upon the rights of other adjacent property owners to continue to reasonably use their own properties. The proposed development repeats a pattern already established in the neighborhood of ground floor retail or small office along Martway Street and multi-story multi-family housing.

2. That the deviation desired will not adversely affect the public health, safety, morals, order, convenience, prosperity or general welfare.

-The impacts of the deviations upon traffic, stormwater runoff, and the public streetscape are being examined and must be found to meet city requirements at the time of final site plan approval. At this time, it appears all impacts can be mitigated.

3. The granting of the deviation will not be opposed to the general spirit and intent of this Title.

-The requested deviations with stipulations as noted meet the spirit and intent of the code to encourage redevelopment which is in compliance with the comprehensive plan as discussed in the section above.

4. That it has been determined the granting of a deviation will not result in extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing federal or state laws.

-The proposed deviations will not create additional public expense, nuisances, or violate other laws.

Johnson Drive Design Guidelines

The Johnson Drive Design Guidelines provide a wide range of recommended and required design elements applicable to the development. These include streetscaping and the relationship of buildings and their exterior facades to public streets as well as building materials and screening. Many of these details are not required at the time of preliminary site plan review and will be fully evaluated with final site plans.

Staff Notes-Design Guidelines: Buildings are shown filling in the block parallel to the public street and extending the width of the property with parking behind or under the primary facade. Adequate room has **not** been reserved for streetscape elements to match the Martway Street streetscape and Rock Creek Trail already established. The proposed building materials and architectural style are reflected in the colored elevations and exterior renderings. A modern architectural theme is proposed. The intent of the Johnson Drive Guidelines is to encourage detailed and articulated building elevations that create interesting facades, complementary massing, human scale elements, and high quality appearance materials. It acknowledges that Mission benefits from a diversity of architectural styles and would not prohibit modern styles that are compatible in form and proportion to buildings with their immediate context on Martway Street. Specific details of all building elements including materials will be reviewed at the time of final site plan submittal. The applicant has provided comment on the building design in the project narrative.

Traffic Impact Analysis & Parking

Update: On site parking is no longer a concern as the required minimum number of stall are to be provided on site. In addition, with fewer dwelling units proposed, traffic generation will be reduced. An update to the traffic impact analysis will be required at the time of final site plan anyway, so these estimates can be revised then. Staff's notes on the project remain otherwise unchanged.

The proposed parking plan is discussed in the deviations section of the staff report. Access into the site is proposed from two access points along Martway Street. One will align with Beverly Avenue and one will be slightly offset from Dearborn Street. The off-set entrance is in the same location as an existing driveway and therefore not a new condition in the street network. Both driveways will enter into the ground floor parking area under the building.

Staff Notes-Traffic & Parking:The Johnson Drive Design Guidelines support structured parking and minimizing the amount of surface parking in redeveloping areas of the city. The applicant was required to provide a full traffic impact analysis including estimated traffic generation trips and the assignment of those trips to the various intersections surrounding the

site using standard traffic engineering practices. In addition to traffic volume, the impact to the performance of several intersections adjacent to the site were also studied and assigned a A-F grade.

The City's on-call engineers at Olsson Associates have reviewed the Traffic Impact Analysis and the proposed preliminary site plans. They are generally satisfied with the preliminary project design and the capacity of the road network to accommodate the proposed development but note a discrepancy in the trip generation method estimating traffic based on office or retail use on the ground floor. They recommend reserving the right to make further comment on the proposed parking until a revised final study is provided. Comments will be required to be resolved before the study or final site plan are accepted. Conditions regarding on-site vehicle and ADA circulation are included in the recommended approval below.

Stormwater Management

The subject property generally drains southeast into the adjacent Rock Creek channel located immediately south and flowing to the east. No details of the proposed future drainage collection, routes or discharged were provided. The proposed development results in a slight increase in impervious surface (approximately 3,418 S.F.) and has requested a waiver from stormwater management based on the adopted code provisions of APWA 5600.

The City's on-call engineers at Olsson Associates have reviewed a stormwater drainage memorandum and the preliminary site plans. They are generally satisfied with the preliminary project design but recommend reserving the right to make further comment until the final study is provided. Any further comments for the applicant to address will be required to be resolved before the study or final site plan are accepted. Conditions regarding drainage are included in the recommended approval below.

Floodplain

A portion of the Rock Creek regulatory 100-year floodplain exists on this site. Therefore the City's Floodplain Management Ordinance will regulate the development. Development will only be permitted through the issuance of a floodplain development permit under such safeguards and restrictions as may be reasonably imposed for the protection of the community. The City's on-call engineers have begun this review and will continue to evaluate the proposed construction for the proper floodproofing, site work, and regulatory permits. This is a process which occurs as site planning begins and concludes before building permit issuance. Conditions regarding this process are included in the recommended approval below.

On Site/Off-Site Public Improvements

The developer is responsible for the construction of public improvements along Martway Street such as sidewalk, street trees, irrigation, benches, bike racks, street lights, etc. Improvements to the barrier to Rock Creek may also be required. Any necessary off-site improvements identified in review of the final traffic and stormwater studies will also be the responsibility of the applicant.

Staff Notes-Public Improvements: A minimum 10' wide paved clear zone along Martway Street must be maintained for the existing Rock Creek Trail. The proposed 8' wide trail is insufficient to meet multi-modal trail standards. In addition, adequate space for a streetscape amenity zone (street trees, streetlights, signage, etc.) must be provided. This zone should be 5' wide at a minimum. Room for door sweeps for the ground floor commercial space should be accounted for outside of the trail as well. Additional details are needed with final plans to

ensure the Martway Street streetscape provides adequate dimensions. Additional street right-of-way dedication will be required with final plans and plats.

Signs

As a mixed use development, the subject property is encouraged to establish a private sign criteria as an alternative to the specific sign requirements of this district.

Staff Notes-Signs: The city's sign code indicates criteria shall be for the purpose of ensuring harmony and visual quality throughout the development. The size, colors, materials, styles of lettering, appearance of logos, types of illumination and location of signs must be set out in such criteria. Signs may wait to be addressed in this manner until final development plans are submitted. A preliminary proposal was provided. The sign criteria will be reviewed and approved at the time of final site plan review.

Sustainable design and construction practices

The Mission Sustainability Commission has developed a rating and certification system for development projects. The applicant has been invited to present the project to the Sustainability Commission. Once completed, the final scoring of the project will be provided to the Planning Commission at the time of Final Site Plan review.

Miscellaneous

A neighborhood meeting was hosted by the applicant at the Community Center on September 12th. Property owners within 700' of the subject property were invited by a mailed invitation to attend. The event was also advertised on the City's social media accounts and website. Approximately 40-50 people attended the meeting. Issues discussed included the building height and aesthetics of the project.

Update: In addition to the statutory requirement for notice of the public hearing to property owners within 200', property owners within 700' of the subject property were also mailed notice of the December 18th meeting.

Code Review: Consideration of Site Plans (440.160)

Site plans shall be approved upon determination of the following criteria:

1. The site is capable of accommodating the building(s), parking areas and drives with appropriate open space.

-The building, parking area, driveways, and open space have been designed to meet codes and guidelines within a planned district.

2. The plan provides for safe and easy ingress, egress and internal traffic circulation.

-There is adequate space on the site to allow for circulation of residents, customers, and the public with no impact to traffic on adjacent public streets. A traffic/trip generation study was submitted for review and any further comments can be addressed at final site plan review.

3. The plan is consistent with good land planning and site engineering design principles.

-The proposed project is in preliminary conformance with the Main Street District 2 zoning district with the deviations and conditions below and the *Mission, Kansas Design Guidelines for the Johnson Drive Corridor* for building placement and massing.

4. An appropriate degree of harmony will prevail between the architectural quality of the proposed building(s) and the surrounding neighborhood.

-The proposed project is subject to the design guidelines for the downtown district which will ensure architectural harmony as the final site plan is prepared. The design concept expressed at preliminary site plan indicates a modern architectural style similar to many similar mixed use developments occurring in Northeast Johnson County and the mid-century office buildings in the immediate neighborhood. Design elements of the surrounding buildings are shown in the exterior renderings.

5. The plan represents an overall development pattern that is consistent with the Comprehensive Plan and other adopted planning policies.

-The proposed mixed use building is consistent with the intent of the Comprehensive Plan to encourage greater density and mix of uses in the downtown District.

6. Right-of-way for any abutting thoroughfare has been dedicated pursuant to the provisions of Chapter 455.

-Any required right-of-way changes for this site to accommodate such things as public trails will be addressed with preparation of a revised final plat.

Staff Recommendation 9.25.17

The proposed development conforms with the Comprehensive plan, meets the overall intent of the "MS2" zoning district, and complies with the required findings for Section 405.090 and 440.160. Therefore, Staff recommends the Planning Commission recommend approval of the Preliminary Site Development Plan for Case # 17-08 Martway Mixed Use to the City Council with the following stipulations:

1. Deferral of consideration of the requested deviation to on-site parking until the time of final site plan approval.
2. Approval of the requested deviation to rear yard setbacks to waive the requirement for a 25' setback along adjacent "R-1" zoned city property.
3. Approval of the requested deviation to height to allow a maximum building height of five stories and or 67 feet.
4. Approval of the requested deviation to waive the minimum lot area per dwelling unit to allow for the proposed design of 156 units or 155,908 square feet of residential development in a mixed-use building.
5. Approval of the requested deviation to waive the 6' parking lot setbacks along the west property line. Alternative screening of the area should be provided for consideration with the final site plan.
6. Approval of the requested deviation to waive the parking lot buffers for the entire site.
7. Approval of the requested deviation to waive the site tree requirement based on parking spaces.

8. Approval of the requested deviation to waive the parking lot open space standard.
9. A revised final traffic study and final stormwater drainage designs must be submitted for review with the final site plan application. The appropriate data, text, maps, drawings and tables must be included per the Olsson Associates review comments dated September 20, 2017 and attached to this report.
10. Staff reserves the right to provide additional comments or stipulations on development plans until all traffic, circulation, ADA, storm drainage, and floodplain related concerns have been addressed.
11. Provide adequate right-of-way for the required streetscape elements. A minimum of 10' wide paved clear path is required for the Rock Creek Trail separated from the back of curb by a minimum 5' way planting zone.

Planning Commission Recommendation

The Planning Commission, at their September 25, 2017 meeting, voted 8-0 to recommend denial of Case # 17-08 Martway Mixed Use due to concerns about the requested deviation in height.

Update

On September 29, 2017 the applicant indicated to staff they they would rework their proposal based on public comment for reconsideration by the Planning Commission. Revised plans were submitted for review.

Staff Recommendation 12.18.17

The proposed development conforms with the Comprehensive plan, meets the overall intent of the "MS2" zoning district, and complies with the required findings for Section 405.090 and 440.160. Therefore, Staff recommends the Planning Commission recommend approval of the Preliminary Site Development Plan for Case # 17-08 Martway Mixed Use to the City Council with the following stipulations:

1. Approval of the requested deviation to rear yard setbacks to waive the requirement for a 25' setback along adjacent "R-1" zoned city property.
2. Approval of the requested deviation to height to allow a maximum building height of four (4) stories and or 56' 3" feet.
3. Approval of the requested deviation to waive the minimum lot area per dwelling unit to allow for the proposed design of 117 units or 116,931 square feet of residential development in a mixed-use building.
4. Approval of the requested deviation to waive the 6' parking lot setbacks along the west property line. Alternative screening of the area should be provided for consideration with the final site plan.
5. Approval of the requested deviation to waive the parking lot buffers for the entire site.
6. Approval of the requested deviation to waive the site tree requirement based on parking

spaces.

7. Approval of the requested deviation to waive the parking lot open space standard.
8. A revised final traffic study and final stormwater drainage designs must be submitted for review with the final site plan application. The appropriate data, text, maps, drawings and tables must be included per the Olsson Associates review comments dated September 20, 2017 and attached to this report.
9. Staff reserves the right to provide additional comments or stipulations on development plans until all traffic, circulation, ADA, storm drainage, and floodplain related concerns have been addressed.
10. Provide adequate right-of-way for the required streetscape elements. A minimum of 10' wide paved clear path is required for the Rock Creek Trail separated from the back of curb by a minimum 5' way planting zone.

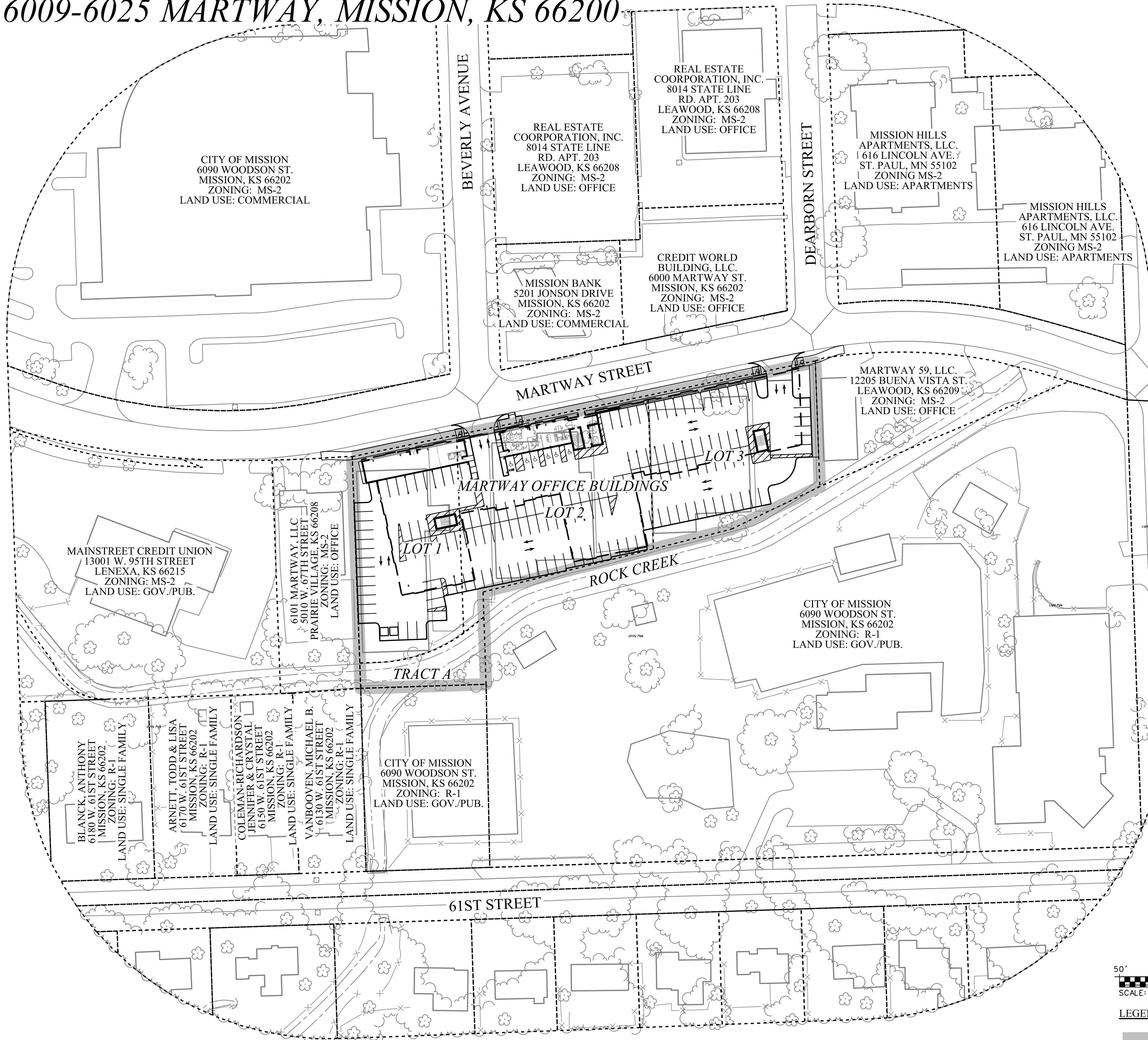
Multifamily Density by City District-Updated 12.18.17									
Map Key	Property Name	Site Address	Number of Units	Lot Area (SqFT)	Min Lot Area (Lot Area/Unit)	Year Built	Current Code Requirement (Lot Area/Unit)	Acres	Units/Acre
Downtown District									
Zone									
DND	Maple Hill	5946 Maple St	12	19,103	1,592	1984	SF-4,500sqft 9.68 du/ac, TH-1.742sqft 25 du/ac, MF-872sqft 50 du/ac	0.44	27
DND	Mission Woods- At Home	5920 Reeds Rd (4 buildings on 4 parcels)	48	67,199	1,400	1972	SF-4,500sqft 9.68 du/ac, TH-1.742sqft 25 du/ac, MF-872sqft 50 du/ac	1.54	31
DND	Mission Gardens	5905 W. 58th St	25	33,602	1,344	1960	SF-4,500sqft 9.68 du/ac, TH-1.742sqft 25 du/ac, MF-872sqft 50 du/ac	0.77	32
DND	Mission Terrace - At Home	5720 Martway St	11	14,712	1,337	1964	SF-4,500sqft 9.68 du/ac, TH-1.742sqft 25 du/ac, MF-872sqft 50 du/ac	0.34	33
DND	The Gables-At Home	5934 Outlook St (2 buildings on 2 parcels unevenly distributed)	43	56,050	1,303	1966	SF-4,500sqft 9.68 du/ac, TH-1.742sqft 25 du/ac, MF-872sqft 50 du/ac	1.29	33
R-4	Mission Point - At Home	5708 Outlook St (2 buildings on 3 parcels)	34	44,101	1,297	1973	3,500 sqft	1.01	34
MS2	Mission Hills - At Home	5954 Woodson St (4 buildings on 4 parcels)	120	137,427	1,145	1976	1,245 sqft, 35 du/ac	3.15	38
MS2	The Maples	5811 Maple St	16	16,800	1,050	1964	1,245 sqft, 35 du/ac	0.39	41
MS2	Mission 58	5601 W 58th St	16	16,800	1,050	1968	1,245 sqft, 35 du/ac	0.39	41
DND	Outlook Apts	5933 Outlook St #2	24	25,198	1,050	1985	SF-4,500sqft 9.68 du/ac, TH-1.742sqft 25 du/ac, MF-872sqft 50 du/ac	0.58	41
DND	Mission Ridge - At Home	5911 Reeds Rd	30	30,760	1,025	1973	SF-4,500sqft 9.68 du/ac, TH-1.742sqft 25 du/ac, MF-872sqft 50 du/ac	0.71	42
MS2	Proposed 12.18.17 Martway Mixed Use	6005-6045 Martway St (1 building spanning 3 parcels)	117	76,971	658	2018	1,245 sqft, 35 du/ac	1.77	66
MS1	Mission Trails	6201 Johnson Dr	200	122,669	613	2018	None	2.82	71
MS2	Proposed 9.25.17 Martway Mixed Use	6005-6045 Martway St (1 building spanning 3 parcels)	156	76,971	493	2018	1,245 sqft, 35 du/ac	1.77	88
R-4	Mission Heights	5717 Outlook St	40	17,501	438	1974	3,500 sqft	0.40	100
West Gateway District									
FBC	The Welstone at Mission Crossing*	6050 Broadmoor St	101	98,868	979	2014	NA	2.27	44
East Gateway District									
Other Areas-Mission									
RP-4	Hillsborough	5401 Foxridge Dr (Many buildings on 2 parcels unevenly distributed)	329	1,279,324	3,889	1984	NA	29.37	11
R-6	Wellington Club	6900 W 50th Ter	224	759,024	3,389	1972	1,200 sqft	17.42	13
R-4	Bridges At Foxridge	5250 Foxridge Dr (Many buildings on 4 parcels)	317	1,044,140	3,294	1966	3,500 sqft	23.97	13
R-4	The Retreat at Mission	6230 W 51st St	108	302,618	2,802	1971	3,500 sqft	6.95	16
R-6	Silverwood	5100 Foxridge Dr	280	648,063	2,315	1986	1,200 sqft	14.88	19
R-6	Foxfire Apartments	5020 Glenwood St	280	548,172	1,958	1984	1,200 sqft	12.58	22
R-6	The Falls	6565 Foxridge Dr	435	675,134	1,552	1972	1,200 sqft	15.50	28
Other Areas-Outside Mission									
	Brookridge	Antioch Rd & I-435, Overland Park (131 acre site with many features)	2,076	5,706,360	2,749	2020		131.00	16
	The Heights-Linden Square	N. Oak Trafficway & 69th St-Downtown Gladstone	222	240,000	1,081	2015		5.51	40
	Meadow Brook-The Kessler Apartments	95th Street & Nall Ave, Prairie Village (6.8 acres of mixed use and parkland 42 ac site)	282	296,208	1,050	2017		6.80	41
	District at City Center-EPC	Not yet built 87th St & Rnner Blvd, Lenexa (2 buildings on 2 parcels)	175	156,030	892	2019		3.58	49
	Woodside village	Rainbow Blvd & 47th Pl-Westwood (Apts and live work units on Lot 5 & 2 other grdn fl uses)	330	240,000	727	2016		5.51	60
	Domain at City Center-EPC	87th St & Renner Blvd, Lenexa	203	140,133	690	2016		3.22	63
	Avenue 80-EPC	Metcaif Ave & 80th Street, Overland Park	218	148,674	682	2017		3.41	64
	Interurban Lofts	79th St & Conser St-Downtown OP (bldg also has ground floor office)	41	24,352	594	2017		0.56	73
	51 Main-EPC	Plaza south area-KCMO	176	94,500	537	20??		2.17	81
	The Vue	Under construction 80th St and Santa Fe Drs/southside-Downtown OP	219	100,924	461	2017		2.32	95
	Market Lofts	Under construction 80th St and Santa Fe Dr/by Rio-Downtown OP (bldg also has grnd fl retail)	36	15,342	426	2017		0.35	102

Property Name	Site Address	Number of Units	Rent Range and Unit Types	Amenities (pool/clubhouse/covered parking)	Year Original Construction (AIMS)	Major Renovations (Year/description/value-BIM)	2017 Appraised Value (AIMS)	2016 Appraised Value (AIMS)	% Change Value 16-17
Mission Gardens	5905 W. 58th St	25			1960	Oct 2016/ reroof/\$18,000 June 2016/ reroof/\$5,600	\$1,012,000.00	\$945,000.00	7.09%
Mission Terrace - At Home	5720 Martway St	11	\$810 - \$850 1 Bedroom	Google Fiber	1964	2013/multi-family reroof/\$13,895	\$493,000.00	\$472,000.00	4.45%
The Maples	5811 Maple St	16	1 ,2 Bedrooms		1964	No permit information found	\$781,000.00	\$751,000.00	3.99%
Bridges At Foxridge	5250 Foxridge Dr	317	\$840 - \$1150 1, 2, 3 Bedrooms	Pool, Clubhouse, Covered Parking, Garages, Dog Park, Tennis Court	1966	2016/emerg damage repair to kitchen/\$16,542 2015/reroof 2 apts bldgs/1 carport/\$43,780 2012/HVAC replacement - eight permits/\$525 ea Oct 2012/ HVAC replacement - twelve permits/\$525 ea 2011/replace meter can /\$2,200 2007/no description/\$150,000	\$5,552,000.00	\$5,321,000.00	4.34%
The Gables-At Home	5934 Outlook St	43	\$800 - \$1050 1,2 Bedrooms	Google Fiber	1966	2014/ reroof/\$19,500 2013/ deck replacement/\$40,000	\$1,477,000.00	\$1,417,000.00	4.23%
Mission 58	5601 W 58th St	16	\$625 - \$725 1, 2 Bedrooms	On site laundry, downtown proximity	1968	Nov 2014/ replace water heater/\$3,900 Oct 2014/gas leak repairs/\$5,000 2012/reroof/\$35,000	\$727,000.00	\$699,000.00	4.01%
The Retreat at Mission	6230 W 51st St	108	\$650 - \$975 1, 2, 3 Bedrooms	Pool, Garages, Basketball Court	1971	2016/HVAC/\$3150 2015/water heater - four permits/\$3100 ea Dec 2015/furnace replacement - four permits/0 value (together with water heater?) June 2015/ HVAC/\$2600 emer repair demo of apts due to fire/ \$1200 2001/ no description/\$10,998	\$5,169,000.00	\$4,630,000.00	11.64%
Mission Woods- At Home	5920 Reeds Rd	48	\$725 - \$880 1, 2 Bedrooms	Google Fiber	1972	no permit information found	\$635,000.00	\$609,000.00	4.27%
The Falls	6565 Foxridge Dr	435	\$659 - \$900 Studio, 1, 2 Bedrooms	Cover Parking, Pool, Clubhouse, Garages	1972	see attached page	\$18,229,000.00	\$17,507,000.00	4.12%
Wellington Club	6900 W 50th Ter	224	\$625 - \$975 1, 2, 3 Bedrooms	Clubhouse, Pool, Basketball Court, Sand Volleyball Court	1972	2014/water heater/\$1,000 2013/ Remodel of fire damaged apts/\$250,000 Feb 2013/Temp elect for apts/\$2500 Feb 2013/demo of apart bldg/\$15,000 2012/water heater/\$500 Dec 2009/reroof/\$102,500 2009/ Remodel from fire damage/\$47,444	\$11,208,000.00	\$10,471,000.00	7.04%
Mission Point - At Home	5708 Outlook St	34	\$800 - \$900 1,2 Bedrooms	Google Fiber	1973	2015/replace deck/\$14,288 Apr 2013/HVAC/\$10,200 Mar 2013/reroof/\$14,500	\$901,000.00	\$866,000.00	4.04%
Mission Ridge - At Home	5911 Reeds Rd	30	\$695 - \$825 Studio, 1 Bedroom	Google Fiber	1973	2012/AC/\$7,000 2011/Exter Alteration/\$108,084	\$1,406,000.00	\$1,352,000.00	3.99%
Mission Heights	5717 Outlook St	40	\$719 - \$910 1,2 Bedrooms		1974	Mar 2016/ HVAC replacement /\$3,100 ea - three permits Dec 2015/HVAC replacement/\$3,100 ea - five permits Oct 2015/HVAC replacement/\$3,100 - one permit July 2015/HVAC replacement /\$3,100 ea-two permits June 2015/HVAC/\$3,100-one permit March 2004/new patio/deck/\$8,000	\$587,000.00	\$563,000.00	4.26%

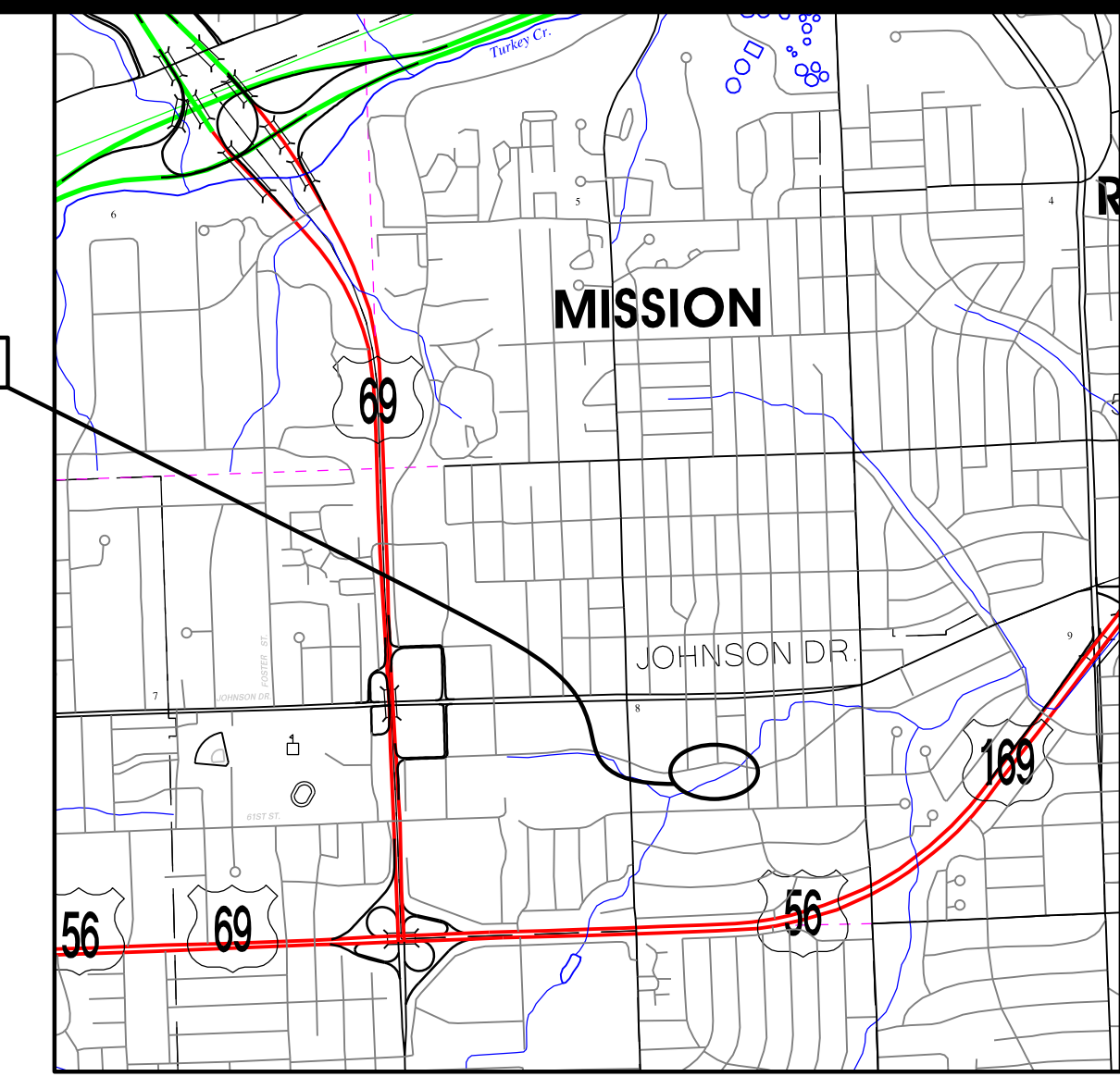
Property Name	Site Address	Number of Units	Rent Range and Unit Types	Amenities (pool/clubhouse/covered parking)	Year Original Construction (AIMS)	Major Renovations (Year/description/value-BIM)	2017 Appraised Value (AIMS)	2016 Appraised Value (AIMS)	% Change Value 16-17
Mission Hills - At Home	5954 Woodson St	120	\$800 - \$880 1,2 Bedrooms	Covered Parking, Google Fiber	1976	2014/reroof/\$28,500	\$1,562,000.00	\$1,501,000.00	4.06%
Foxfire Apartments	5020 Glenwood St	280	\$585 - \$740 1, 2 Bedrooms	Pool, Clubhouse, Covered Parking, Tennis Court	1984	2012/reroof/\$553,927 2011/replace retaining wall/\$19,878 stall of iron fence/addition to existing / \$2,670 2003/HVAC replacement/\$400,000 2000/no description/\$30,000 1997/stairs/\$305,000	\$15,313,000.00	\$14,517,000.00	5.48%
Hillsborough	5401 Foxridge Dr	329	\$790 - \$1040 1, 2 Bedrooms	Pool, Clubhouse, Covered Parking, Garages, Tennis Court, Basketball Court	1984	2016/gas water heater- five permits/\$400 ea y 2014/garage carport replacement/\$30,000 April 2014 / Demo of fire damaged apt./\$20,000 Mar 2014/elect repair due to fire/\$1500 Oct 2013/Fire repair to 4 units/\$300,000 Mar 2013/ electrical demo and temp power/\$2,500 and mechanical reconnect gas/\$400 2000/no description/\$19,622 1995/no description/\$3,536,000	\$17,479,000.00	\$17,092,000.00	2.26%
Maple Hill	5946 Maple St	12			1984	2011/re-roof/\$12,000 2013/water heater replacement/\$500	\$427,000.00	\$409,000.00	4.40%
Outlook Apts	5933 Outlook St #2	24			1985	2014/ deck and stair replacement/\$30,000	\$989,000.00	\$951,000.00	4.00%
Silverwood	5100 Foxridge Dr	280	\$738 - \$1405 1, 2 Bedrooms	Covered Parking, Pool, Clubhouse,	1986	Oct 2015/Water heater/\$500 July 2015/ stair replacement/\$108,000 2012/Retaining wall/\$14,890 2007/install eng key stone wall system/\$30,000	\$19,391,000.00	\$18,898,000.00	2.61%
The Welstone at Mission Crossing	6050 Broadmoor St	101	1, 2 Bedrooms	Clubhouse, WiFi, Prepared Meals	2014	16/inter remodel/\$100,000 014/New construction/\$8,100,000 April 2014/temp elect serv/\$1,000	\$10,550,840.00	\$7,887,370.00	33.77%

MARTWAY MIXED USE

PRELIMINARY DEVELOPMENT PLAN 6009-6025 MARTWAY, MISSION, KS 66200



PROJECT LOCATION



VICINITY MAP:

LEGAL DESCRIPTION

LOTS 1, 2 AND 3 OF MARTWAY OFFICE BUILDINGS A SUBDIVISION OF LAND IN THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 25 SOUTH, RANGE 25 EAST OF THE SIXTH PRINCIPLE MERIDIAN IN THE CITY OF MISSION, JOHNSON COUNTY, KANSAS.

SITE DEVELOPMENT SUMMARY TABLE

EXISTING ZONING: MS-2
 LAND AREA: 1.767 ACRES OR 76,971 SQUARE FEET MORE OR LESS
 LAND USE:
 EXISTING: OFFICE
 PROPOSED: A MIXED USE DEVELOPMENT WITH A 5-STORY APARTMENT COMPLEX WITH COMMERCIAL SPACE AND PARKING DECK ON THE FIRST FLOOR
 BUILDING HEIGHT:
 MAXIMUM BUILDING HEIGHT: 3-STORY/45'-0"
 PROPOSED BUILDING HEIGHT: 5-STORY/67'-0"
 BUILDING FLOOR AREA:
 FIRST FLOOR: 3,491 S.F.
 SECOND FLOOR: 38,977 S.F.
 THIRD FLOOR: 38,977 S.F.
 FOURTH FLOOR: 38,977 S.F.
 FIFTH FLOOR: 38,977 S.F.
 TOTAL FLOOR AREA 159,399 S.F.

FLOOR AREA RATIO
2.07

PARKING SUMMARY
PROPOSED PARKING RATIO: 0.79

BUILDING USE	SPECIFIC USE REQUIREMENT	SPACE REQUIREMENT
COMMERCIAL SPACE	4 SPACES PER 1000 S.F. 3,491 S.F.	14 SPACES
EFFICIENCY APARTMENTS	1 SPACE PER UNIT 24 UNITS	24 SPACES
ONE BEDROOM APARTMENTS	1 SPACE PER UNIT 92 UNITS	92 SPACES
TWO BEDROOM APARTMENTS	2 SPACES PER UNIT 40 UNITS	80 SPACES
TOTAL SPACES REQUIRED		210 SPACES
TOTAL SPACES PROVIDED		**166 SPACES

** 6 ACCESSIBLE SPACES WITH 1 VAN SPACE HAS BEEN PROVIDED

OWNER:

MARTWAY OFFICE WORKS, LLC
423 DELAWARE STREET, STE. 102
KANSAS CITY, MO 64105

ARCHITECT:

CLOCKWORK
423 DELAWARE STREET STE. 102
KANSAS CITY, MO 64105

DEVELOPER:

MARTWAY OFFICE WORKS, LLC
423 DELAWARE STREET, STE. 102
KANSAS CITY, MO 64105

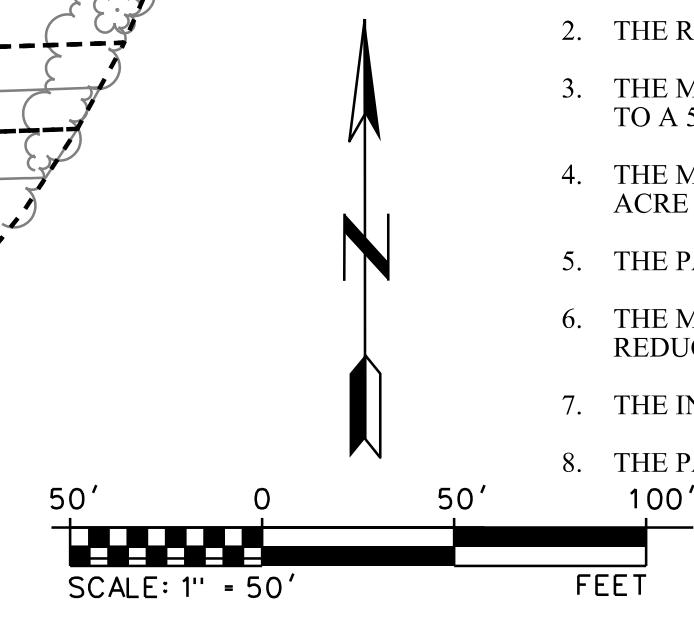
ENGINEER/LANDSCAPE ARCHITECT/SURVEYOR/PLANNER:

CFS ENGINEERS, P.A.
1421 E. 104TH STREET, SUITE 100
KANSAS CITY, MO 64131

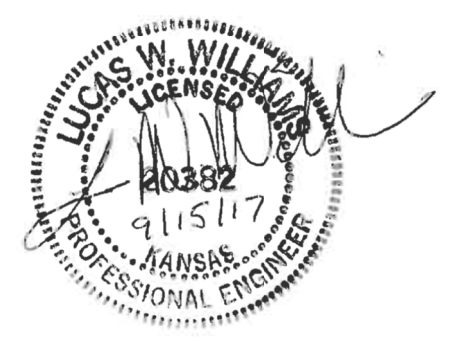
REQUESTED DEVIATIONS

THE DEVELOPER REQUESTS THE FOLLOWING DEVIATIONS TO THE CITY OF MISSION'S MUNICIPAL CODE:

- THE ONSITE PARKING SPACE REQUIREMENT BE REDUCED FROM 210 SPACES TO 166 SPACES AS LONG AS THE ADDITIONAL 44 SPACES ARE OBTAINED IN AN OFF-SITE PARKING AGREEMENT.
- THE REAR YARD SETBACK REQUIREMENT BE REDUCED FROM 25' TO A 0' SETBACK.
- THE MAXIMUM BUILDING HEIGHT REQUIREMENT BE RAISED FROM A 3-STORY 45 FOOT TO A 5-STORY 67 FOOT MAXIMUM BUILDING HEIGHT.
- THE MINIMUM LOT AREA PER MULTI-FAMILY DWELLING BE RAISED FROM 35 UNITS PER ACRE TO 88.64 UNITS PER ACRE.
- THE PARKING LOT SETBACK BE REDUCED FROM 6' TO 0'.
- THE MINIMUM GREEN SPACE BUFFER BETWEEN PARKING AND INTERIOR LOT LINES BE REDUCED FROM 4' TO 0'.
- THE INTERIOR PARKING LOT TREE REQUIREMENTS.
- THE PARKING LOT INTERIOR OPEN SPACE REQUIREMENT.



LEGEND:
 LIMITS OF DEVELOPMENT



LUCAS W. WILLIAMS - ENGINEER
KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
Mission, KS 64202

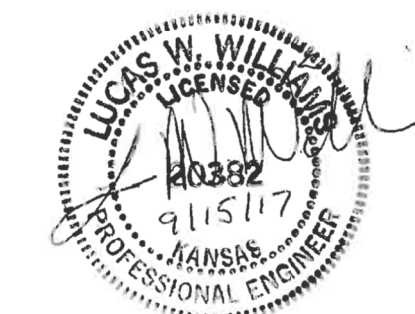
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	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	FINAL DEV. PLAN SUBMITTAL	09.15.2017

16.05.Martway

C100

OVERALL SITE PLAN

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 o: 816-333-4477 f: 816-333-6688



LUCAS W. WILLIAMS - ENGINEER
KS PE # 20382

Martway Mixed Use

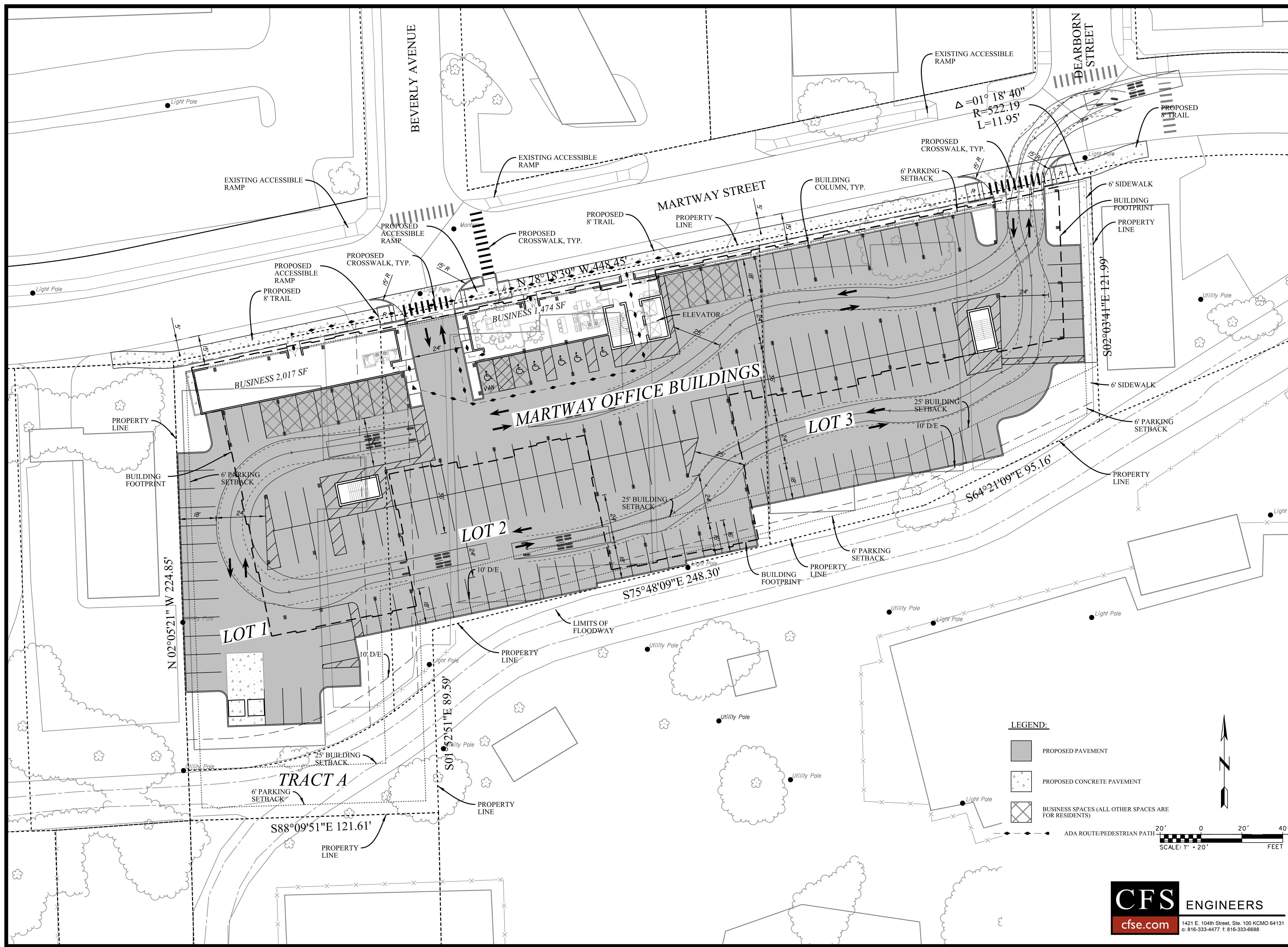
6009 - 6045 Martway
Mission, KS 64202

rev	issue	date
	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	FINAL DEV. PLAN SUBMITTAL	09.15.2017

I6.05.Martway

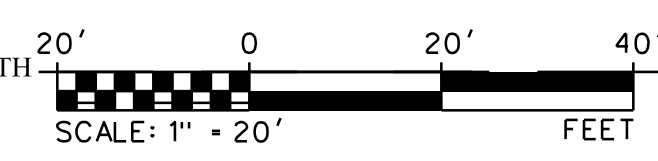
C101

SITE PLAN

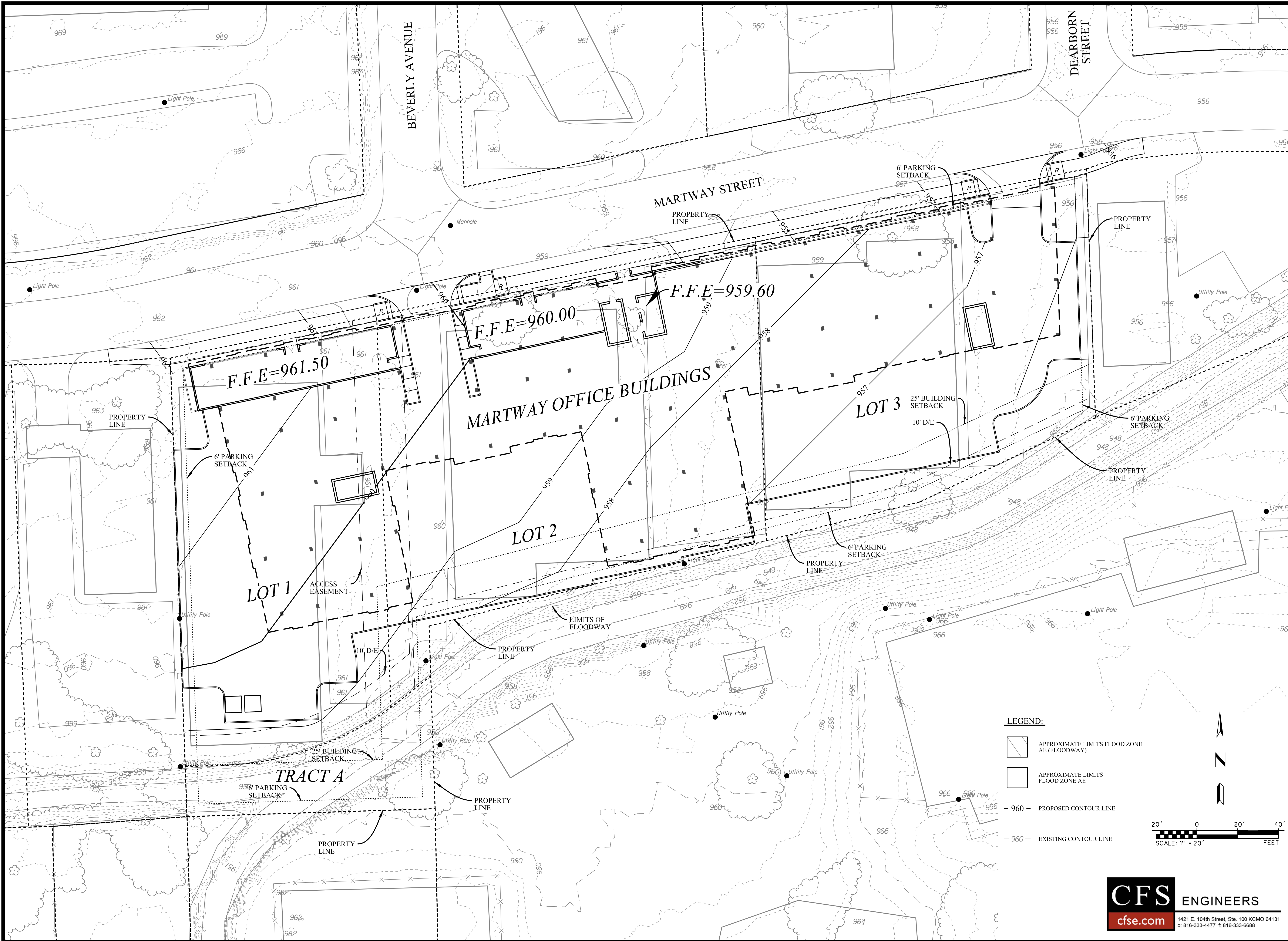


LEGEND:

- PROPOSED PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- BUSINESS SPACES (ALL OTHER SPACES ARE FOR RESIDENTS)

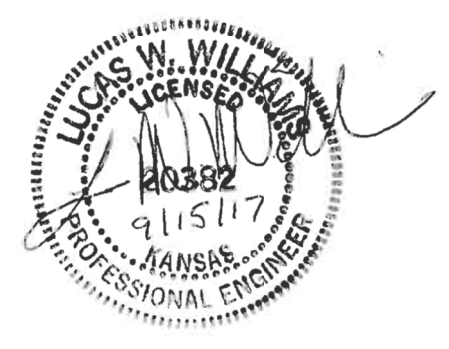
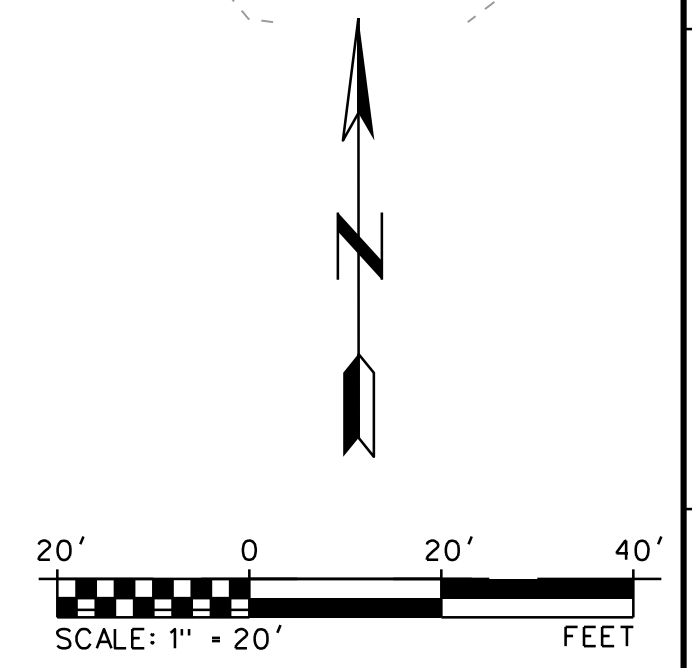


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LEGEND:

- APPROXIMATE LIMITS FLOOD ZONE AE (FLOODWAY)
- APPROXIMATE LIMITS FLOOD ZONE AE
- 960 - PROPOSED CONTOUR LINE
- 960 - EXISTING CONTOUR LINE



LUCAS W. WILLIAMS - ENGINEER
 KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

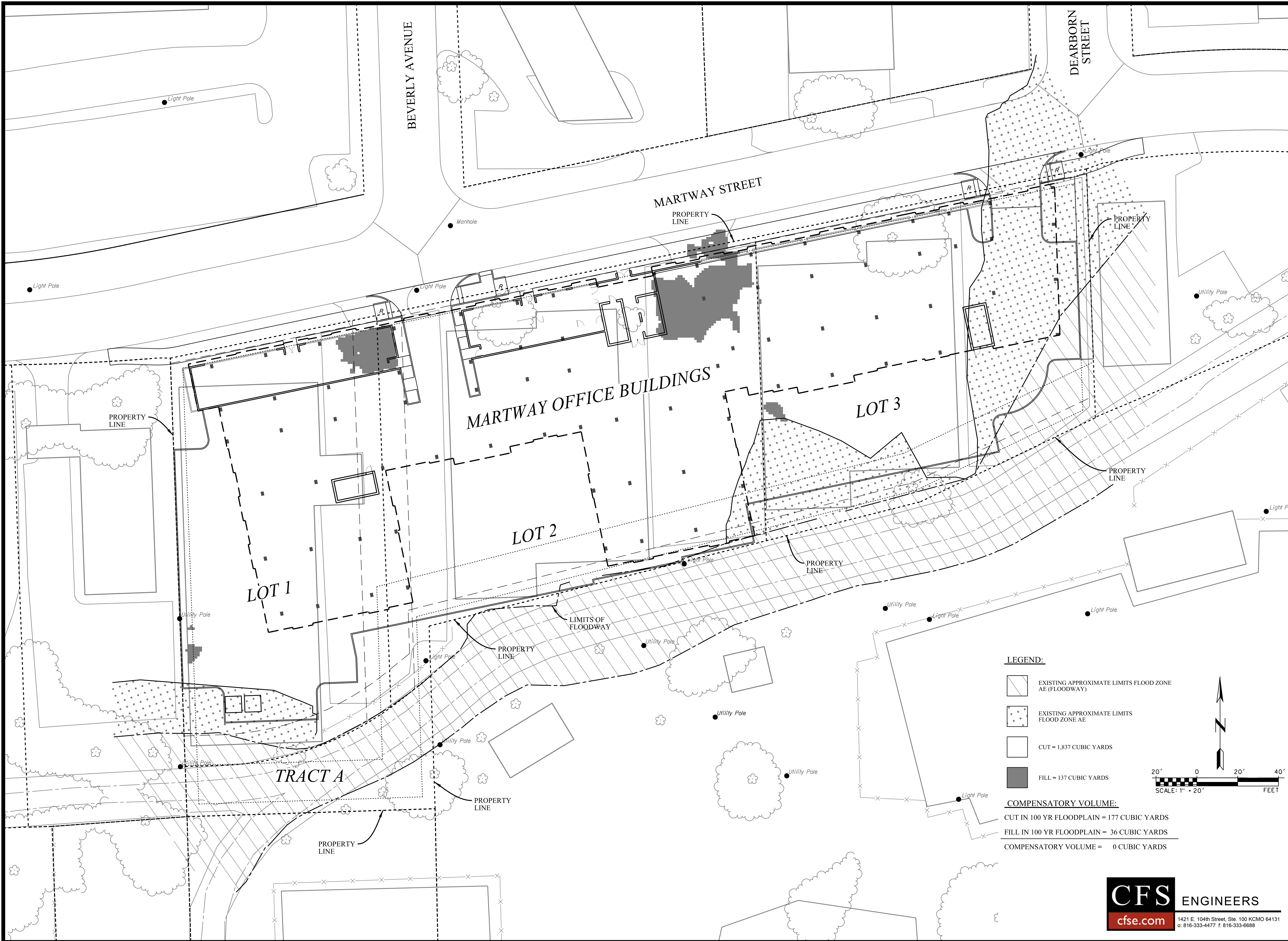
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	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	FINAL DEV. PLAN SUBMITTAL	09.15.2017

16.05.Martway

C200

GRADING PLAN

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LUCAS W. WILLIAMS - ENGINEER
 KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

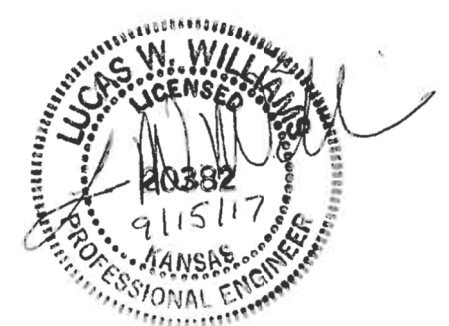
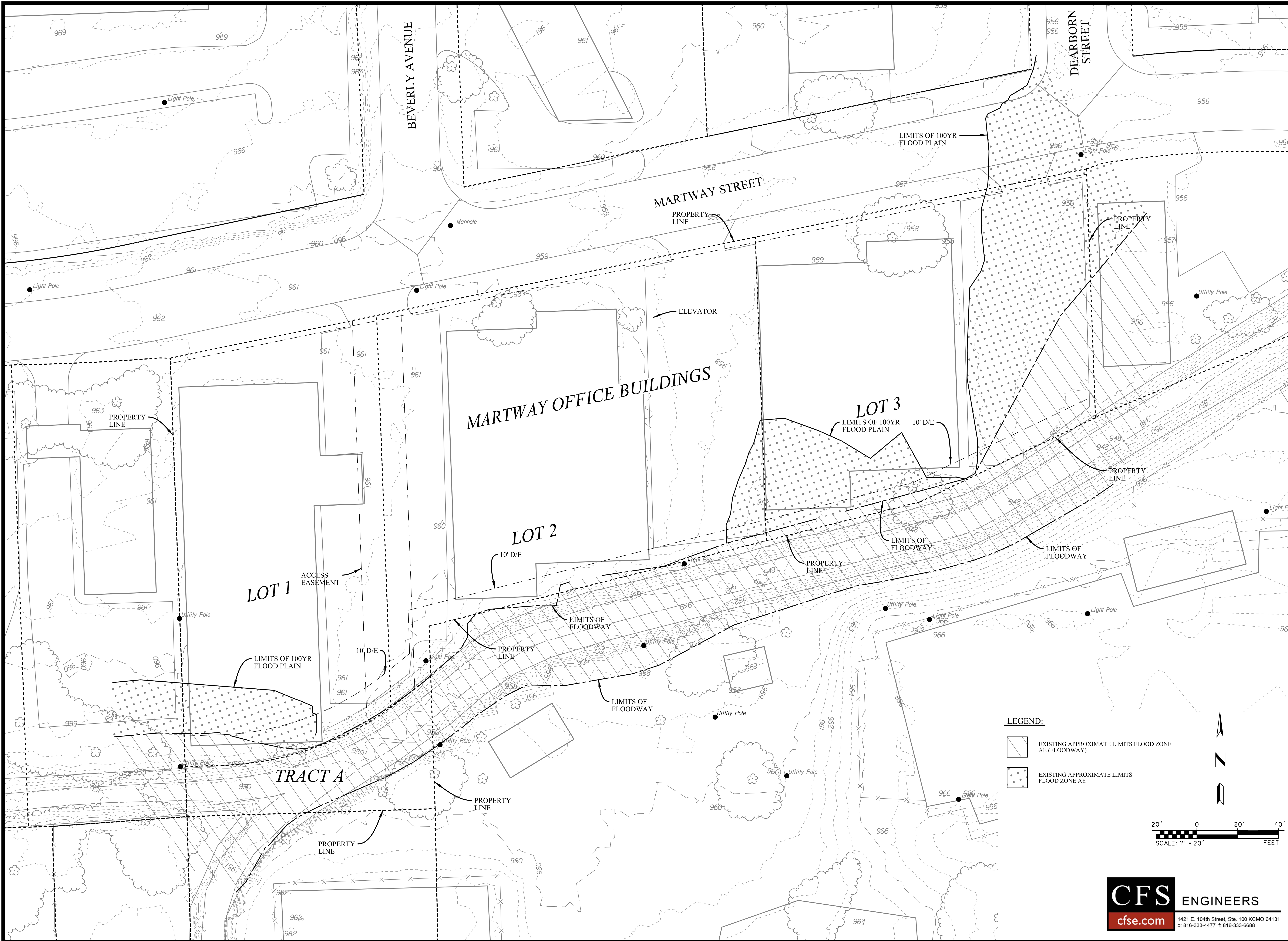
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	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	FINAL DEV. PLAN SUBMITTAL	09.15.2017

16.05.Martway

C201

CUT & FILL PLAN

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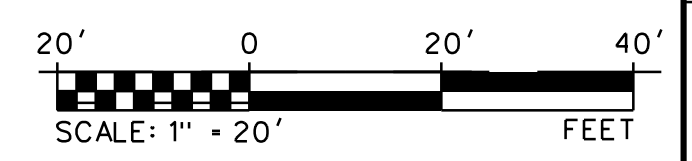
LUCAS W. WILLIAMS - ENGINEER
 KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

LEGEND:

- EXISTING APPROXIMATE LIMITS FLOOD ZONE AE (FLOODWAY)
- EXISTING APPROXIMATE LIMITS FLOOD ZONE AE



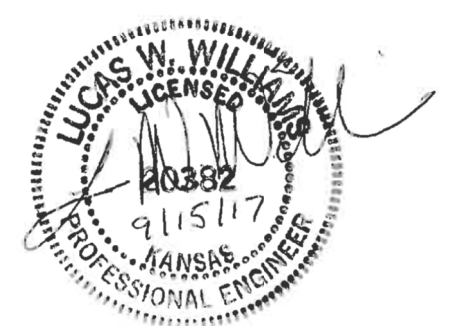
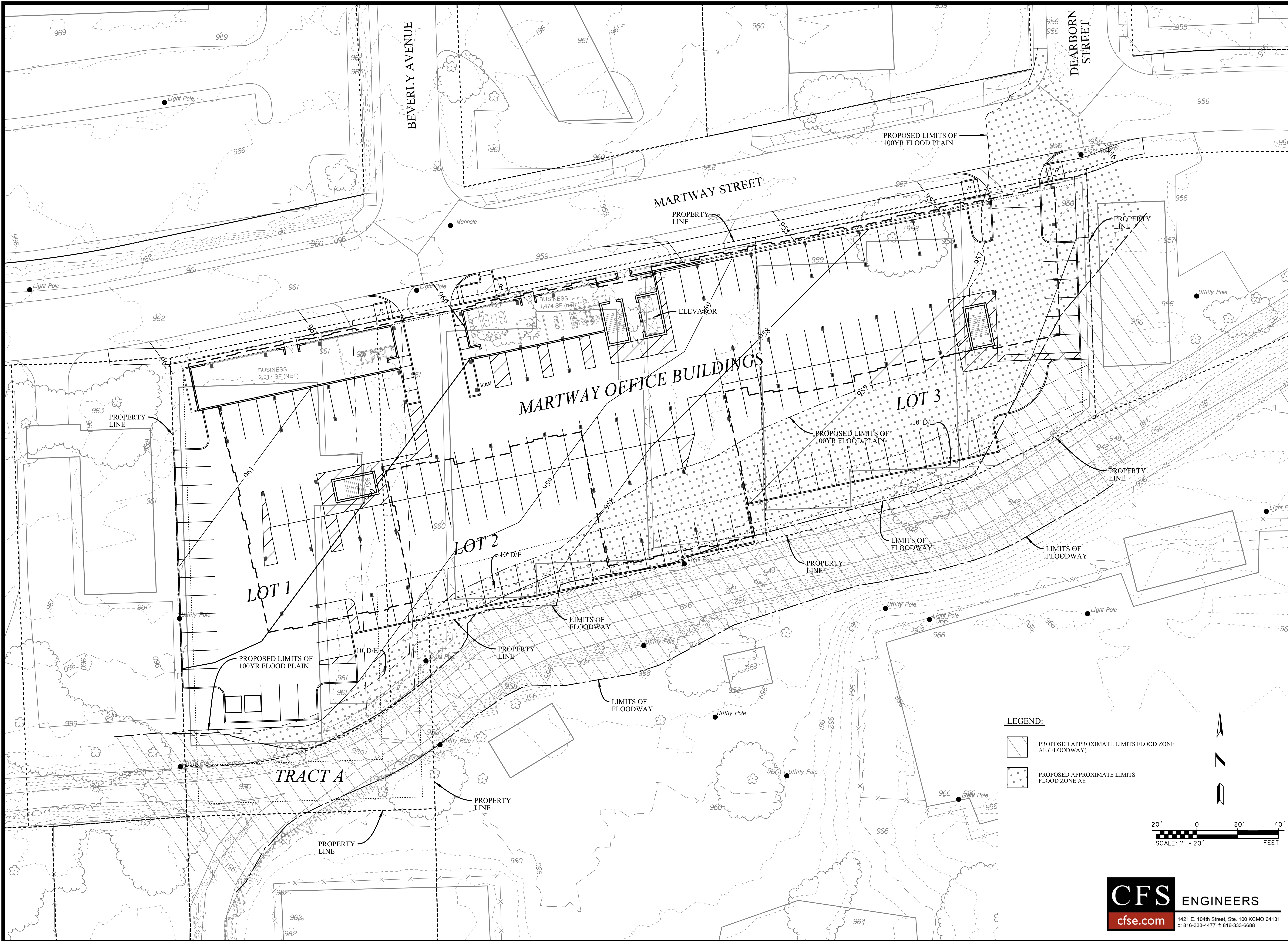
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	FINAL DEV. PLAN SUBMITTAL	09.15.2017

I6.05.Martway

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C202

EXISTING FLOOD PLAIN PLAN





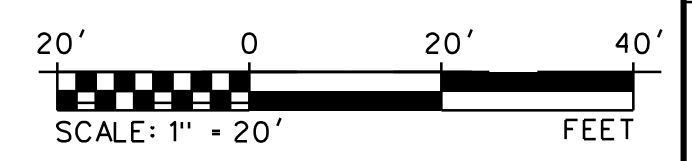
LUCAS W. WILLIAMS - ENGINEER
 KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

LEGEND:

-  PROPOSED APPROXIMATE LIMITS FLOOD ZONE AE (FLOODWAY)
-  PROPOSED APPROXIMATE LIMITS FLOOD ZONE AE



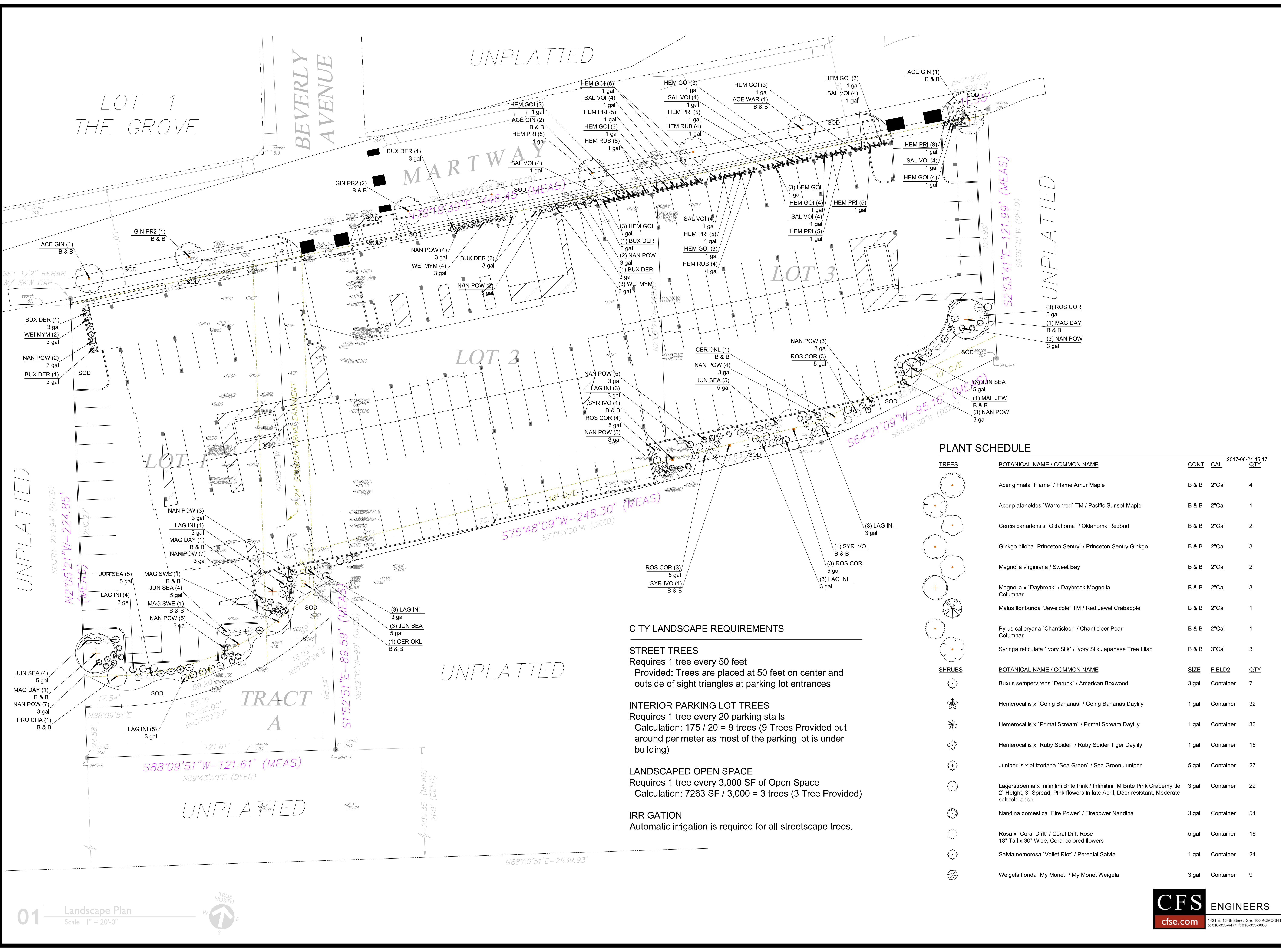
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16.05.Martway

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C203

PROPOSED FLOOD PLAIN PLAN



PLANT SCHEDULE

TREES	BOTANICAL NAME / COMMON NAME	CONT	CAL	2017-08-24 15:17 QTY
	Acer ginnala 'Flame' / Flame Amur Maple	B & B	2"Cal	4
	Acer platanoides 'Warrenred' TM / Pacific Sunset Maple	B & B	2"Cal	1
	Cercis canadensis 'Oklahoma' / Oklahoma Redbud	B & B	2"Cal	2
	Ginkgo biloba 'Princeton Sentry' / Princeton Sentry Ginkgo	B & B	2"Cal	3
	Magnolia virginiana / Sweet Bay	B & B	2"Cal	2
	Magnolia x 'Daybreak' / Daybreak Magnolia Columnar	B & B	2"Cal	3
	Malus floribunda 'Jewelcole' TM / Red Jewel Crabapple	B & B	2"Cal	1
	Pyrus calleryana 'Chanticleer' / Chanticleer Pear Columnar	B & B	2"Cal	1
	Syringa reticulata 'Ivory Silk' / Ivory Silk Japanese Tree Lilac	B & B	3"Cal	3
SHRUBS	BOTANICAL NAME / COMMON NAME	SIZE	FIELD2	QTY
	Buxus sempervirens 'Derunk' / American Boxwood	3 gal	Container	7
	Hemerocallis x 'Going Bananas' / Going Bananas Daylily	1 gal	Container	32
	Hemerocallis x 'Primal Scream' / Primal Scream Daylily	1 gal	Container	33
	Hemerocallis x 'Ruby Spider' / Ruby Spider Tiger Daylily	1 gal	Container	16
	Juniperus x pfitzeriana 'Sea Green' / Sea Green Juniper	5 gal	Container	27
	Lagerstroemia x Infinitini Brite Pink / Infinitini Brite Pink Crapemyrtle 2' Height, 3' Spread, Pink flowers in late April, Deer resistant, Moderate salt tolerance	3 gal	Container	22
	Nandina domestica 'Fire Power' / Firepower Nandina	3 gal	Container	54
	Rosa x 'Coral Drift' / Coral Drift Rose 18" Tall x 30" Wide, Coral colored flowers	5 gal	Container	16
	Salvia nemorosa 'Voilet Riot' / Perennial Salvia	1 gal	Container	24
	Weigela florida 'My Monet' / My Monet Weigela	3 gal	Container	9

CITY LANDSCAPE REQUIREMENTS

STREET TREES
Requires 1 tree every 50 feet
Provided: Trees are placed at 50 feet on center and outside of sight triangles at parking lot entrances

INTERIOR PARKING LOT TREES
Requires 1 tree every 20 parking stalls
Calculation: 175 / 20 = 9 trees (9 Trees Provided but around perimeter as most of the parking lot is under building)

LANDSCAPED OPEN SPACE
Requires 1 tree every 3,000 SF of Open Space
Calculation: 7263 SF / 3,000 = 3 trees (3 Tree Provided)

IRRIGATION
Automatic irrigation is required for all streetscape trees.

Martway Mixed Use
 6009 - 6045 Martway
 Mission, KS 64202

REV	ISSUE	DATE
	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	FINAL DEV. PLAN SUBMITTAL	09.15.2017

16.05.Martway

L100

LANDSCAPE PLAN





Martway Mixed Use

6009 - 6045 Martway
Mission, KS 64202

rev	issue	date
	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	REVISED PRELIM. PLAN SUBMITTAL	09.15.2017

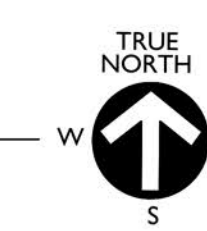
16.05.Martway

A100

FLOOR PLAN



01 | Typical Floor Plan
Scale 1/8" = 1'-0"



- EXTERIOR ELEVATIONS GENERAL NOTES:
1. WE ARE SEEKING A DEVIATION TO ALLOW THE MAXIMUM BUILDING HEIGHT REQUIREMENT BE RAISED FROM A THREE STORY 45' TO A FIVE STORY 65' MAXIMUM BUILDING HEIGHT.
 2. ROOF MOUNTED MECHANICAL EQUIPMENT SHALL BE HIDDEN BY THE USE OF PARAPETS.



04 | Elevation - South
Scale 1/16" = 1'-0"



03 | Elevation - West
Scale 1/16" = 1'-0"



02 | Elevation - East
Scale 1/16" = 1'-0"

GRAPHIC PATTERN	MATERIAL DESCRIPTION
	NICHIHA 'ILLUMINATION' WALL PANEL VERT. RUNNING BOND 18"x72"
	NICHIHA 'ARCH. BLOCK' WALL PANEL HORIZ. STACK BOND 18"x72"
	NICHIHA SIM. WOOD WALL PANEL (CEDAR) 6"x120"
	NICHIHA 'ILLUMINATION' WALL PANEL VERT. RUNNING BOND 18"x72"



GLAZING & OPENNESS AREA CALCULATION
TOTAL GLAZING & OPENNESS AREA @ FIRST FLOOR = 3,762 SF
TOTAL FACADE AREA @ FIRST FLOOR = 6,861 SF
TOTAL PERCENTAGE OF GLAZING AND OPENNESS = 55%

01 | Elevation - North
Scale 1/16" = 1'-0"

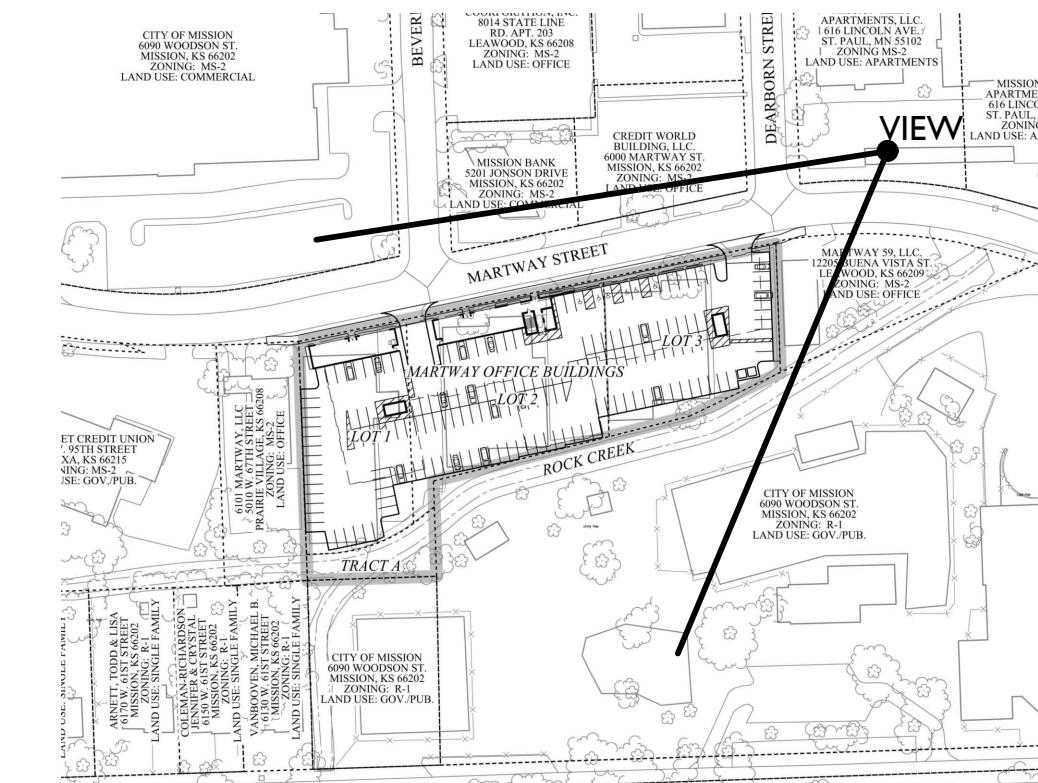
Martway Mixed Use
 6009 - 6045 Martway
 Mission, KS 64202

rev	issue	date
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	REVISED PRELIM. PLAN SUBMITTAL	09.15.2017

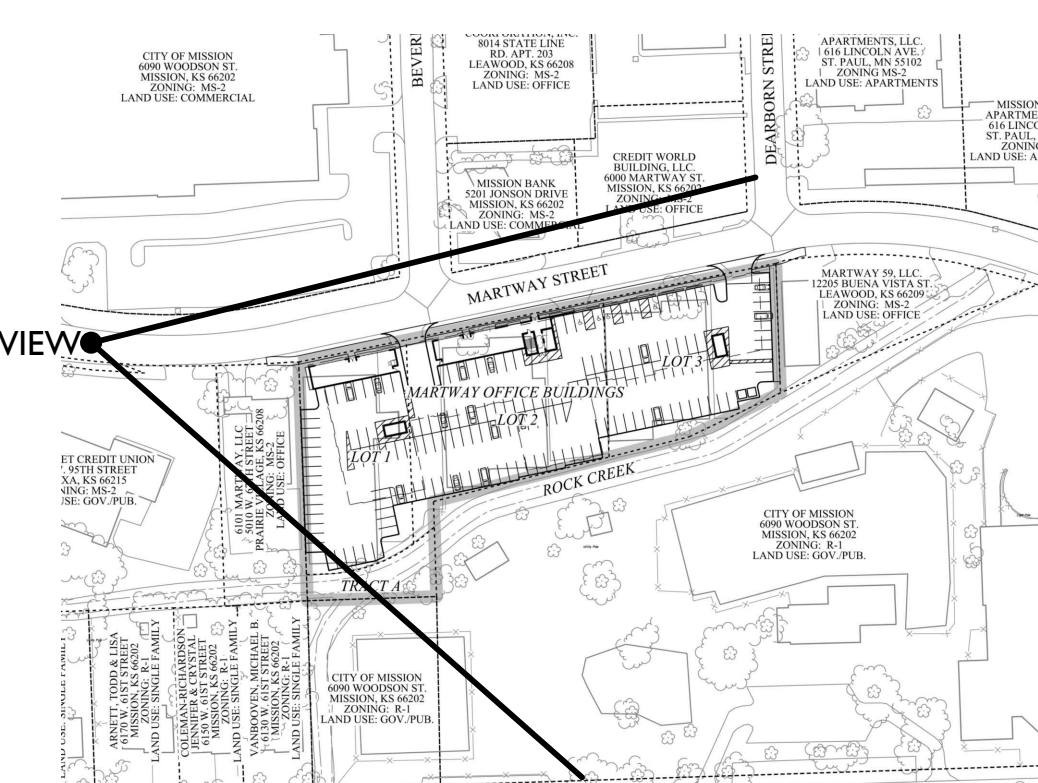
16.05.Martway

A200

ELEVATIONS



02 Perspective View Looking Southwest
Scale N.T.S.



01 Perspective View Looking Southeast
Scale N.T.S.



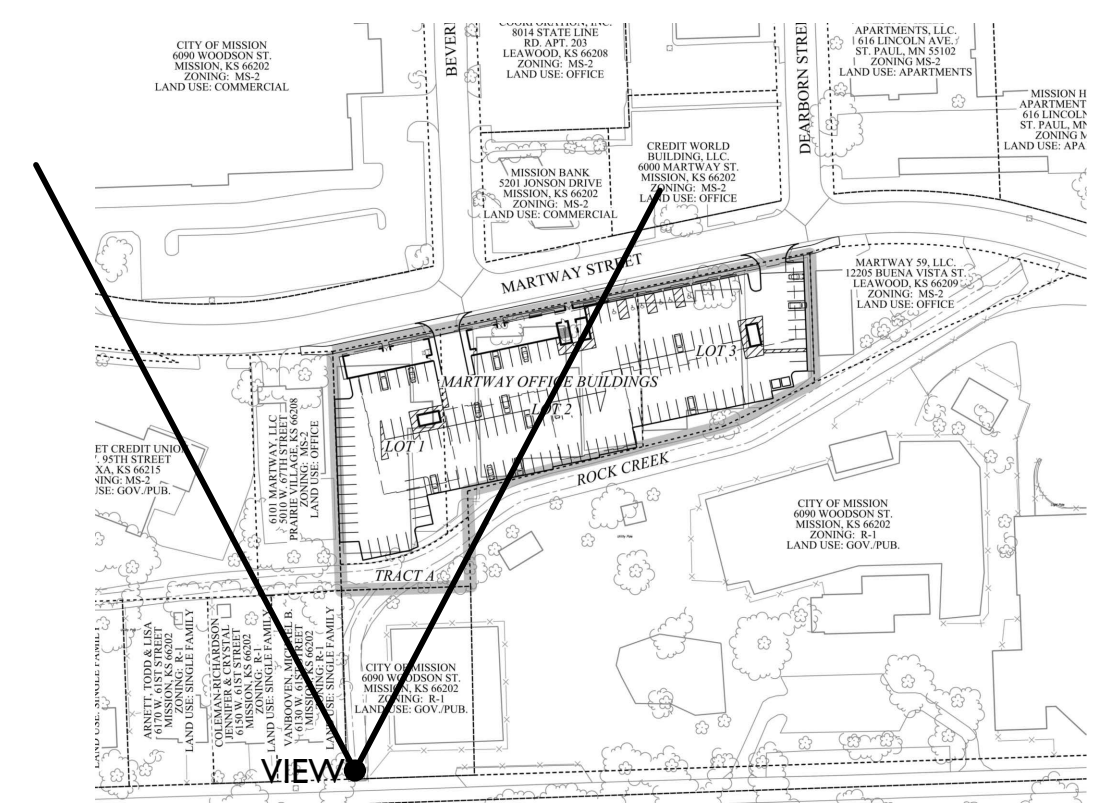
Martway Mixed Use

6009 - 6045 Martway
Mission, KS 64202

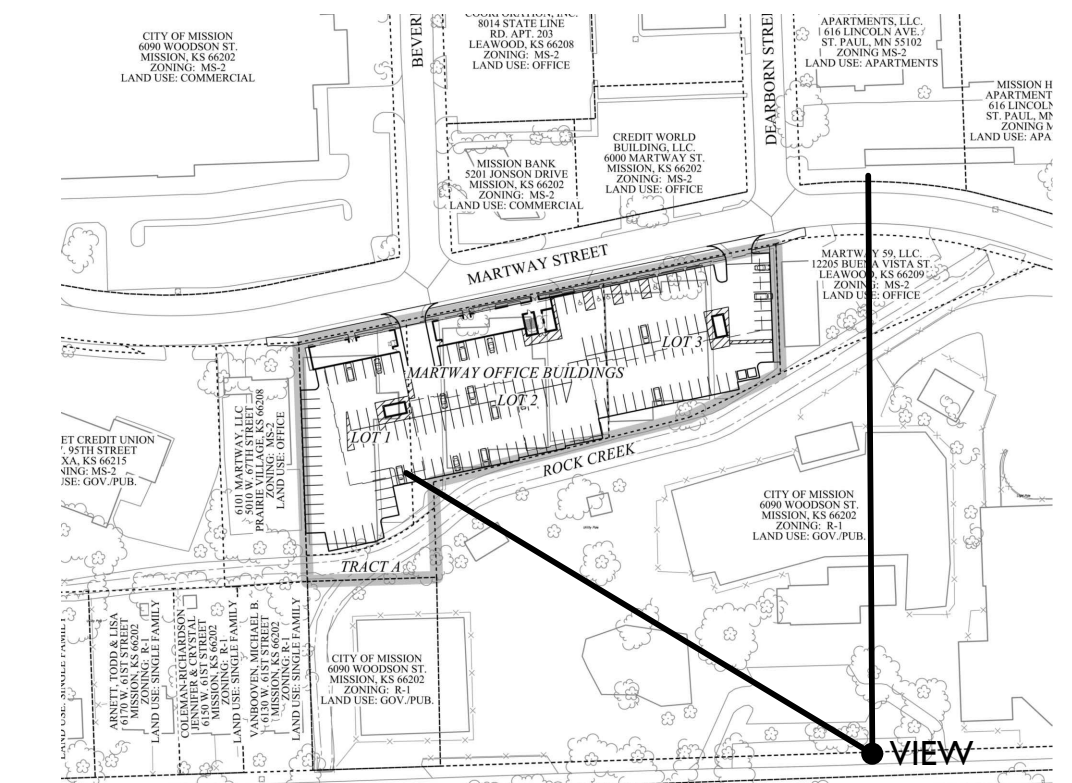
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	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	REVISED PRELIM. PLAN SUBMITTAL	09.15.2017

16.05.Martway

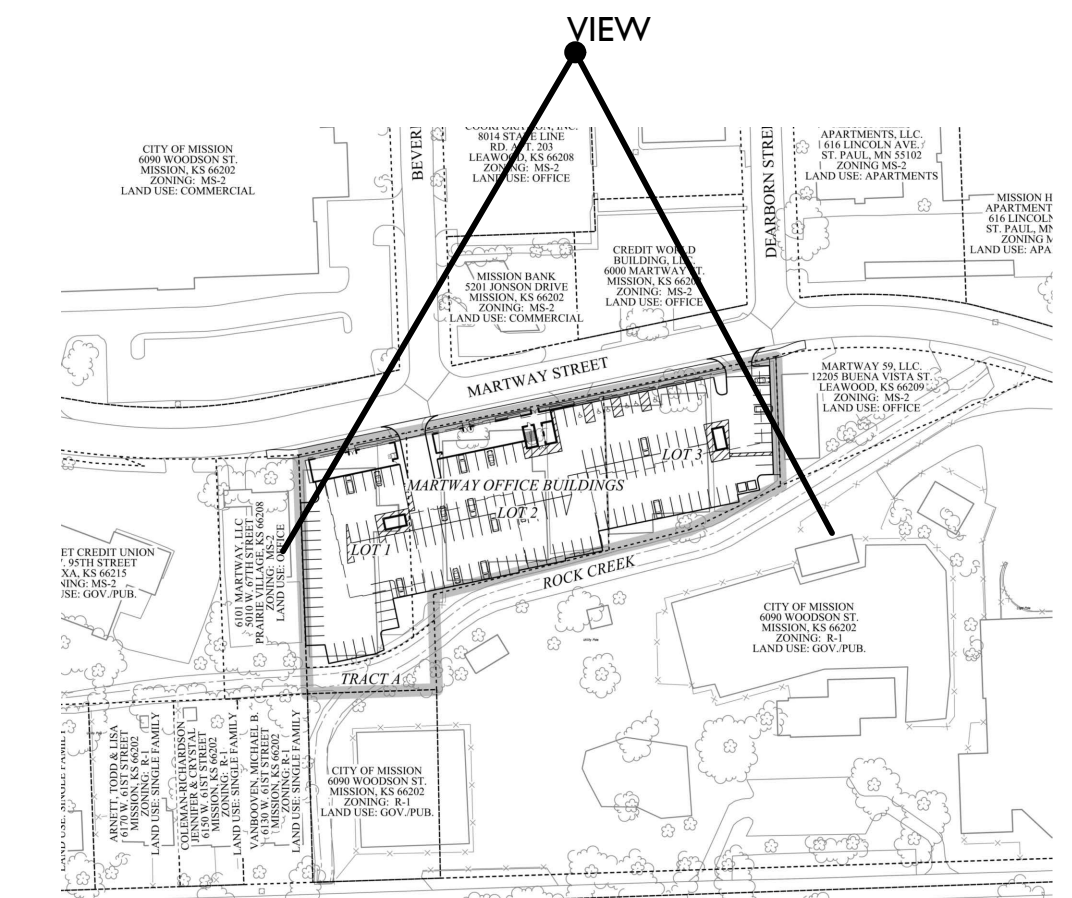
A201



03 | View Looking North
 Scale N.T.S.



02 | View Looking Northwest
 Scale N.T.S.



01 | View Looking South
 Scale N.T.S.

Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

rev	issue	date
	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	REVISED PRELIM. PLAN SUBMITTAL	09.15.2017

16.05.Martway

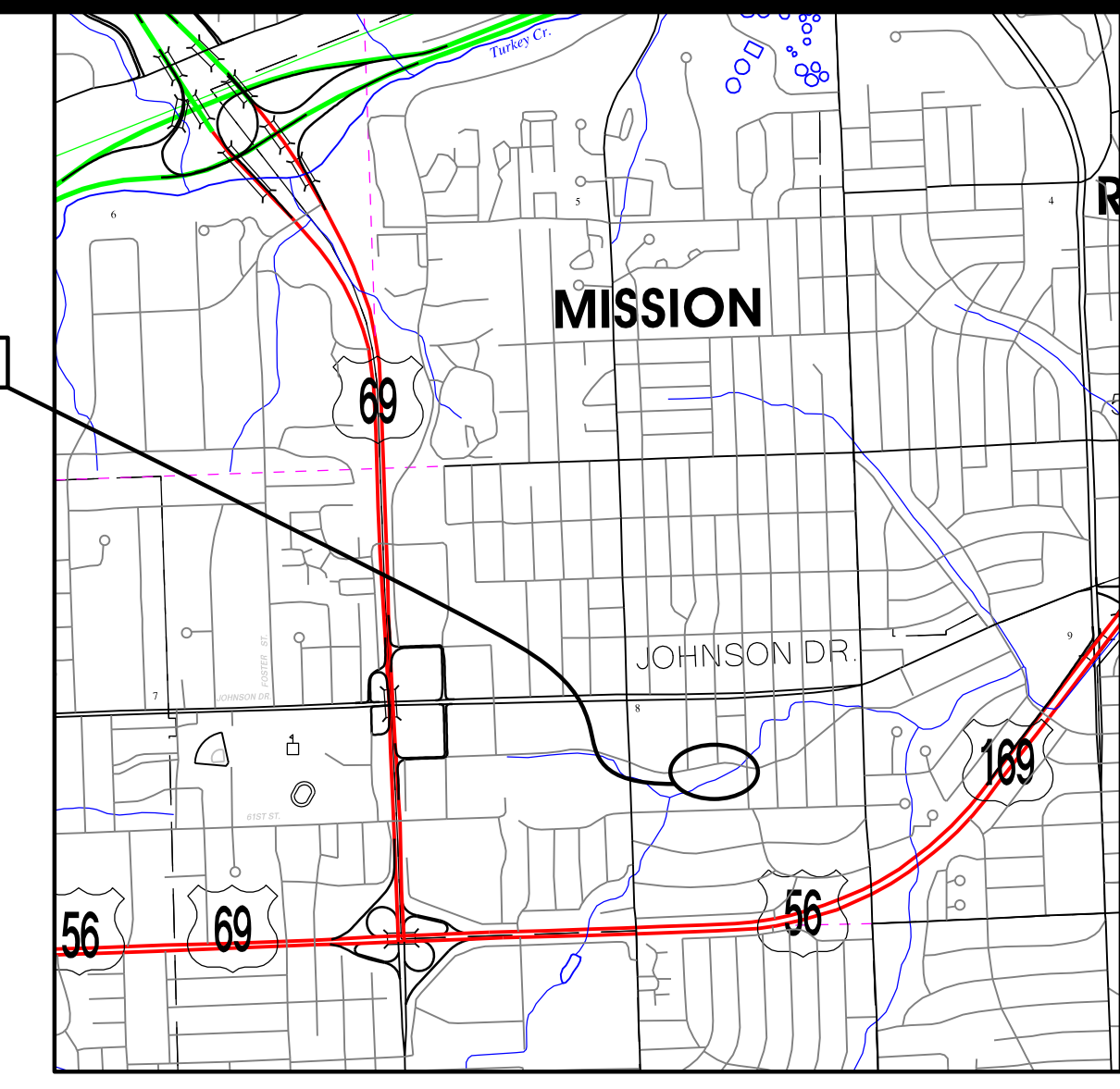
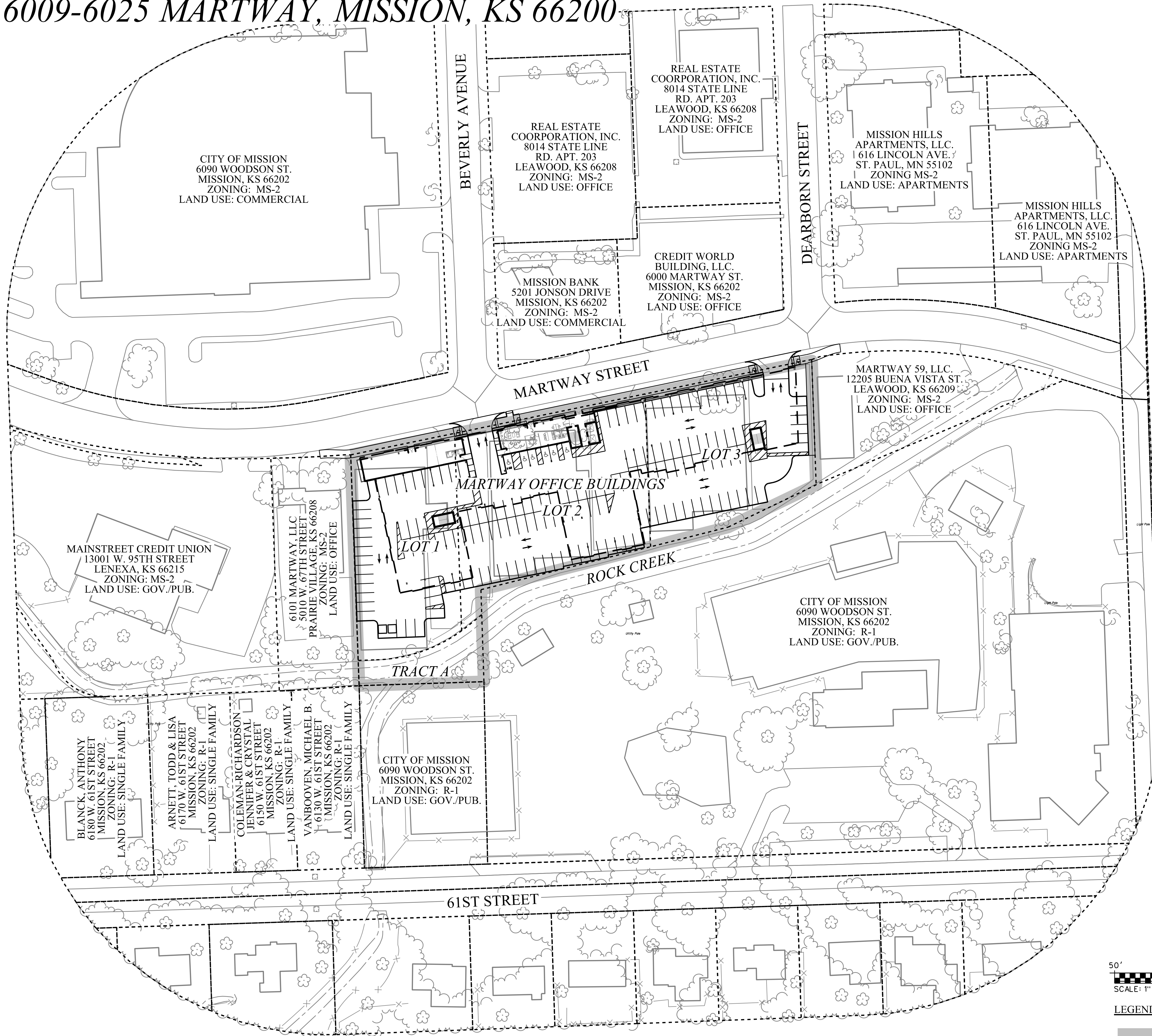
A202

EXTERIOR VIEWS

MARTWAY MIXED USE

PRELIMINARY DEVELOPMENT PLAN

6009-6025 MARTWAY, MISSION, KS 66200



VICINITY MAP:

LEGAL DESCRIPTION

LOTS 1, 2 AND 3 OF MARTWAY OFFICE BUILDINGS A SUBDIVISION OF LAND IN THE NORTHWEST QUARTER OF SECTION 8, TOWNSHIP 25 SOUTH, RANGE 25 EAST OF THE SIXTH PRINCIPLE MERIDIAN IN THE CITY OF MISSION, JOHNSON COUNTY, KANSAS.

SITE DEVELOPMENT SUMMARY TABLE

EXISTING ZONING: MS-2

LAND AREA: 1.767 ACRES OR 76,971 SQUARE FEET MORE OR LESS

LAND USE:

EXISTING: OFFICE

PROPOSED: A MIXED USE DEVELOPMENT WITH A 4-STORY APARTMENT COMPLEX WITH COMMERCIAL SPACE AND PARKING DECK ON THE FIRST FLOOR

BUILDING HEIGHT:

MAXIMUM BUILDING HEIGHT: 3-STORY/45'-0"

PROPOSED BUILDING HEIGHT: 4-STORY/56'-3"

BUILDING FLOOR AREA:

FIRST FLOOR:	3,491 S.F.
SECOND FLOOR:	38,977 S.F.
THIRD FLOOR:	38,977 S.F.
FOURTH FLOOR:	38,977 S.F.
TOTAL FLOOR AREA	120,422 S.F.

FLOOR AREA RATIO: 1.56

PARKING SUMMARY

PROPOSED PARKING RATIO: 1.03

PARKING SUMMARY TABLE		
BUILDING USE	SPECIFIC USE REQUIREMENT	SPACE REQUIREMENT
COMMERCIAL SPACE	4 SPACES PER 1000 S.F. x 3,491 S.F.	14 SPACES
EFFICIENCY APARTMENTS	1 SPACE PER UNIT x 18 UNITS	18 SPACES
ONE BEDROOM APARTMENTS	1 SPACE PER UNIT x 69 UNITS	69 SPACES
TWO BEDROOM APARTMENTS	2 SPACES PER UNIT x 30 UNITS	60 SPACES
TOTAL SPACES REQUIRED		161 SPACES
TOTAL SPACES PROVIDED		**166 SPACES

** 6 ACCESSIBLE SPACES WITH 1 VAN SPACE HAS BEEN PROVIDED

OWNER: MARTWAY OFFICE WORKS, LLC
423 DELAWARE STREET, STE. 102
KANSAS CITY, MO 64105

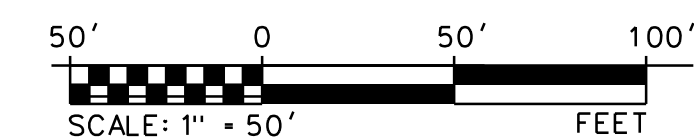
ARCHITECT: CLOCKWORK
423 DELAWARE STREET STE. 102
KANSAS CITY, MO 64105

DEVELOPER: MARTWAY OFFICE WORKS, LLC
423 DELAWARE STREET, STE. 102
KANSAS CITY, MO 64105

ENGINEER/LANDSCAPE ARCHITECT/SURVEYOR/PLANNER: CFS ENGINEERS, P.A.
1421 E. 104TH STREET, SUITE 100
KANSAS CITY, MO 64131

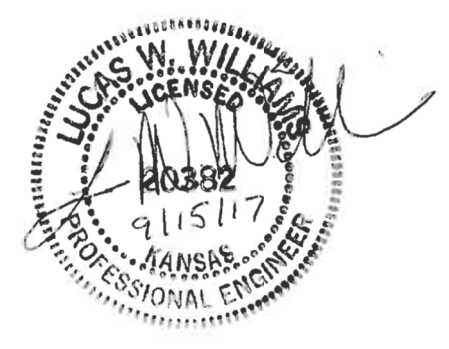
REQUESTED DEVIATIONS

- THE DEVELOPER REQUESTS THE FOLLOWING DEVIATIONS TO THE CITY OF MISSION'S MUNICIPAL CODE:
1. THE REAR YARD SETBACK REQUIREMENT BE REDUCED FROM 25' TO A 0' SETBACK.
 2. THE MAXIMUM BUILDING HEIGHT REQUIREMENT BE RAISED FROM A 3-STORY 45' TO A 4-STORY 56'-3" MAXIMUM BUILDING HEIGHT.
 3. THE MINIMUM LOT AREA PER MULTI-FAMILY DWELLING BE RAISED FROM 35 UNITS PER ACRE TO 66.21 UNITS PER ACRE.
 4. THE PARKING LOT SETBACK BE REDUCED FROM 6' TO 0' AT WEST PROPERTY LINE ONLY.
 5. THE MINIMUM GREEN SPACE BUFFER BETWEEN PARKING AND INTERIOR LOT LINES BE REDUCED FROM 4' TO 0' AT WEST PROPERTY LINE ONLY.
 6. THE INTERIOR PARKING LOT TREE REQUIREMENTS.
 7. THE PARKING LOT INTERIOR OPEN SPACE REQUIREMENT.



LEGEND:
LIMITS OF DEVELOPMENT

clockwork
423 Delaware St Ste 102
Kansas City MO 64105
www.clockwork-ad.com



LUCAS W. WILLIAMS - ENGINEER
KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
Mission, KS 64202

rev	issue	date
	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	FINAL DEV. PLAN SUBMITTAL	09.15.2017
	REV. PRELIM. DEV. PLAN SUBMITTAL	11.06.2017

16.05.Martway

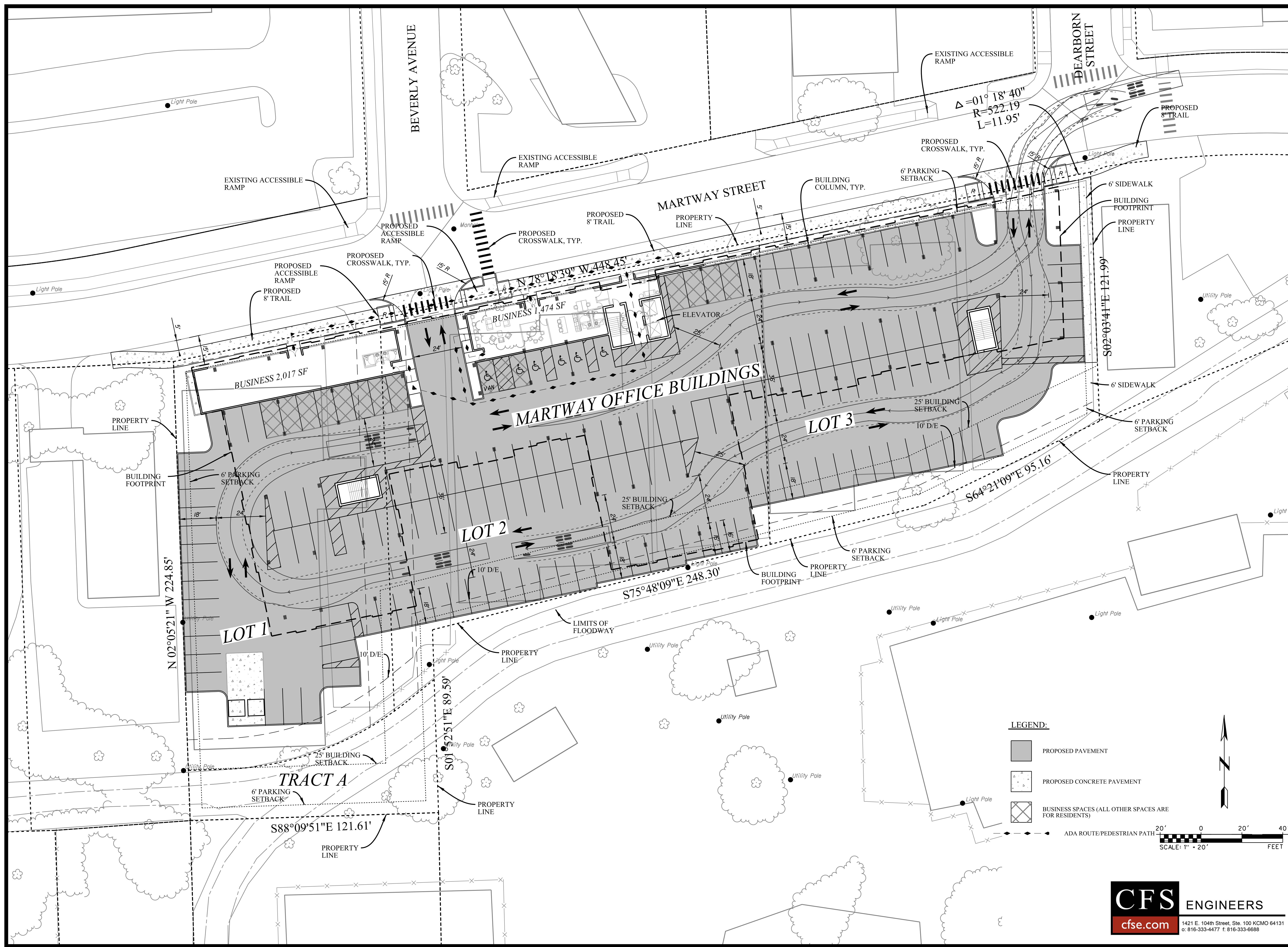
C100

CFS ENGINEERS
cfs.com
1421 E. 104th Street, Ste. 100 KCMO 64131
o: 816-333-4477 f: 816-333-6688

OVERALL SITE PLAN



LUCAS W. WILLIAMS - ENGINEER
KS PE # 20382

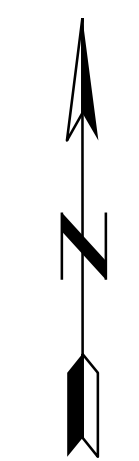
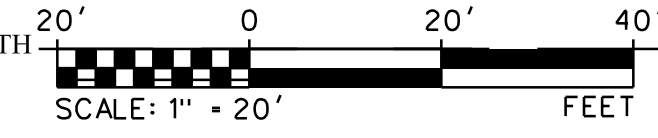


Martway Mixed Use

6009 - 6045 Martway
Mission, KS 64202

LEGEND:

- PROPOSED PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- BUSINESS SPACES (ALL OTHER SPACES ARE FOR RESIDENTS)



rev	issue	date
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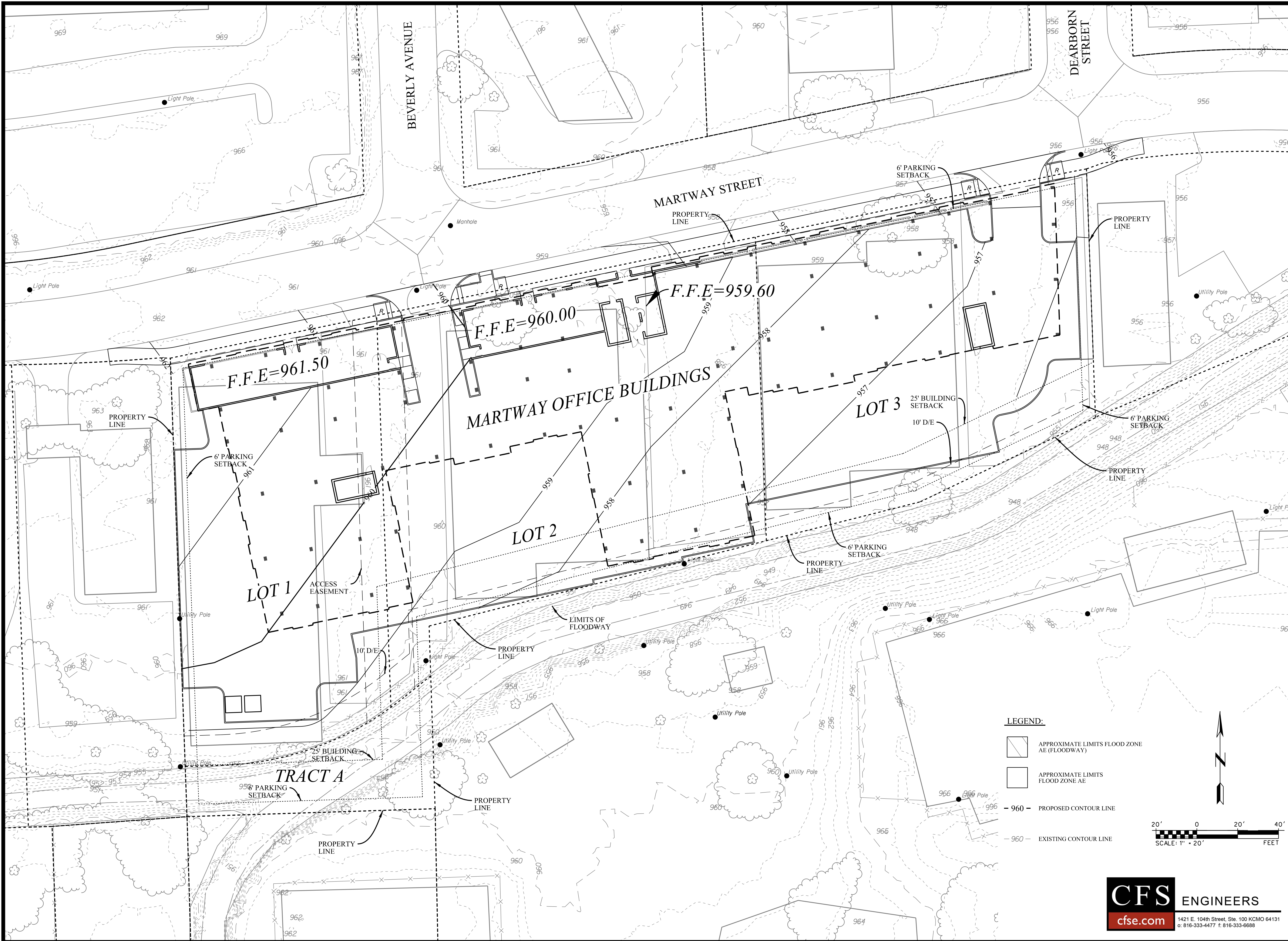
I6.05.Martway

C101

SITE PLAN

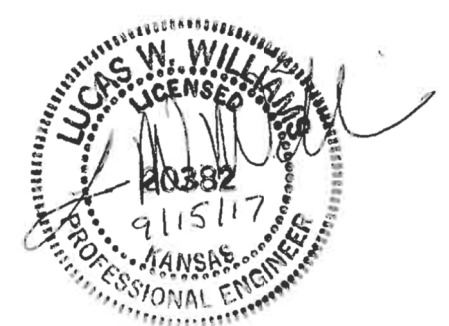
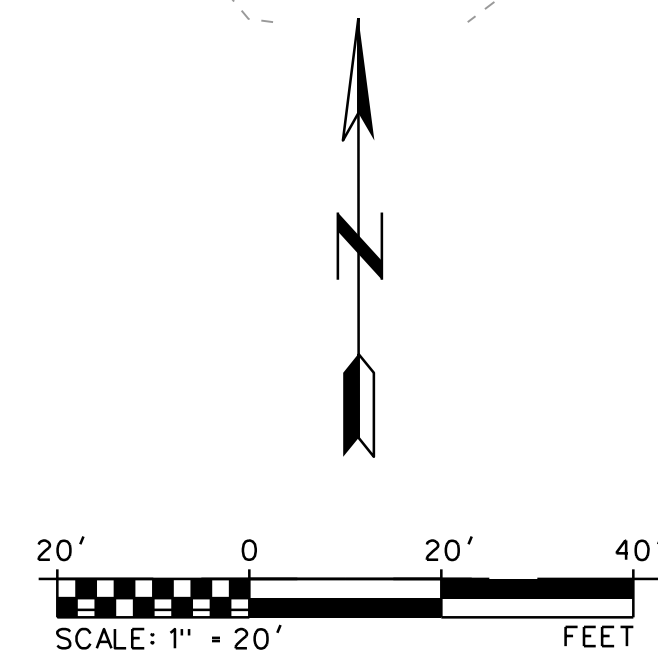


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o: 816-333-4477 f: 816-333-6688



LEGEND:

- APPROXIMATE LIMITS FLOOD ZONE AE (FLOODWAY)
- APPROXIMATE LIMITS FLOOD ZONE AE
- 960 - PROPOSED CONTOUR LINE
- 960 - EXISTING CONTOUR LINE



LUCAS W. WILLIAMS - ENGINEER
 KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

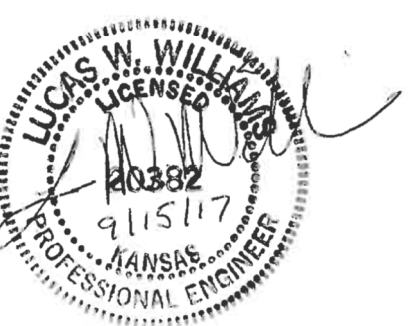
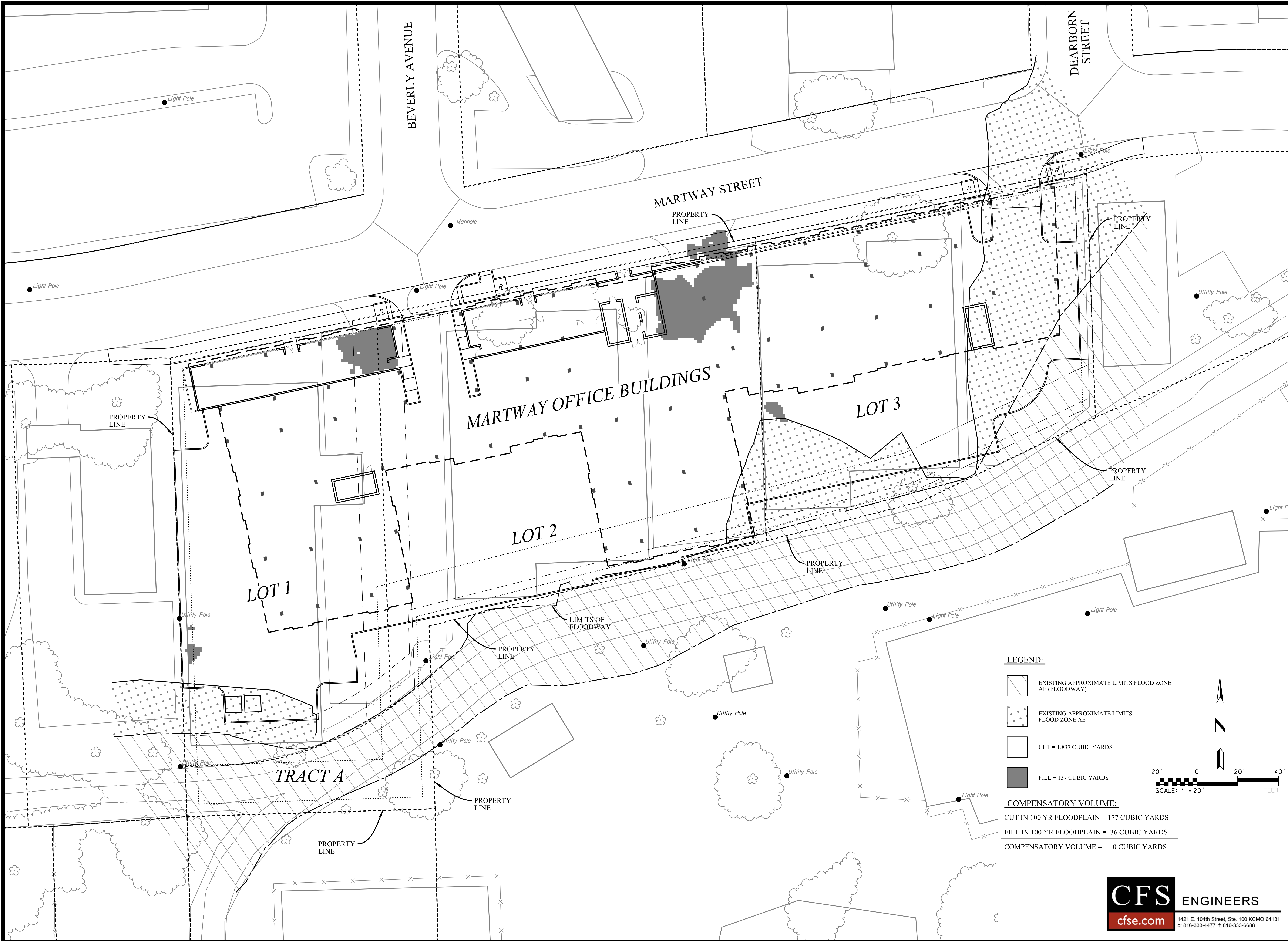
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	REV. PRELIM. DEV. PLAN SUBMITTAL	11.06.2017

16.05.Martway

C200

GRADING PLAN

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LUCAS W. WILLIAMS - ENGINEER
 KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

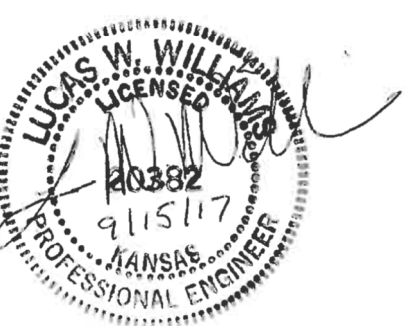
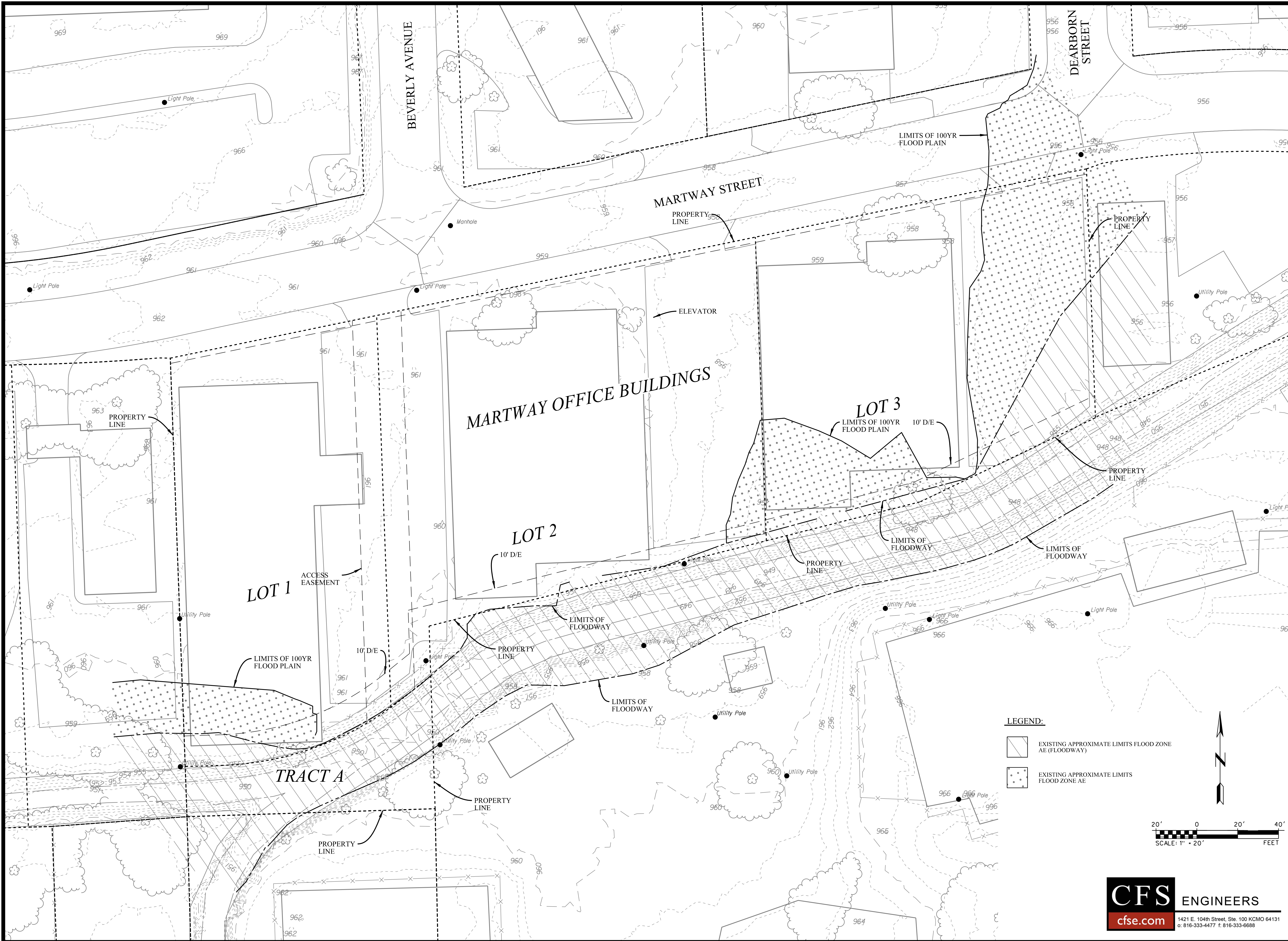
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	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017
	FINAL DEV. PLAN SUBMITTAL	09.15.2017
	REV. PRELIM. DEV. PLAN SUBMITTAL	11.06.2017

16.05.Martway

C201

CUT & FILL PLAN

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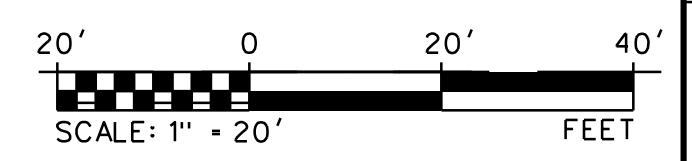
LUCAS W. WILLIAMS - ENGINEER
 KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

LEGEND:

- EXISTING APPROXIMATE LIMITS FLOOD ZONE AE (FLOODWAY)
- EXISTING APPROXIMATE LIMITS FLOOD ZONE AE



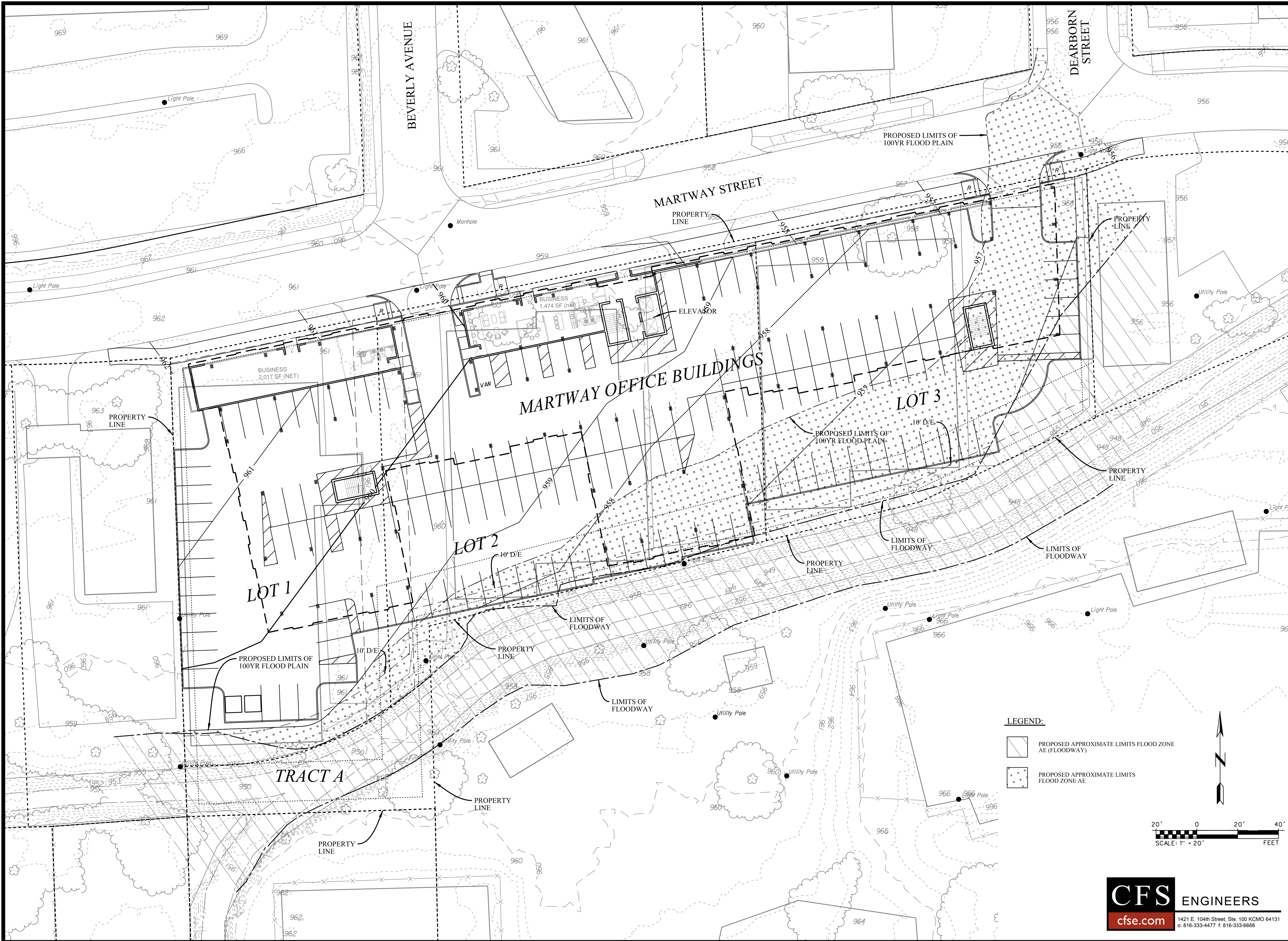
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I6.05.Martway

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C202

EXISTING FLOOD PLAIN PLAN



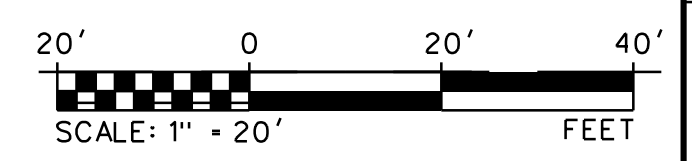
LUCAS W. WILLIAMS - ENGINEER
 KS PE # 20382

Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

LEGEND:

- PROPOSED APPROXIMATE LIMITS FLOOD ZONE AE (FLOODWAY)
- PROPOSED APPROXIMATE LIMITS FLOOD ZONE AE



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C203

PROPOSED FLOOD PLAN PLAN



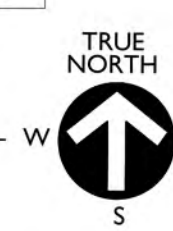
Martway Mixed Use

6009 - 6045 Martway
Mission, KS 64202

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	REVISED PRELIM. PLAN SUBMITTAL	09.15.2017
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MARTWAY UNIT MIX			
	SQ.FT.	UNITS PER FLOOR	TOTAL UNITS
1B/1B (MICRO)	504	4	12
1B/1B (ADA)	644	2	6
1B/1B	720	23	69
2B/2B (ADA)	1,104	3	9
2B/2B	1,112	5	15
2B/2B	1,144	2	6
TOTAL:		39	117
AVERAGE UNIT SIZE =			795.48
FLOORS 2-4 FOOTPRINT AREA =	38,977 SF	# OF BEDS =	147

01 | Typical Floor Plan
Scale 1/8" = 1'-0"



A100

FLOOR PLAN





EXTERIOR ELEVATIONS GENERAL NOTES:

1. WE ARE SEEKING A DEVIATION TO ALLOW THE MAXIMUM BUILDING HEIGHT REQUIREMENT BE RAISED FROM A THREE STORY 45' TO A FOUR STORY 56'-3" MAXIMUM BUILDING HEIGHT.
2. ROOF MOUNTED MECHANICAL EQUIPMENT SHALL BE HIDDEN BY THE USE OF PARAPETS.



04 | Elevation - South
Scale 1/16" = 1'-0"

GRAPHIC PATTERN	MATERIAL DESCRIPTION
	NICHIHA 'ILLUMINATION' WALL PANEL VERT. RUNNING BOND 18"x72"
	NICHIHA 'ARCH. BLOCK' WALL PANEL HORIZ. STACK BOND 18"x72"
	NICHIHA SIM. WOOD WALL PANEL (CEDAR) 6"x120"
	NICHIHA 'ILLUMINATION' WALL PANEL VERT. RUNNING BOND 18"x72"



03 | Elevation - West
Scale 1/16" = 1'-0"



02 | Elevation - East
Scale 1/16" = 1'-0"



GLAZING & OPENNESS AREA CALCULATION
TOTAL GLAZING & OPENNESS AREA @ FIRST FLOOR = 3,762 SF
TOTAL FACADE AREA @ FIRST FLOOR = 6,861 SF
TOTAL PERCENTAGE OF GLAZING AND OPENNESS = 55%

01 | Elevation - North
Scale 1/16" = 1'-0"

Martway Mixed Use

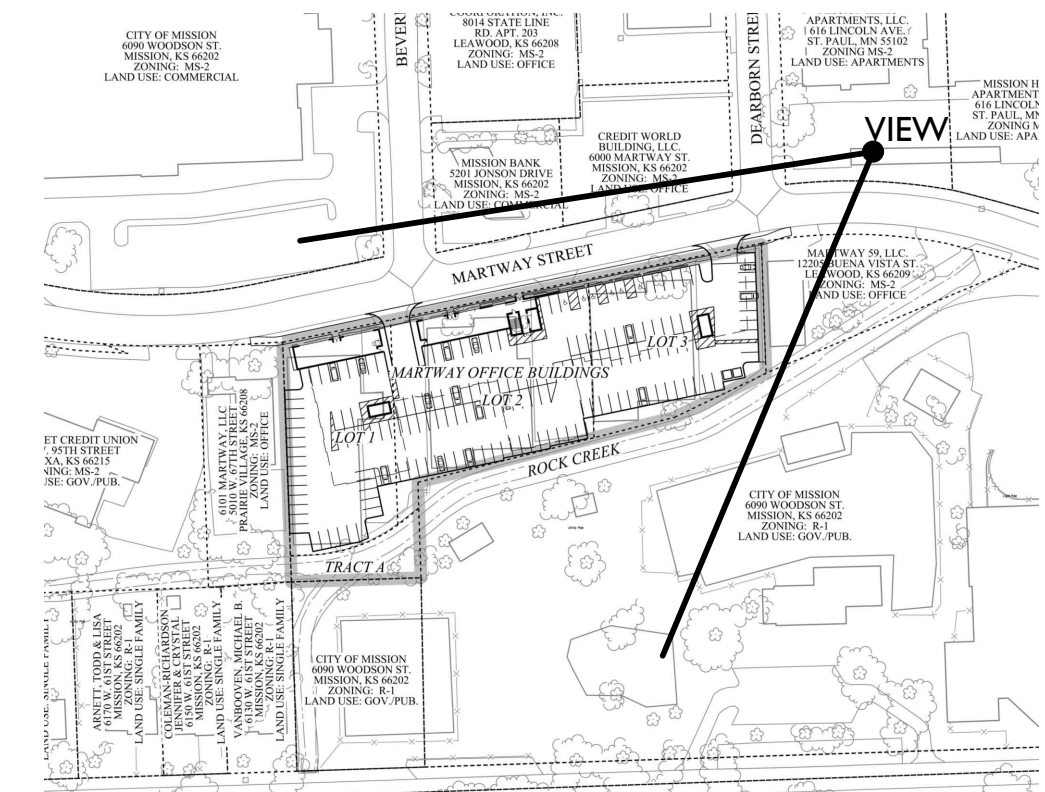
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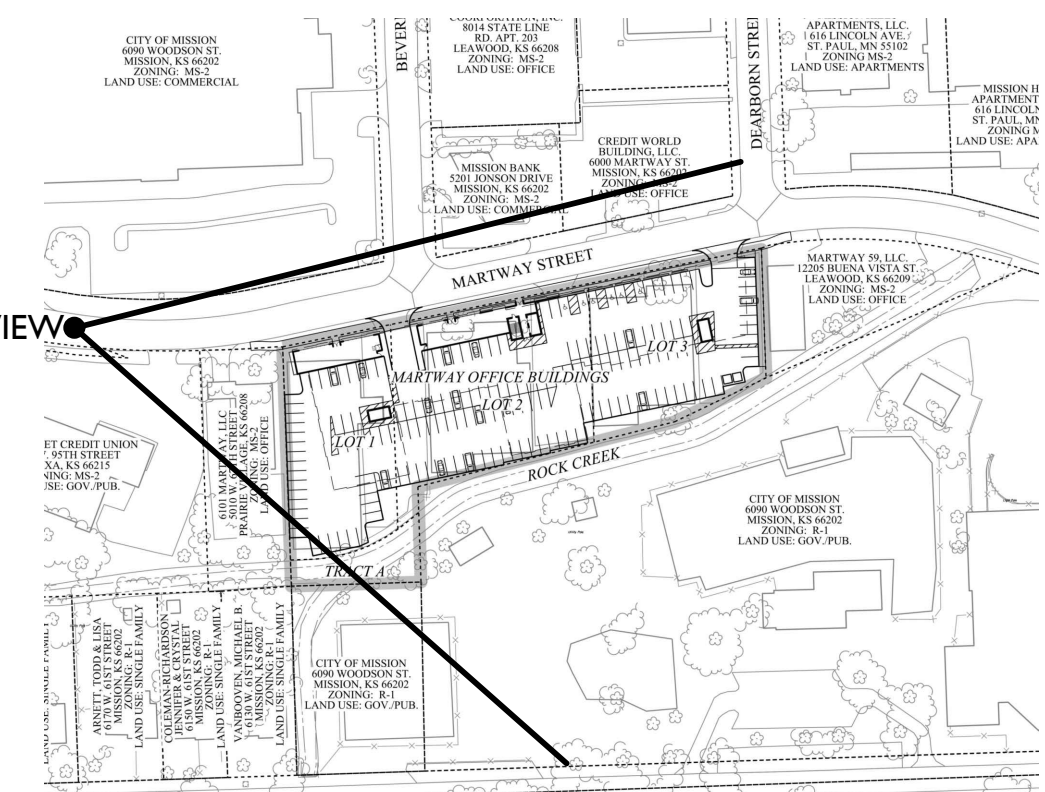
16.05.Martway

A200

ELEVATIONS



02 Perspective View Looking Southwest
 Scale N.T.S.



01 Perspective View Looking Southeast
 Scale N.T.S.

Martway Mixed Use

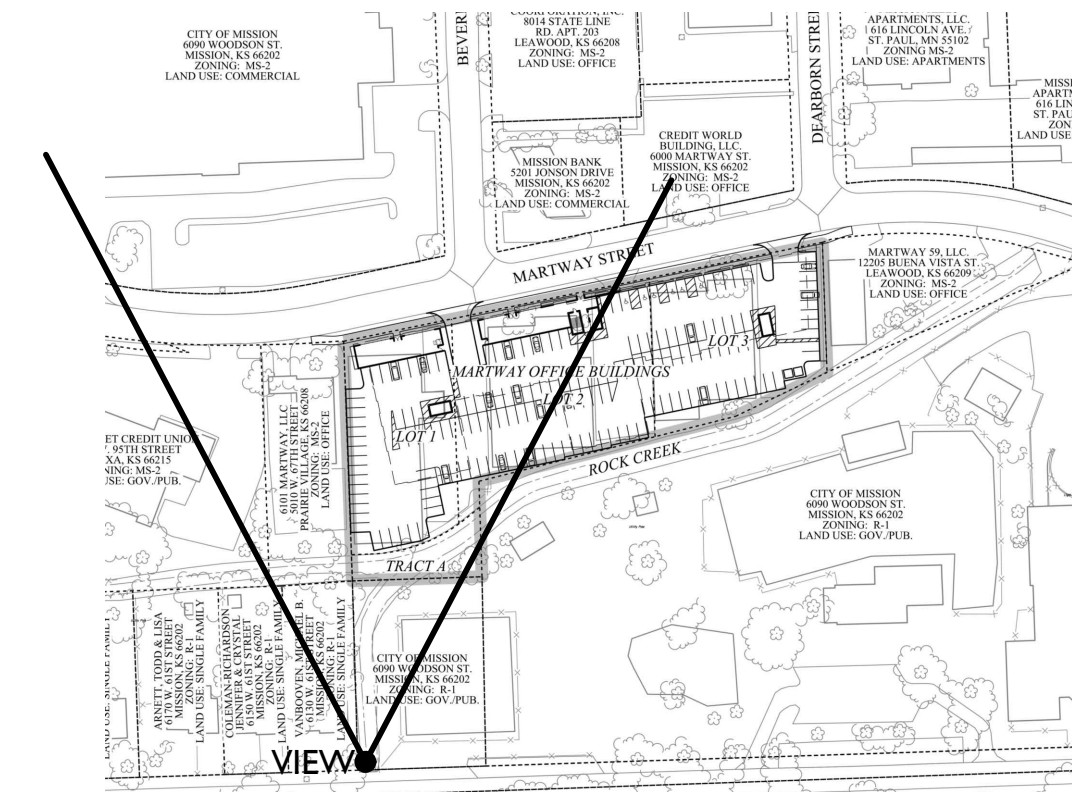
6009 - 6045 Martway
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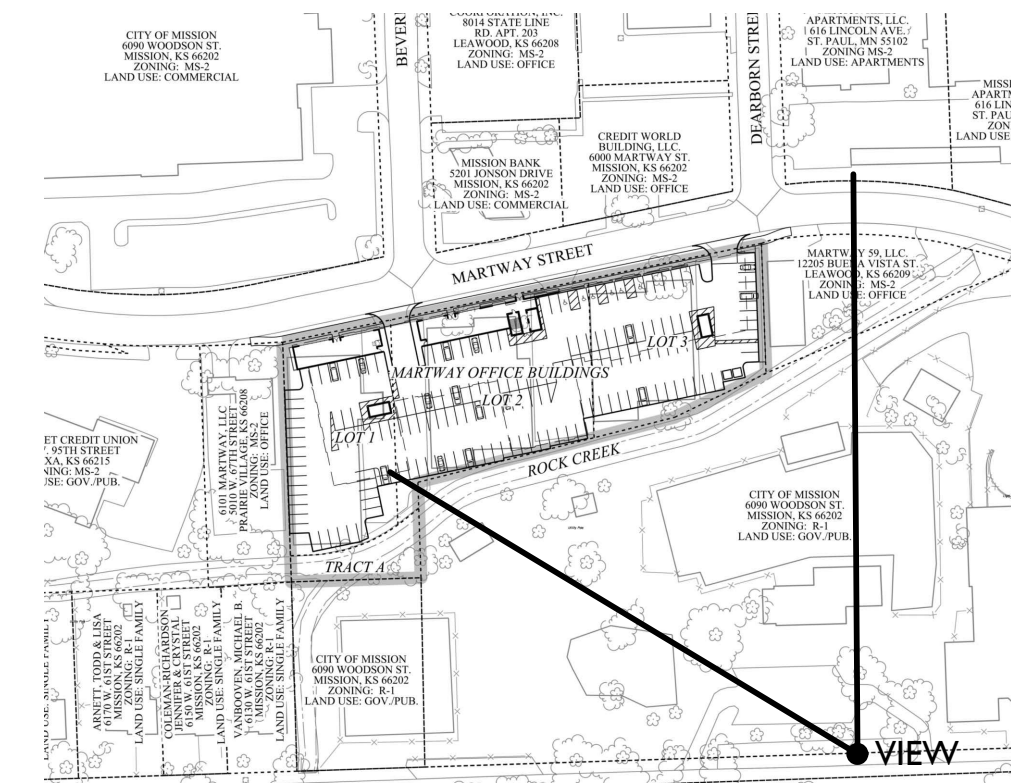
16.05.Martway

A201

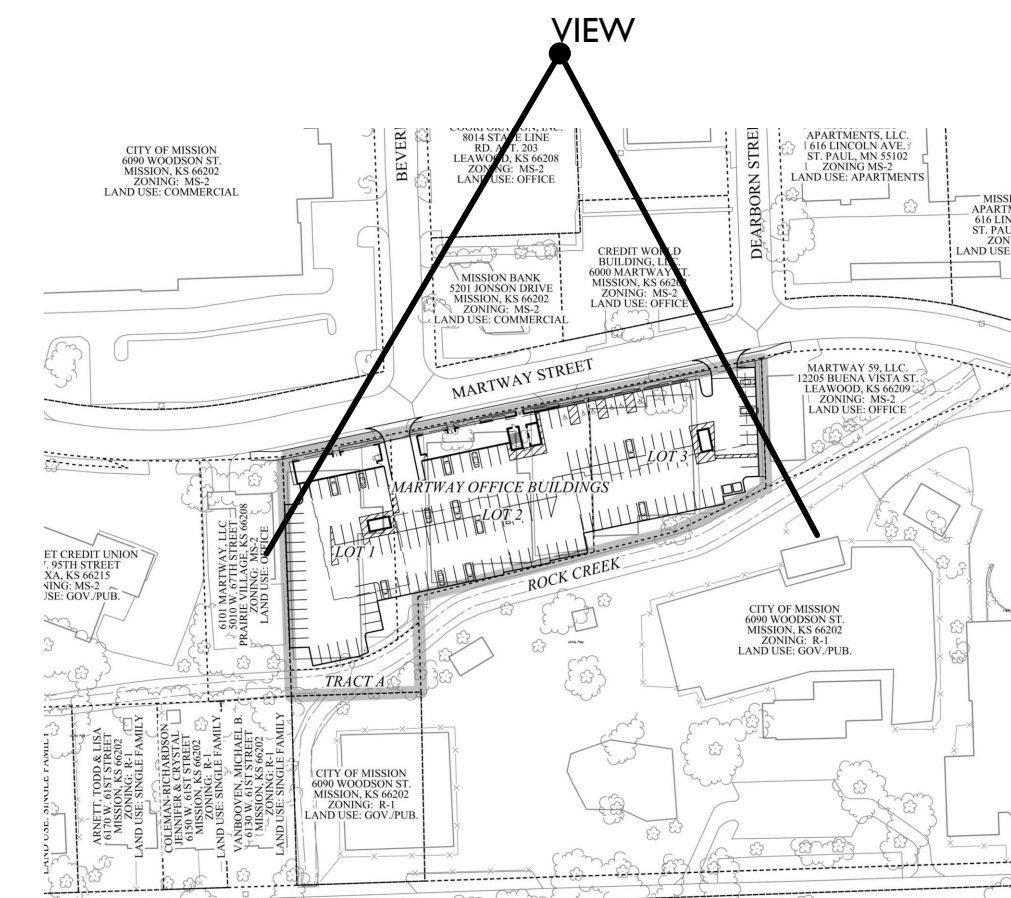
EXTERIOR RENDERINGS



03 View Looking North
Scale N.T.S.



02 View Looking Northwest
Scale N.T.S.



01 View Looking South
Scale N.T.S.



Martway Mixed Use

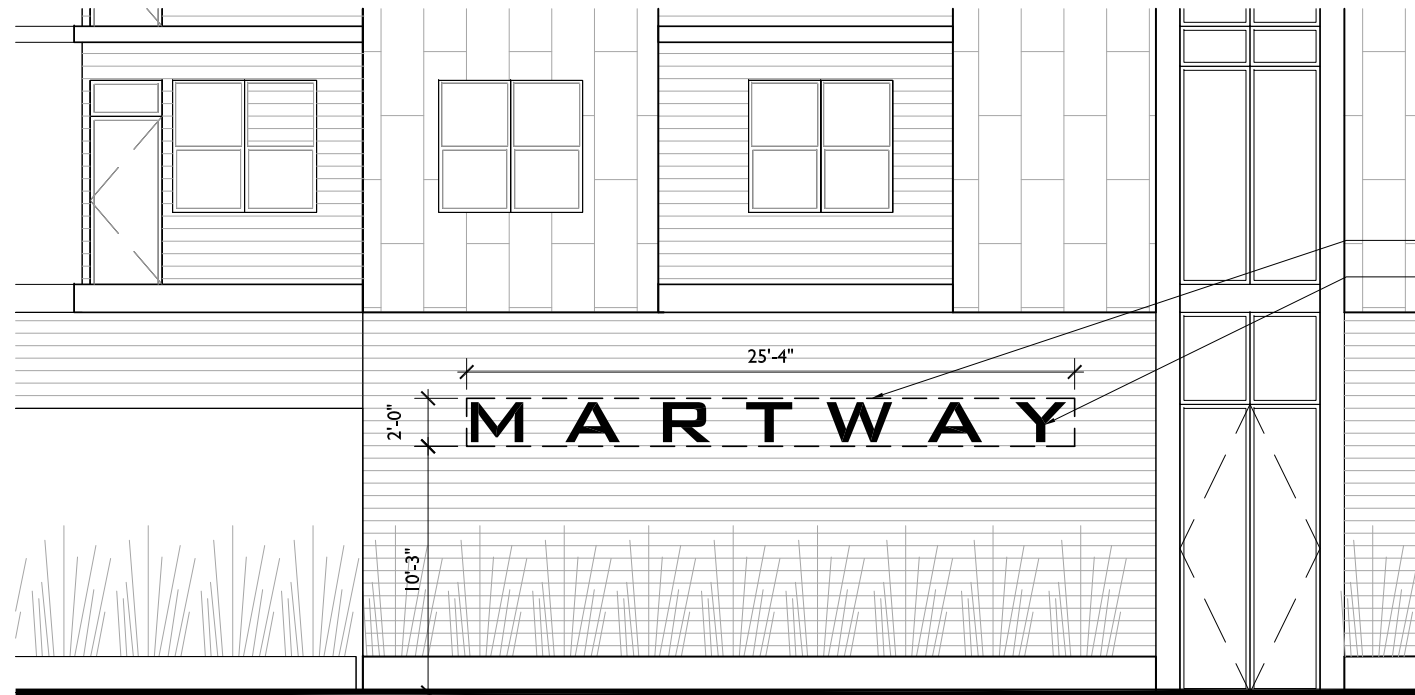
6009 - 6045 Martway
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16.05.Martway

A202

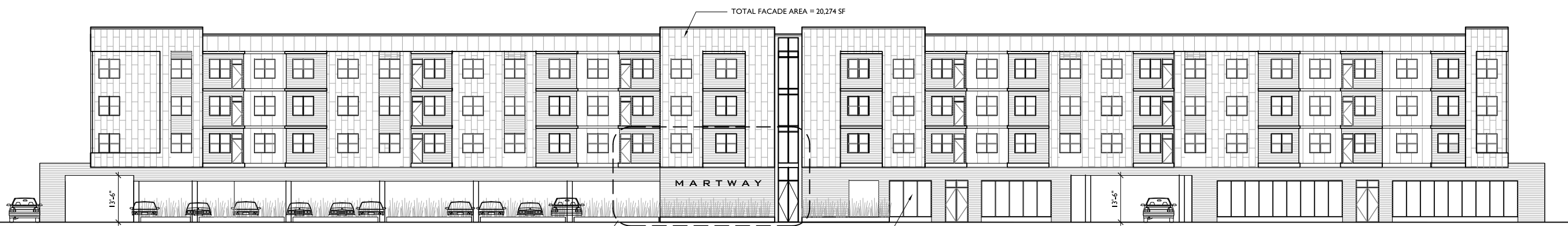
EXTERIOR VIEWS



TOTAL SIGN AREA = 50.66 SF (.0025% OF TOTAL FACADE AREA)
 PIN MOUNTED STAINLESS STEEL LETTERS
 BACKLIT WITH WHITE LED TAPE LIGHT

- SIGNAGE GENERAL NOTES:**
- SIGNAGE TO COMPLY WITH MISSION KS DESIGN GUIDELINES AND SIGNAGE CRITERIA - SECTION 430.090 'SIGNS PERMITTED IN COMMERCIAL AND INDUSTRIAL DISTRICTS' AND SECTION 430.120 'PRIVATE SIGN CRITERIA'.
 - FOR ANY ADDITIONAL SIGNAGE PROVIDED AT COMMERCIAL TENANT SPACES AS REQUIRED, PROVIDE COMPLIANT SIGNAGE IN ACCORDANCE WITH ABOVE SECTIONS, WITH TOTAL SIGNAGE AREA TO BE LESS THAN OR EQUAL TO 10% TOTAL FACADE AREA.

02 | Enlarged Signage Elevation
 Scale 1/8" = 1'-0"



GLAZING & OPENNESS AREA CALCULATION
 TOTAL GLAZING & OPENNESS AREA @ FIRST FLOOR = 3,762 SF
 TOTAL FACADE AREA @ FIRST FLOOR = 6,861 SF
 TOTAL PERCENTAGE OF GLAZING AND OPENNESS = 55%

01 | North Elevation
 Scale 1/32" = 1'-0"

1421 E. 104th Street
Ste 100
Kansas City, Missouri 64131
(816) 333-4477 Office
(816) 333-6688 Fax

cfse.com

Other Offices:
Kansas City, Kansas
Lawrence, Kansas
Holton, Kansas
Topeka, Kansas
Wichita, Kansas
Branson, Missouri
Springfield, Missouri
Jefferson City, Missouri

September 15th, 2017

Danielle L. Sitzman, AICP
City Planner
City of Mission
6090 Woodson St.
Mission, KS 66202
Ph. 913.676.8363
email:dsitzman@missionks.org

RE: Maryway Mixed Use/Mission Trails Final Preliminary Plan Case #17-08-Staff
Review Comments

Dear Danielle;

In regards to the cities August 8th and August 9th, 2017 review comments we are resubmitting revised plans, and we offer the following responses:

Engineering Review Comments

Floodplain Comments

1. Compensatory volume for any fill within the 100 year floodplain must be provided. Please show fill areas and location for compensatory volume.

An exhibit has been added to the Drainage Memo showing the fill areas and the locations of compensatory volume.

2. Provide the maximum 100 year floodplain depth in the parking lot. 7" depth is the maximum allowed.

The 100 year floodplain limits over parking lot have been shown on Sheet C-203, Proposed Floodplain Plan. The parking lot has been graded such that no parking stall would pond over 7" based on the FEMA floodplain depths.

3. Show that the 1st floor retail is 2' above the 100 year floodplain.

The finished floor elevations have been shown, and are 2' or more above the FEMA 100yr floodplain elevations.

Board of Directors:
Kenneth M. Blair, P.E.
Robert S. Chambers, P.E.
Kevin K. Holland, P.E.
Daniel W. Holloway, P.E.
Charles C. LePage, P.E.
Lance W. Scott, P.E.
Sabin A. Yañez, P.E.

Associates:
Aaron J. Gaspers, P.E.
Michael J. Morrissey, P.E.
Gene E. Petersen, P.E.
Todd R. Polk, P.E.
William J. Stafford, P.E.
Richard A. Walker, P.E.
Lucas W. Williams, P.E.

Drainage Memo Comments

1. State that the additional impervious area is under 5,000 square feet as required by APWA 5600.

The Drainage Memo has been updated to address the 3418 sqft of additional impervious area from the proposed development.

2. Provide an exhibit or multiple exhibits that show the existing and proposed development, existing and proposed drainage boundaries and floodplain lines.

An exhibit has been added to the drainage memo.

Preliminary Development Plans

All Sheets/General Comments

1. Delineate building footprint with a darker line type as it's difficult to discern from parking lot.

The building footprint line type has been revised.

2. Show and label all columns, elevators and general site features.

All columns, elevators and general site features have been added to the site plans.

3. Provide a turning template for service and emergency vehicles as required within the site.

Fire truck access requirements were coordinated with the Fire Marshal of CFD#2 and that their largest truck is 44' from bumper to bumper and 48' from front bumper to back of basket, with a turning radius of 42' wall-to-wall, outside diameter, which is reflected on the plans.

C100/101

1. State ADA van and regular stalls provided in parking chart.

The number of regular and van ADA spaces has been added to the parking chart.

2. Confirm with city that variances requested are acceptable

Noted.

3. Show striping or linework to indicate vehicle circulation within parking area. There is a concern with vehicle flow within parking lot.

Circulation arrows have been added to the site plan.

4. Match legend to linework for floodplain limits hatch.

The legend for the floodplain limits has been updated.

5. Show internal pedestrian path for ADA route.

The internal pedestrian path for the ADA route has been added to the site plans.

6. The parking spaces along the east side of the property are directly adjacent to the driveway. Provide an adequate throat length (50' min.) to allow for vehicle queuing and reduce potential conflict when vehicles enter/exit the property via that drive and enter/exit parking spaces.

The parking layout has been revised to provide a 40' throat length to match the island adjacent to the easterly parking spaces.

7. In SW quadrant of parking lot, it appears that the two parking spaces (one is oriented N/S, the other E/W) would be in conflict with one another, specifically when the N/S vehicle tries to exit. Please resolve.

The parking layout has been revised to alleviate this conflict.

C200

1. Confirm retaining walls are not needed. If needed, show and state height of walls.

No retaining walls are required for this project.

Traffic Study Comments

The following comments are in reference to the Traffic Impact Analysis submitted by Cook, Flatt & Strobel Engineers, P.A., dated July 6, 2017, for the Martway Mixed Use Development Project.

1. Page 4 of report: Confirm posted speed limit along Johnson Drive (30 mph or 25 mph).

Eastbound Johnson Drive west of Beverly posted at 30 mph. Report revised.

2. Neither proposed drive provides alignment with the existing street network or existing access points. Recommend alignment of new drives at intersections (Beverly Avenue and Dearborn Street) to limit offset intersections and decrease the introduction of new conflict points along this segment of roadway.

- a. West Drive – Recommend alignment of the proposed west drive with Beverly Avenue. Intersection analysis sheets provided in the report indicate drive is aligned at the intersection, but the site plan illustrates an offset drive.

The west entrance driveway was shifted east to align with Beverly Avenue.

- b. East Drive – Based on the submitted site plan, it appears that the east drive cannot be aligned with Dearborn Street due to existing property lines. Recommend alignment of the drive with an existing access along the north side of Martway Street. Current drive alignment presents an offset intersection from Dearborn Street as well as existing access points along the north side of Martway Street. The provided intersection analysis sheets illustrate that analysis was conducted with the drive aligned at the intersection.

The east drive lane will be constructed close to its current location, offsetting Dearborn Street by approximately 35 ft, as it has been for the past forty or so years. If the eastern entrance is required to be shifted slightly to the west, we would anticipate minimal changes to the traffic or safety characteristics of the intersections. Also, turning radius for emergency vehicles would be impacted and could result in the loss of parking spaces due to inefficiencies in the layout. The Synchro models of the existing and proposed site conditions were revisited to include offset-links for both of the driveways.

3. Trip Generation:

- a. Daily trip generation is not provided.

The traffic study scope received on May 23, 2017, only called for AM and PM peak hour traffic counts, however, the daily trip generation has been included.

- b. Trip generation for the retail portion of the site (3,530 sf of retail space) was conducted using a shopping center land use. Based on the size of retail proposed with this development, the specialty retail land use may be more appropriate for this site. Recommend conducting analysis and revising report as necessary.
 - i. Page 8 of the report references a retail square footage of 3,254 sf in the trip generation paragraph and 3,530 sf in the trip generation table. Revise report as necessary for correct building square footage.

The trip generation calculations and report were revised to the updated 3,491 sqft building area, and changed from Specialty Retail (ITE Code 826) to General Office (ITE Code 710).

- c. Trip generation calculations were conducted using the average rate. For the majority of the land uses there is an adequate sample size and the R^2 value is greater than 0.75, thus use of the provided trip generation equation should be considered.

Both trip generation equations and the average rates were examined and higher values used in the traffic models.

4. Operational Analysis:

- a. Unsignalized intersection analysis was conducted with the proposed drives aligning with Dearborn/Beverly. The site plan indicates that these drives are offset. See comment 2 regarding access location recommendations. However, analysis should be conducted to be consistent with the proposed site plan. Analysis indicates a southbound right-turn movement at the intersection of Martway and Beverly associated with proposed traffic. For analysis considering alignment of the intersections, as illustrated on the provided files in the appendix, there should be no additional trips assigned to the southbound right-turn movement.

The southbound right-turn movements have been eliminated.

- b. It appears that analysis was conducted adding the proposed development trips to the existing volumes. The analysis should take into account the removal of trips associated with the existing development (proposed to be removed). I.e: trips entering and exiting the site should match the trip generation conducted (AM: 27 enter/62 exit, PM: 70 enter, 47 exit).

The small amount of traffic from the existing site has been removed from the traffic volumes.

5. Parking:

- a. Report states a portion of the provided parking spaces may have 6-8" of overbank water with the 100-year flood, but does not state how many spaces may be impacted. Please address also in Drainage Memo above.

Both the traffic study and the drainage memo has been updated to address parking lot ponding. The 100 year floodplain limits over parking lot have been shown on Sheet C-203, Proposed Floodplain Plan. The parking lot has been graded such that no parking stall would pond over 7" based on the FEMA floodplain depths.

- b. Report indicates 210 parking spaces are required but the development only provides 175 spaces. Report indicates an additional 35 spots will be leased off site.

Parking on the revised site has been reduced to 166 spaces and an additional 44 spaces will need to be leased off of the site. The traffic report has been updated to reflect this change.

6. Update report to include intersection figures for traffic volumes (existing, proposed trips, and existing plus proposed), trip distribution and level of service. This will allow for a more expedient review and is consistent with industry standard.

Added schematic traffic volume figures including: Existing Traffic with incoming & outgoing directional percentages, Site-Generated Traffic, and Total Combined Traffic.

7. Provide a flash drive with all electronic files including Synchro.

Planning Review Comments

Plat Comments

1. Re-platting of the property will be required prior to the issuance of building permits. Right-of-way must be dedicated to include all of the Rock Creek Trail, public sidewalks, and public infrastructure including stormwater facilities. A final plat may be submitted with the final site plan.

Noted.

Site Comments

2. Please explain the purpose for each of the deviations requested and how they meet the objectives and standards of the planned district regulations (Section 405.070)

Deviation 1- On site parking requirements reduction- Residential Use and Office Use are highly compatible uses due to the peak demand being offset between day and night use. Large empty parking lots is not the highest and best in a vibrant walkable neighborhood of Mission, so are intent is not to continue this trend. We anticipate that the 14 parking spaces for the business use will easily be handled on site due to this peak day/night offset. An expected operational vacancy for the residential use is 5% which reduces the actual parking demand from 196 to 186 required spaces. This results in a likely scenario of leasing approximately 10 parking spaces off-site.

The existing adjacent privately owned parking lots totaling over 200 parking spaces, are highly underutilized during day use and largely vacant for night use. We have reached out to several of the property owners and they are agreeable to leasing their surplus spaces for residential use, if needed.

Deviation 2- Rear yard setback reduction- The proposed building and parking footprint have been designed to maximize the potential of the site. The Rock Creek channel that runs along the rear of the entire property provides a natural landscape buffer of over 30' that exceeds the setback requirement. Additionally the City Park provides an additional buffer of approximately 300'.

Deviation 3- Maximum building height increase- The Martway Mixed Use project has been designed to accommodate a total unit count that will make the project financially sustainable. As such, the proposed residential unit count, coupled with the site's unique shape have resulted in the proposed design's footprint and overall building height. As illustrated in the composite views, Architectural detailing at the podium level, and the existing tree canopy to the south, and the 300' naturally landscaped City Park will effectively reduce the buildings height. The floodplain has required the building to be built on a podium structure. The fire department access to the rear of the building has dictated the height of the first floor podium elevation. The proposed structure is consistent with the surrounding precedents, the Mission Square building is approximately 56' above grade at its high point and the recently approved Mission Trails project is approximately 63' above grade at its high point. Due to the sloping topography, these projects sit 10' -20' higher than the the Martway site effectively making the proposed structure the lowest of the three

developments in elevation.

Deviation 4- Minimum lot area per multi-family increase- The Martway Mixed Use project has been designed in response to current marketplace trends for increased density as well as developmental targets to make the project an economically sustainable project. To continue developing a vibrant walk-able neighborhood and support the existing business along Johnson Drive additional density is required.

Deviation 5- Parking lot setback reduction- The proposed parking lot is designed to maximize the on-site parking potential to accommodate the residential and commercial parking requirements. The standard 6' dimension is typically related to incompatible uses and we don't want to create an awkward condition between the 2 parking lots (existing and new) at the west property line. Also, the proposed building massing design exceeds the setback requirements to provide more openness between the adjacent property owners to the east and west. As the site design continues to develop, we will look for opportunities to create landscape buffers where feasible and we will submit a proposed solution with final development plan if required. We can also evaluate compact parking dimensions and site optimization as the planning process moves forward in an effort to reduce the overall parking lot width. Please note that the 6' setback at the east property line is compliant. We are seeking this deviation at the west property line only.

Deviation 6- Minimum green space buffer reduction- The proposed parking lot is designed to maximize the on-site parking potential to accommodate the residential and commercial parking requirements. See above response for deviation request #5.

Deviation 7- Interior parking lot tree requirement- In lieu of a large open surface parking lot or multi-level parking deck, the proposed parking has intentionally been placed under the building's footprint to reduce its visual impact to the surrounding areas. As such, tree growth will not be possible. The Rock Creek channel creates a natural landscape buffer that exceeds the requirement.

Deviation 8- Parking lot interior open space requirement- The proposed parking lot is designed to maximize the on-site parking potential to accommodate the residential and commercial parking requirements. The majority of the parking is covered by the building above (so this requirement is more applicable to open suburban surface lots). As the site design continues to develop, we will look for opportunities to create landscape buffers where feasible and we will submit a proposed solution with final development plan if required.

3. Please provide any additional studies or data regarding the anticipated parking demand for this use. These may be counts or observations made at other similar projects for the number of vehicles per dwelling unit. A deviation for the number of required parking stalls may be considered. Staff would prefer this to deviations in parking lot design especially along the west and east property boundaries.

Based on past experience with mixed use projects located cities of Olathe, Overland Park and KCMO, it is not recommended to deviate from the 210 space parking requirement. As mentioned in our deviation request #1 response for onsite parking reduction, we anticipate that the 14 parking spaces for the business use will easily be handled on site due to this peak day/night offset. An expected operational vacancy for the residential use is 5% which reduces the actual parking demand from 196 to

186 required spaces. This results in a likely scenario of leasing approximately 10 parking spaces off-site. We do not foresee any further reduction in the anticipated parking demand.

4. The tree species shown for shade trees must comply with the City's approved list of street trees per Section 240.070. Please substitute another compliant species.

The landscape plan has been updated to show compliant species.

5. Automatic irrigation of the streetscape trees is required.

A note has been added to the landscape plan.

6. Leave sufficient room for the required streetscape elements. A minimum of 15' feet from back of curb to building is suggested. Sidewalks along Martway Street are part of the Rock Creek Trail system and must maintain a 10' wide clear path. See the previous platting comment. A five foot tree planting zone is preferred.

The plan has been revised to show a 5' planting zone, and a 8' trail with a 10' wide clear path.

7. Please show the pedestrian crosswalk locations along Martway Street and how they relate to the proposed building. Details of pedestrian circulation/access to the building on the site will need to be shown with final site plan drawings.

Existing and proposed pedestrian crosswalks have been added to the site plan.

8. The establishment of a private sign criteria to serve as the adopted sign code for this development is suggested. The criteria must be approved by the Planning Commission as part of the final site plan (Section 430.120). Staff recommends organizing the sign criteria by building area or use and including an analysis of how the proposed criteria is similar to the City Sign Ordinance. Objective criteria for signs such as type, area, height, number, illumination should to be provided in a separate document at that time. Signs are not approved as part of the site plan review process and individual sign permits must be issued before installation.

Clockwork is handling this comment.

9. Stories beyond the second story must incorporate a minimum 8' step back from the front facade of lower stories to meet the Johnson Drive Design Guidelines. Please keep this in mind for final site plan review.

Clockwork is handling this comment.

10. The primary facades of the parking structure along Martway Street should reflect similar materials and building quality as the main building. The Johnson Drive Design Guidelines require first floor buildings along Martway Street to incorporate glazing into at least 75% of the facade.

Clockwork is handling this comment.

11. Vehicles inside the parking structure must be screened so as to be obscured from view from the street. Additional screening treatment may be required.

The landscape plan has been revised to show screening between the parking structure and Martway.

12. Please provide additional perspective views of the building from the surrounding neighborhoods to the north and south so the impact to public health, safety, morals, order, convenience, prosperity or general welfare can be evaluated as part of the height deviation review.

Clockwork is handling this comment.

13. Indicate which area of the parking field will be designated for resident use or business use.

Business use and resident use spaces have been indicated on the site plans.

14. Surface parking stalls along the Rock Creek Trail must be screening with hardscape and plantings or an equivalent evergreen landscape a minimum of 3' in height.

The landscape plan has been revised to show screening between the parking structure and Martway.

15. The Johnson Drive Design Guidelines encourage hard surfaced exterior materials that do not artificially simulate other materials. Please explain how Nichiha fiber cement board panels as proposed accomplish this.

Clockwork is handling this comment.

16. Windows along the ground floor along Martway Street should be elevated above the sidewalks by 18-24". Bulkheads should be constructed out of sturdy materials

Clockwork is handling this comment.

17. A floodplain development permit will be required per Section 460. Please explain how the proposed design will meet these standards.

A floodplain permit will be filed based on city standards.



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To: Danielle L. Sitzman, AICP
City Planner
City of Mission
6090 Woodson St.
Mission, KS 66202
Ph. 913.673.8363
Email: dsitzman@missionks.org

Date: September 15, 2017

From: Todd Howard
Clockwork Architecture & Design
423 Delaware, #102
Kansas City, MO 64133

Project: Martway Mixed Use

RE: Responses to Preliminary Planning Review Comments

Comment # & Response

Plat Comments:

- 1) Re-platting of the property will be required prior to the issuance of building permits. Right-of-way must be dedicated to include all of the Rock Creek Trail, public sidewalks, and public infrastructure including stormwater facilities. A final plat may be submitted with the final site plan.

Acknowledged.

Site Comments:

- 2) Please explain the purpose for each of the deviations requested and how they meet the objectives and standards of the planned district regulations (Section 405.070

Refer to attached responses prepared by CFS Engineers.

- 3) Please provide any additional studies or data regarding the anticipated parking demand for this use. These may be counts or observations made at other similar projects for the number of vehicles per dwelling unit. A deviation for the number of required parking stalls may be considered. Staff would prefer this to deviations in parking lot design especially along the west and east property boundaries.

Refer to attached responses prepared by CFS Engineers.

- 4) The tree species shown for shade trees must comply with the City's approved list of street trees per Section 240.070. Please substitute another compliant species.

Refer to attached responses prepared by CFS Engineers.

- 5) Automatic irrigation of the streetscape trees is required.

Refer to attached responses prepared by CFS Engineers.



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- 6) Leave sufficient room for the required streetscape elements. A minimum of 15' feet from back of curb to building is suggested. Sidewalks along Martway Street are part of the Rock Creek Trail system and must maintain a 10' wide clear path. See the previous platting comment. A five foot tree planting zone is preferred.

Refer to attached responses prepared by CFS Engineers.

- 7) Please show the pedestrian crosswalk locations along Martway Street and how they relate to the proposed building. Details of pedestrian circulation/access to the building on the site will need to be shown with final site plan drawings.

Refer to attached responses prepared by CFS Engineers.

- 8) The establishment of a private sign criteria to serve as the adopted sign code for this development is suggested. The criteria must be approved by the Planning Commission as part of the final site plan (Section 430.120). Staff recommends organizing the sign criteria by building area or use and including an analysis of how the proposed criteria is similar to the City Sign Ordinance. Objective criteria for signs such as type, area, height, number, illumination should to be provided in a separate document at that time. Signs are not approved as part of the site plan review process and individual sign permits must be issued before installation.

Refer to new Signage Details 11"x17" sheet. The signage criteria has been organized by building area and includes objective criteria for sign type, area, height, number and illumination. All building signage shall comply with Mission design guidelines and section 430.120 'Private Sign Criteria'.

- 9) Stories beyond the second story must incorporate a minimum 8' step back from the front facade of lower stories to meet the Johnson Drive Design Guidelines. Please keep this in mind for final site plan review.

Acknowledged. We understand that this guideline relates to the historical buildings along Johnson Drive to respect the scale of the existing single story buildings and provide setback relief from the street to simulate the vernacular of a historical downtown main street. Given that this project is not directly on Johnson Drive and the existing adjacent and surround buildings do not provide an 8' step back from their front façade of the lower stories, the current design aligns with the existing context and fabric on Martway Street. An 8' setback at the second floor and above would result in the loss of 14 units per floor or 56 total units for floors 2-5 parallel to Martway street. A redesign to push the building further back into the site would conflict with alleviating building massing concerns for the residents directly behind the project along 61st Street.



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- 10) The primary facades of the parking structure along Martway Street should reflect similar materials and building quality as the main building. The Johnson Drive Design Guidelines require first floor buildings along Martway Street to incorporate glazing into at least 75% of the facade.

The primary façade of the parking structure does reflect similar materials and building quality of the main building. The Nichiha wood wall panel is used as an accent on the main building at the back wall of all balcony insets and between windows. Per the Mission Design Guidelines, lower levels of buildings should be differentiated architecturally from upper levels, which is reflected in the current design.

Regarding glazing and openness area at the first floor, calculations have been provided on the elevations showing the overall area of the first floor façade (6,861 sf) and the area and percentage of glazing and openness (3,762 sf) (55%). Refer to A200.

Please note that glazing area was reduced 170 sf (5%) to provide an 18” bulkhead per planning comment #16.

- 11) Vehicles inside the parking structure must be screened so as to be obscured from view from the street. Additional screening treatment may be required.

Refer to attached responses prepared by CFS Engineers.

- 12) Please provide additional perspective views of the building from the surrounding neighborhoods to the north and south so the impact to public health, safety, morals, order, convenience, prosperity or general welfare can be evaluated as part of the height deviation review.

Three additional photomontage/composite views have been added. Refer to A202.

- 13) Indicate which area of the parking field will be designated for resident use or business use.

Refer to attached responses prepared by CFS Engineers.

- 14) Surface parking stalls along the Rock Creek Trail must be screening with hardscape and plantings or an equivalent evergreen landscape a minimum of 3’ in height.

Refer to attached responses prepared by CFS Engineers.



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- 15) The Johnson Drive Design Guidelines encourage hard surfaced exterior materials that do not artificially simulate other materials. Please explain how Nichiha fiber cement board panels as proposed accomplish this.

Nichiha fiber cement board panels are a hard surface exterior material. Only one of the three panel types that have been specified simulate another material, wood. When compared to wood, the Nichiha fiber cement panel is more durable, requires less maintenance, has better color stability, is resistant to delamination, resists warping, rotting and pests, has a fire rating and is a higher end product when compared to the cost of wood. The Nichiha fiber cement panel carries a 15 year warranty, which cannot be provided with true wood. Please see attached Nichiha vs wood comparison chart.

- 16) Windows along the ground floor along Martway Street should be elevated above the sidewalks by 18-24". Bulkheads should be constructed out of sturdy materials.

An 18" tall bulkhead has been added to base of the ground floor windows along Martway. Refer to A200.


- 17) A floodplain development permit will be required per Section 460. Please explain how the proposed design will meet these standards.

Acknowledged. A floodplain permit will be filed based on city standards.

WOOD CLADDING COMPARISON CHART

See how Nichiha's Wood Series Architectural Wall Panels stack up against the competition...



	NATURAL WOOD	PARKLEX FACADE	 NICHIBA fiber cement <i>the power of possibilities™</i>	LONGBOARD	RESYSTA
Wood Texture	✓		✓		✓
Color Stability		✓	✓	✓	✓
Exclusive manufacturer of wall cladding			✓	✓	
Integrated Rainscreen		✓	✓	✓	
Easy Installation	✓		✓	✓	✓
Fire Rating		✓	✓	✓	
Resistant to warping rotting and pests		✓	✓	✓	✓
50-year or more limited lifetime warranty			✓	✓	
Resistant to delamination			✓	✓	✓
Budget friendly	✓		✓		✓



Safety Data Sheet (SDS)

[1. PRODUCT AND COMPANY IDENTIFICATION]

PRODUCT NAME	Nichiha NichiProducts: NichiBoard, NichiPanel, NichiShake, NichiStaggered, NichiStraight, NichiSoffit, NichiTrim, NichiFrontier
MANUFACTURER	Nichiha USA, Inc.
ADDRESS	3150 Avondale Mill Road, Macon, GA 31216
HEADQUARTERS ADDRESS	6565 East Johns Crossing, Johns Creek, GA 30097
PHONE	866-424-4421
DATE PREPARED	June 2015

[2. SUMMARY OF HAZARDOUSNESS/HARMFULNESS]

GHS classification

Health harmfulness

- Skin corrosivity/irritation: Classification 1
- Serious eye damage/eye irritation: Classification 1
- Carcinogenicity: Classification 1A
- Specific target organ toxicity (single exposure): Classification 1 (respiratory system)
- Specific target organ toxicity (repeated exposures): Classification 1 (respiratory system, kidney)

GHS label element(s)

Symbols



Signal Word: DANGER

Hazard Statements

- Serious chemical damage to skin
- Serious eye damage
- Carcinogenicity
- May damage the respiratory system if inhaled.
- May damage the respiratory system or kidneys through long-term or repeated exposures.

Safety Measures

- Wash your hands and face thoroughly after handling the product.
- Wear protective gloves, clothes, goggles and mask.
- Do not inhale powder dust.
- Do not eat, drink or smoke while using this product.

First-aid Measures

- Inhalation: Move the victim to a place with fresh air and rest patient in the posture comfortable for breathing.
- Skin contact: Immediately take off/remove all contaminated clothes. Wash the skin under running water.
- Eye contact: Rinse the eye with water carefully for a few minutes. Next, if contact lenses are worn, remove them if easy to remove. Continue washing the eye with water. Immediately seek medical advice/attention.
- When ingested: Wash the mouth. Do not induce vomiting.
- When reusing the contaminated clothes: Wash them prior to use.
- Seek medical attention if you were exposed or feel sick.

Disposal

- Follow applicable local, state, and federal construction waste management requirements. Prevent potential dust exposure for others.

[3. COMPONENT/INFORMATION ON INGREDIENTS]

Classification of single product or mixture: Mixture

Ingredients: Cement, silicate material, organic fiber, additives

NAME	CAS#	%content
Crystalline silica	14808-60-7	0 ~ 10
Calcium silicate	1344-95-2	30 ~ 60
Cellulose	9004-34-6	5 ~ 10
Mica	12001-26-2	3 ~ 5

- The product does not contain asbestos.
- The product does not contain formaldehydes.

[4. FIRST AID]

Eye contact: Immediately wash the eye for at least 15 minutes using clean water and then seek attention of a doctor.

Skin contact: Immediately wash the skin thoroughly with soap and water. Seek medical attention as needed if irritation develops or persists.

Inhalation: Immediately move to a place with fresh air away from dust, gargle with water, and seek medical attention as needed.

Ingestion: Wash the inside of the mouth thoroughly with water and seek medical attention. If the victim is groggy or unconscious, do not induce vomiting, but seek medical attention without delay.

When exposed or potentially exposed to silica dust: Seek medical attention/treatment as necessary.

[5. MEASURES TAKEN IN CASE OF FIRE]

Flammability of the product: Non-combustible when tested under ASTM E136.

Extinguishing method: Cut off the combustion path to the source of fire and extinguish the fire using water and fire-extinguishing medium. Fight the fire from the upwind side and wear respiratory protection gear if necessary.

Fire-extinguishing media: Water, powder, carbonic acid gas, foam

[6. MEASURES TAKEN IN CASE OF LEAK]

The product is normally in a solid sheet-shaped state, so no special measures are needed.

[7. HANDLING AND STORAGE PRECAUTIONS]

Handling:

- Wear protective gloves (work gloves, etc.) when handling the product.
- Provide local exhaust measures when cutting the material and use cutting equipment with anti-dust function. Also wear proper protective equipment (anti-dust mask, protective goggles, etc.) so as not to inhale powder dust or let it enter the eyes.
- Clean dust with HEPA filter equipped vacuum. Do not dry sweep or use compressed air.
- Do not wet the product.
- Rinse face, hands, mouth, etc., with water after handling the product.

Storage: Store the product away from water.

[8. MEASURES FOR PREVENTION OF EXPOSURE]

See below if powder or dust is generated from cutting or otherwise processing the product.

Japan Society for Occupational Health (2014)

Inhalant crystalline silica	0.03 mg/m ³ (TWA)
Inhalant powder dust	1 mg/m ³ (TWA)
Total powder dust	4 mg/m ³ (TWA)

ACGIH TLV (2006):	
Crystalline silica	0.025 mg/m ³ (TWA)
Inhalant powder dust	3 mg/m ³ (TWA)
Total powder dust	10 mg/m ³ (TWA)

OSHA PEL (2015) (Refer to 29 CFR 1910 Table Z-3 regarding mineral dusts):

Crystalline silica (Quartz) (Action Level)	25 µg/m ³ (TWA)
(Permissible Exposure Limit [PEL])	50 µg/m ³ (TWA)
Calcium Silicate	(Respirable Fraction) 5 mg/m ³ (TWA)
	(Total) 15 mg/m ³ (TWA)
Cellulose	(Respirable Fraction) 5 mg/m ³ (TWA)
	(Total) 15 mg/m ³ (TWA)
NIOSH REL (2015)	
Mica	(Respirable Fraction) 3 mg/m ³ (TWA)

Facility/Engineering Measures: Cut the product outdoors or in a well-ventilated place using a saw with fiber cement saw blades and dust-collecting function. When handling the product indoors, provide a ventilation system, etc., to keep the concentration of airborne dust to the controlled level or below or cut using fiber cement shears.

Personal Protective Equipment:

Eyes:	Anti-dust goggles compliant with ANSI Z87.1.
Hands:	Protective work gloves, regularly washed.
Respiratory:	Use a properly-fitted N, O, or P 100 respirator when cutting or otherwise abrading product.
Skin:	Select personal protective equipment for the body based on the task being performed. Pants, long-sleeve shirts recommended to prevent skin from dust exposure.

[9. PHYSICAL AND CHEMICAL PROPERTIES]

Appearance:	Sheet shaped
Bulk specific gravity:	1.2 ± 0.2
Solubility:	Insoluble in water

[10. STABILITY AND REACTIVITY INFORMATION]

Stability/Reactivity:	Stable
Hazardous/harmful reaction potential:	Not applicable
Hazardous/harmful decomposition products:	Not applicable

[11. INFORMATION ON TOXICOLOGY/HARMFULNESS]

Acute toxicity: No data is available.

Skin corrosivity/irritation and serious damage/irritation to eye:

- If product comes into contact with water, it may exhibit strong alkalinity (pH12 to 13) and cause irritation to the eye, nose and skin as well as inflammation to the cornea, tissues inside the nose, and skin.

Respiratory organ sensitization or skin sensitization:

- The cement contains a trace amount of chromium compound and may cause allergic reaction in people sensitive to hexavalent chromium.

Carcinogenicity: No data is available.

- The product is classified under carcinogenicity classification 1A because it contains crystalline silica.

Reproductive cell mutagenicity: No data is available.

Reproductive toxicity: No data is available.

Specific target toxicity (single exposure): No data is available.

- The product is classified as specific target toxicity (single exposure) classification 1 (respiratory system) because it contains crystalline silica that is classified as having specific target toxicity (single exposure).

Specific target toxicity (repeated exposures): The product may cause pneumoconiosis if inhaled in large quantities over a long period of time.

- The product is classified as specific target toxicity (repeated exposures) classification 1 (respiratory system) because it contains crystalline silica that is classified as having specific target toxicity (repeated exposures).

[12. INFORMATION ON ENVIRONMENTAL IMPACT]

Environmental impact/bio-toxicity

- Exercise caution to prevent negative environmental impact, water may exhibit strong alkalinity (pH12 to 13) with prolonged exposure.

[13. PRECAUTIONS ON DISPOSAL]

Follow all local, state, and federal regulations with respect to construction waste material disposal. When cleaning up dust, never dry sweep. Wet the dust prior to sweeping or use a HEPA vacuum. Take measures to prevent potential dust exposure to others.

[14. PRECAUTIONS ON TRANSPORT]

Information on codes and classifications under international regulations: Not applicable

Specific safety measures and conditions for transport:

- Prevent collapse of cargo, etc., without fail.
- Pay attention to prevent wetting.

[15. REGULATORY INFORMATION]

United States inventory (TSCA) listed items: Quartz – Crystalline Silica (14808-60-7), Calcium Silicate (1344-95-2).

SARA 302/303: No Extremely Hazardous Substances.

SARA 311/312:

	<u>Acute</u>	<u>Chronic</u>	<u>Fire</u>	<u>Pressure</u>	<u>Reactive</u>
Crystalline Silica (Quartz)	yes	yes	no	no	no

[16. OTHER INFORMATION]

Cited Literatures

- JIS Z 7253: 2012 (Japan)
- Health, Labour and Welfare Ministry's Workplace Safety Site, Information on GHS-compliant Model Labeling/Model SDS (Japan)

This data sheet has been prepared based on documents, information and data currently available, but the contents, physical/chemical properties, hazardousness information and other values are not guaranteed. Also note that the cautionary instructions assume normal handling, and if the product will be handled in any special manner, implement safety measures appropriate for the specific application/method of use.

November 20, 2017

christian@clockwork-ad.com

423 delaware \ suite 102 \ \ kansas city \ \ mo \ \ 64105

At the September 25th Planning Commission Meeting we listened to the residents along 61st street that voiced concerns regarding the development.

To address the concerns, the revised submission has removed one entire floor of the building. This reduction in height also reduces the need for any off-site parking.

Over the last 2 months, we've received encouragement from residents and business owners who are excited to see the continued improvements in the City of Mission.

If any additional concerns or questions arise, please reach out so that they may be answered.

Regards,



Christian Arnold
Principal

Questions raised at the 9/25 Meeting, with comments added related to the proposed revision.

1) Does the developer own the property?

Yes.

2) What are the size of the apartments? Are washers and dryers included? Does each unit have it's own AC/Furnace? Does each unit have its own balcony?

Studio units are 504sf, one bedrooms range from 644sf to 720sf and 2 bedrooms range from 1,104sf to 1,144sf. Yes, each unit has its own AC and furnace unit. Yes, each unit has its own balcony except for the studio units.

3) Will there be a maintenance man/property manager on site at all times?

The original development had 156 units and would have dedicated staff. The current proposal has 117 units so it would not financially support dedicated staff.

4) Is Rock Creek being altered? Will there be any additional flood impacts/concerns?

No, Rock Creek is not being altered. No, there will not be any additional flood impacts.

5) How much larger will power poles and utilities need to be to supply the building? Can the utilities be buried?

There are currently (3) incoming power locations to service each of the existing buildings. This will be reduced to (1) to provide power to the new building. The power poles will not be any larger than existing. Power service from the transformer to the building will be buried and concealed.

6) Where is the trash located at?

The trash dumpster enclosure is currently shown on the site plan in the southwest corner of the site. The trash dumpsters will be screened with a privacy walls.

7) Did the design team look at the feasibility of a shorter building? Is there compromise for the building height? Can the footprint be widened to reduce a story?

Due to the existing floodway limits and the requirements of the City of Mission, the buildings first floor must be lifted above the floodway. The fire department clearance requirements establish the first floor height. The current proposal has removed a floor from the proposed building design. The building is now 3 stories of residential construction on top of parking and commercial space.

8) Are there any amenities for the development? We are concerned that other people will use the tennis courts and park and it could get too busy.

Since it is a public park, residents will be able to enjoy it. Internal amenities are still being considered and developed. The building is programmed with multiple flex spaces that could be utilized with a fitness facility and multipurpose rooms for community gatherings.

9) Has the design team considered the building's aesthetics? Concerns that the building does not reflect mission style architecture.

Yes, the design team has considered the building's aesthetics. The City's guidelines have been adhered to and there is no requirement for mission style architecture. The building aesthetics appeal to the targeted demographic and is designed to relate to the adjacent vernacular established by the existing neighboring buildings along Martway that have a mid-century modern aesthetic that Mission is known for.

10) Where are the local jobs to provide for the new housing?

The demand for housing is gauged by Occupancy rates and Mission is a desirable place to live.

11) If additional parking is needed off site, why wouldn't the development team scale the project back?

The original proposal utilized the adjacent empty surface lots, the current proposal does not require off-site parking.

12) Will there be any public parking on site?

On site parking is for residence only. 14 parking spaces are provided to serve the grade level business.

13) How do the traffic engineers not see an increase in traffic?

Martway is engineered to handle more traffic than currently exists. The traffic study took traffic counts at the intersections of Beverly & Martway and at Dearborn & Martway on typical weekdays during June of this year, and then the anticipated traffic which would be generated by the proposed apartments and the small amount of general office space. Traffic modeling software was used to simulate the existing traffic conditions and the proposed conditions with the additional site-generated traffic superimposed onto the existing volumes. The current proposal has even less than traffic previously approved.

14) What is the construction time frame?

The building will take approximately a year to 15 months to construct after breaking ground.

15) There are no basements. Where do people go to seek shelter from a severe storm?

The building will be designed to meet all applicable building codes. Stairwell shafts will be constructed out of 8" thick concrete and will serve as an area of refuge for storms.

16) Do you envision any children living in this building?

Yes, families with children are welcome to live in this building.

17) Just to confirm, these are market rate apartments? There won't be any subsidized housing?

These are market rate apartments.

September 20, 2017

City of Mission
Community Development
Attention: Danielle L. Sitzman, AICP
6090 Woodson St.
Mission, Kansas 66202

RE: Project Name: Martway Mixed Use – Preliminary Development Plan – Site Civil & Traffic Review

Dear Ms. Sitzman,

We have completed our review of the 2nd submittal for the above mentioned Preliminary Development Plan. If approved, we would recommend the following stipulations be applied:

Martway Multifamily

Olsson Review for Preliminary Plan 2nd Submittal – 9-20/17

Floodplain Stipulations:

1. All design and construction must meet the provisions Article IV, Chapter 460 of the City Code
2. Any enclosed building space including mechanical equipment areas (such as equipment in elevator sumps) must be 2' above FEMA floodplain or must be water proofed.
3. At time of Final Development Plan application, a variance from Article IV of city code must be obtained for any parking or building areas that encroach into the Floodway. This will require a flood study that shows that the project does not increase the 100-year water surface elevation.
4. Prior to building permit, a Floodplain Development Permit shall be obtained from the City, including a study or documentation showing the proposed project will not increase 100-yr water surface elevations.
5. Prior to issuance of a building permit, a Floodplain fills permit from the State of Kansas shall be obtained.
6. Prior to close out of the Floodplain Permit a LOMR-F and elevation certificate is required.

Drainage Memo Stipulations:

1. At time of Final Development Plan application, provide an exhibit or multiple exhibits that show the existing and proposed development, existing and proposed drainage boundaries and floodplain lines. Please provide drainage boundaries, CN values, and flow for each drainage area within the site and all off-site water entering the site for the existing and proposed condition.
2. At time of Final Development Plan application, show and explain how drainage from the site is being collected (within storm sewer or overland flow), routed and discharged at the stream to for adequate erosion control protection.

Preliminary Development Plan Stipulations

1. At time of Final Development Plan application please address the drive aisle width in the two areas near the center of the lot. The 25' dimension provided in two areas near the center of the lot is not adequate as the angle of turns within the lanes is severe and driving lanes are unclear. It appears the drive lane conflicts with pedestrian circulation areas near the elevators. Additional striping showing the lanes in these areas must be provided. A turning template showing cars within each lane must be provided. Stalls in these areas may need to be eliminated to resolve the problem.
2. At time of Final Development Plan application show revised ADA paths to not be within drive lanes parallel with traffic flow as shown in the west entrance. Where ADA paths cross drive lanes, pedestrian paths must be striped.

Traffic Study Stipulations

1. At time of Final Development Plan application, please submit a revised traffic study with corrected trip generation data. The retail land use has now changed to office therefore the am and pm peak trips will change. Provide a flash drive with all electronic files including Synchro. (See attached Martway Mixed-Use Development Traffic Impact Analysis Review Letter dated September 20, 2017 for additional comments)

If you have any questions or comments or need additional information, please do not hesitate to contact me at 913-381-1170 or bsonner@olssonassociates.com.

Sincerely,



Brad Sonner, PLA, LEED AP
Vice President

Martway Mixed-Use Development Traffic Impact Analysis Review

The following comments are in reference to the *Traffic Impact Analysis* (revised submittal) submitted by Cook, Flatt & Strobel Engineers, P.A., dated September 13, 2017, for the Martway Mixed Use Development Project.

A full review of the submitted traffic impact study cannot be completed due to inaccurate trip generation calculations which will impact trip distribution and capacity analysis for the site. Review will be conducted after submittal of a revised traffic impact study.

1. Trip Generation:
 - a. The traffic impact study has been revised for office space (previously retail). The site plan and parking demand analysis submitted to the City indicate retail land use. The traffic impact study should reflect the use proposed for the site and be consistent with the site plan.
 - b. Trip generation calculations are inaccurate. Specifically, the office space should be reviewed. The estimated number of trips are not correct. Additionally, office space does not have a 50% entering/exiting split for the AM and PM peak hour periods. Trip generation calculations should be updated and trip distribution and capacity analysis appropriately revised.
 - i. To ensure trip generation is accurate, updated calculations may be submitted to the City, prior to completion of the final traffic impact study, for review. This information must be submitted in a timely manner to allow for review and comments (if necessary) to be returned prior to the final submittal.
2. Provide a flash drive with all electronic files including Synchro. This allows for more efficient review.

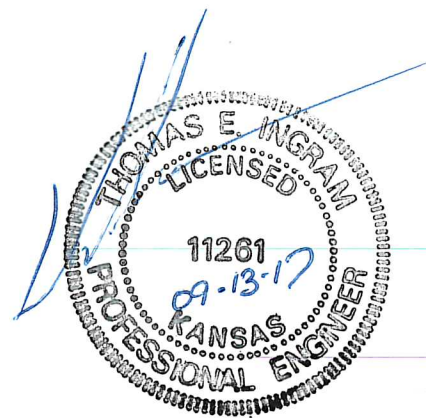
It is recommended that the revised final traffic impact study be submitted a minimum two weeks prior to the City submittal deadline for the final development plan. Adequate time is necessary to conduct a thorough review of the study, allow for comments to be addressed by the submitter, and City staff to develop final comments.

MARTWAY MIXED USE DEVELOPMENT
Proposed Building Redevelopment and Parking
6045 Martway
Mission, Kansas 66202
CFS Project No. 17-5085

Traffic Impact Analysis

September 13, 2017

Prepared for:
Clockwork Architecture & Design
423 Delaware, Suite 102
Kansas City, Missouri 64105



Prepared by:
Cook, Flatt & Strobel Engineers, P.A.
1421 E 104th Street, Suite 100
Kansas City, Missouri 64131
816-333-4477

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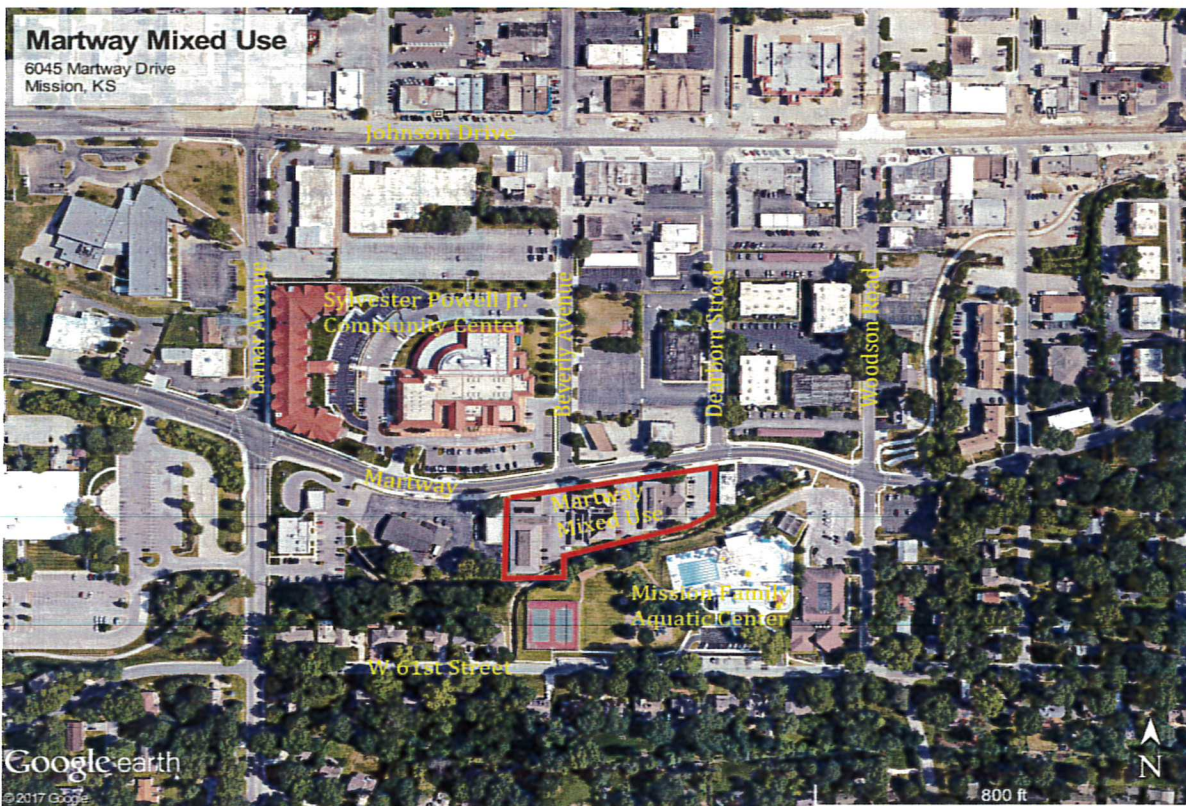
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<i>Appendix I -</i>	<i>Exhibit Maps (Site Plan, FEMA FIRM Map)</i>
<i>Appendix II -</i>	<i>Traffic Counts</i>
<i>Appendix III -</i>	<i>Trip Generation & Traffic Distribution</i>
<i>Appendix IV -</i>	<i>Synchro Results, AM Peak Traffic Conditions / Pre-Development</i>
<i>Appendix V -</i>	<i>Synchro Results, AM Peak Traffic Conditions / Post-Development</i>
<i>Appendix VI -</i>	<i>Synchro Results, PM Peak Traffic Conditions / Pre-Development</i>
<i>Appendix VII -</i>	<i>Synchro Results, PM Peak Traffic Conditions / Post-Development</i>

Review of Existing Site Conditions

This Traffic Impact Analysis for the proposed Martway Mixed Use building and parking lot improvements at 6045 Martway in Mission, Kansas, has been prepared in accordance with the City of Mission's Street Design Criteria. The proposed 1.767 acre site calls for the removal of three existing single-story office buildings along the southern side of Martway Street between Beverly Avenue and Dearborn Street and replacing them with a multi-story apartment building elevated on piers to provide street-level parking.

The site is bounded on the north by Martway Street, on the south by Rock Creek, and along the east and west by low-rise commercial/office buildings. Johnson Drive and Mission's downtown shopping area is located less than a quarter mile to the north. The Sylvester Powell Jr. Community Center is located to the northwest. The Mission Aquatic Center is located across Rock Creek to the southeast.



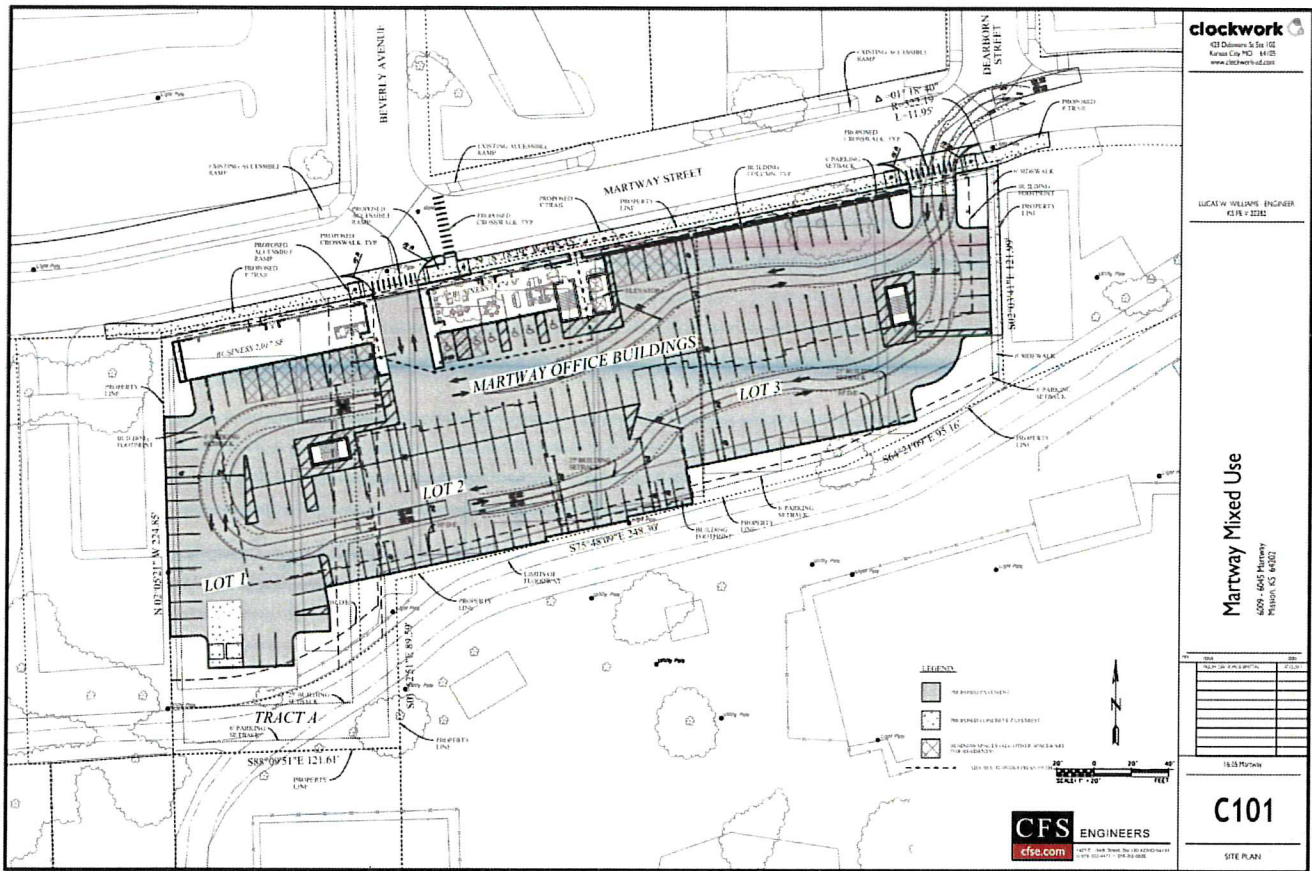
**Site Location Map, Mission, Kansas
Proposed Martway Mixed Use Development**

Area Street and Highway Network: The existing streets around the Martway Mixed Use Development site include:

- Martway Street – Two-lane collector.
 - Posted speed limit of 25 mph.
- Lamar Avenue – Two-lane collector.
 - Posted speed limit of 30 mph.
- Johnson Drive – Four-lane thoroughfare.
 - Posted speed limit of 30 mph.
- Beverly Avenue – Two-lane local.
 - Posted speed limit of 25 mph.
- Dearborn Street – Two-lane local.
 - Posted speed limit of 25 mph.
- Woodson Road – Two-lane local.
 - Posted speed limit of 25 mph.
- W. 61st Street – Two-lane local.
 - Posted speed limit of 25 mph.

The existing intersection of Martway & Beverly Avenue is a tee intersection with a 25 ft+/- offset driveway for the existing office building parking lot. For the proposed improvements, the existing driveway would be shifted to the east to align with Beverly Avenue. Both Martway Street and Beverly Avenue are two lane, 28 ft wide (back of curb to back of curb). The intersection corner radii are 25 ft. There are sidewalks along the north and south sides of Martway and along the west on Beverly. There is a painted crosswalk across the northern leg of the intersection. The intersection is stop controlled with free movement for the east and westbound traffic on Martway and a stop sign for southbound traffic on Beverly.

Grades along Martway are less than 2% and the intersection sight distance from the proposed western driveway entrance to the Martway Mixed Use Development was estimated at approximately 500 ft looking east and approximately 450 ft looking west. Martway has a posted speed limit of 25 mph. A realistic design speed for regular traffic was estimated at 35 mph. AASHTO's Exhibit 9-55, Design Intersection Sight Distance-Case B1- Left Turn from Stop, requires a design intersection sight distance of 390 ft at a design speed of 35 mph. AASHTO's Exhibit 9-58, Design Intersection Sight Distance-Case B2- Right Turn from Stop, requires a design intersection sight distance of 335 ft at a design speed of 35 mph. The proposed western driveway entrance to the Martway Mixed Use Development appears to have adequate intersection sight distance.



Proposed Martway Mixed Use Site Plan and Street-Level Parking Layout

The existing intersection of Martway & Dearborn Street is a tee intersection with a 35 ft+/- offset driveway for the existing office building parking lot. For the proposed improvements, the existing driveway would be held in the same location. Both Martway and Dearborn Street are two lane, 28 ft wide (back of curb to back of curb). The intersection corner radii are 25 ft. There are sidewalks along the north and south sides of Martway and along the west on Dearborn. There is a painted crosswalk across the northern leg of the intersection. The intersection is stop controlled with free movement for the east and westbound traffic on Martway and a stop sign for southbound traffic on Dearborn.

Grades along Martway are less than 2% and the intersection sight distance from the proposed eastern driveway entrance to the Martway Mixed Use Development was estimated at approximately 400 ft looking east and approximately 700 ft looking west. Martway east of the driveway entrance curves to the south, so motorists would have to turn their heads further to observe oncoming traffic, but there are no physical obstructions within the right-of-way to obscure the view. Martway has a posted speed limit of 25 mph. A realistic design speed for regular traffic was estimated at 35 mph. AASHTO's Exhibit 9-55, Design Intersection Sight Distance-Case B1- Left Turn from Stop, requires a design intersection sight distance of 390 ft at a design speed of 35 mph. AASHTO's Exhibit 9-58, Design Intersection Sight Distance-Case B2- Right Turn from Stop, requires a design intersection sight distance of 335 ft at a design speed of 35 mph. The proposed eastern driveway entrance to the Martway Mixed Use Development appears to have adequate intersection sight distance.

There are no known programmed improvements or future planned improvements for any of the roadways listed above in the region surrounding the Martway Mixed Use site.

Land Uses and Proposed Density: For the proposed 1.767 acre site, three lots would be combined into one (parcels KP20600000 0001, 0002 & 0003). The site has a current land use of offices with three existing single-story office buildings with a total footprint of approximately 34,465 sqft. For the proposed mixed use apartments and general office space, the existing buildings would be demolished and replaced with a multi-story apartment building with 156 units and 3,491 sqft of general office space. The main building would be raised on support piers to allow for parking beneath the structure. The general office space would be on the ground floor/parking level, comprised of two enclosed building sections flanking the sides of the entrance drive even with Beverly Avenue.

Water Conflicts: The FEMA FIRM Panel 20091C0024G indicates that a portion of the site is designated within 100-year flood zone AE from flooding from the adjacent Rock Creek which flows along the rear property line. In a 100-year flooding event, approximately 40 parking spaces along the creek could have up to seven inches of overbank water. A portion of the existing parking lot has been in the floodplain fringe area, and the reconfigured parking would closely match the existing parking limits in this area.

Existing Alternative Transportation Mode Choices: There are sidewalks along both sides of Martway Street, along the western side of Beverly Avenue, and along the western side of Dearborn Street. Portions of the Rock Creek Walking Trail coincide with the widened sidewalk section along the southern side of Martway Street fronting the proposed site. There are no designated bicycle lanes on any of the surrounding streets. There are Johnson County bus transit service stops on both sides of Martway Street approximately 300 ft west of Beverly Avenue.

Anticipated Phasing and Time-line: Construction is anticipated to begin in the spring of 2018 and would take approximately 18 months.

Existing and Projected Traffic Volumes

Existing Traffic Volumes: Weekday AM and PM Peak Hour traffic counts were taken at the intersections of Martway & Beverly Avenue and at Martway & Dearborn Street. Traffic volumes were recorded in 15 minute intervals on Wednesday June 14, 2017 and on Thursday June 15, 2017 during the AM Peak Hour from 7AM to 9AM and during the PM Peak Hour from 4PM to 6PM. Bad weather conditions or national holiday traffic did not impact traffic counts. The following tables summarize the traffic volumes measured for a typical AM and PM Peak Hour on a weekday:

Martway & Beverly Avenue, AM Peak Hour Traffic Movements (Wednesday, 06-14-17)

PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
0.94	56	160	2	3	124	35	1	0	1	19	0	41

Martway & Beverly Avenue, PM Peak Hour Traffic Movements (Wednesday, 06-14-17)

PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
0.91	36	253	0	0	274	36	1	0	3	42	0	76

Martway & Dearborn Street, AM Peak Hour Traffic Movements (Thursday, 06-15-17)

PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
0.92	16	131	7	3	137	5	1	0	1	5	1	24

Martway & Dearborn Street, PM Peak Hour Traffic Movements (Thursday, 06-15-17)

PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
0.92	32	268	0	1	244	16	6	0	3	12	0	26

The PM peak hour traffic was notably heavier than the AM. Directional east-west distribution along Martway Street was roughly even during both AM and PM peak hours. The following tables show the measured traffic volumes and directional distribution percentages used to develop the trip distribution of the additional trip generation volumes:

Directional Distribution (AM Incoming)

Intersection	Direction	Volume	Percentage
Beverly & Martway	EB	218	48.3%
	SB	60	13.4%
Dearborn & Martway	WB	145	31.8%
	SB	30	6.5%
Total		457	100.0%

Directional Distribution (AM Outgoing)

Intersection	Direction	Volume	Percentage
Beverly & Martway	WB	166	40.0%
	NB	91	22.0%
Dearborn & Martway	EB	137	32.9%
	NB	21	5.1%
Total		431	100.0%

Directional Distribution (PM Incoming)

Intersection	Direction	Volume	Percentage
Beverly & Martway	EB	289	41.0%
	SB	118	16.7%
Dearborn & Martway	WB	261	36.9%
	SB	38	5.4%
Total		719	100.0%

Directional Distribution (PM Outgoing)

Intersection	Direction	Volume	Percentage
Beverly & Martway	WB	351	46.7%
	NB	72	9.6%
Dearborn & Martway	EB	283	37.3%
	NB	48	6.4%
Total		755	100.0%

Site's Trip Generation and Design Hour Volume Data

Trip Generation and Design Hour Volume Data: Trip generation calculations utilized the land use types categorized by the Institute of Transportation Engineer's Trip Generation Guidelines, 9th Edition. The ITE Land Use categories used to estimate the traffic volumes anticipated to be generated by the site were Apartments (ITE Code 220) and General Office (ITE Code 710). The estimated number of trips generated by the buildings were calculated based on the total 156 dwelling units (DU) in the apartments and 3,491 sqft of floor area for the general office space. Both the ITE's trip generation equations and the average rates were used to calculate the site-generated traffic, and the higher/more conservative figures were used to model the proposed traffic characteristics of the development. The following table shows the parameters for measurement units, total trip generation volumes for the weekday AM and PM peak hour traffic, and the corresponding total vehicles for AM and PM peak hour traffic and the total weekday traffic at the site:

ITE Traffic Generation Volumes for the Proposed Site Improvements (vph)

Description / ITE Code	Units	AM Total	AM Enter	AM Exit	PM Total	PM Enter	PM Exit	Weekday Total
Apartments (220)	156 DU	87	25	62	109	66	43	1069
General Office (710)	3.49 KSF	16	8	8	6	3	3	156
Total		103	33	70	115	69	46	1225

Reductions for Pass-By and Diverted-Link Trips: Not applicable for apartments, and the amount of general office space was relatively small compared to the entire development, so pass-by and diverted-link trips were not included in the proposed trip distribution and traffic assignment.

Trip Distribution and Traffic Assignment

Trip Distribution and Traffic Assignment: Trip distribution patterns were determined based on a gravity model based on the peak hour counts around the development's surrounding origins and destinations. Directional percentages were applied along incoming and outgoing paths so that site-generated trips could be distributed proportionally. Appendix III includes trip generation calculations and traffic distribution diagrams for the existing traffic volumes, the site-generated traffic and the existing plus site-generated traffic for the AM and PM peak hour conditions.

Capacity Analysis

Creating Synchro Scenarios: Using the traffic counts and the ITE trip generation volumes, four Synchro models were created for the traffic conditions surrounding the site.

- Scenario 1 - Existing street/pre-development conditions
(Pre-development AM Peak Traffic 2017)
- Scenario 2 - Proposed site with trip-generated conditions
(Post-development AM Peak Traffic 2017)
- Scenario 3 - Existing street/pre-development conditions
(Pre-development PM Peak Traffic 2017)
- Scenario 4 - Proposed site with trip-generated conditions
(Post-development PM Peak Traffic 2017)

Capacity and Level of Service Analysis: Three performance measures commonly used for Traffic Impact Studies are vehicle delay, level-of-service (LOS), and queue length. Vehicle delay is the average delay, in seconds, experienced by one vehicle passing through the intersection. The quality of traffic operation at an intersection is defined through level-of-service (LOS) which consists of assignments of ‘A’ for free-flowing conditions through ‘F’ for congested conditions. The procedures and methodology for determining the LOS are outlined in the Highway Capacity Manual (HCM 2010), produced by the Transportation Research Board. LOS ‘A’ through ‘C’ is considered acceptable. For intersections, no individual lane should be below LOS D. 95th percentile queue length is the overall length of a string of stopped vehicles. Note that for stop control intersections, the queue length is measured in terms of accumulated number of vehicles which would be lined up waiting to proceed. The “-” symbol represents shared lane or non-existent movement, thus no queue length given. The results of the Synchro models for the left-turn movements at the intersections of Martway & Beverly Avenue are summarized in the table below (Delays are in seconds and Queues are in vehicle lengths set at a nominal 25 ft for the actual length of the design vehicle plus the buffer spacing between vehicles):

Martway & Beverly Avenue (Two-Way Stop Controlled)

Scenario	Intersection Delay (sec)	NBL D-LOS-Q	EBL D-LOS-Q	WBL D-LOS-Q	SBL D-LOS-Q
1-AM-Pre	2.4	0/A/0	7.7/A/0.1	0/A/0	10.5/B/0.3
2-AM-Post	3.2	12.4/B/0.2	7.7/A/0.1	7.6/A/0	11.2/B/0.4
3-PM-Pre	2.7	0/A/0	8/A/0.1	0/A/0	13.9/B/0.9
4-PM-Post	3.5	15.3/C/0.2	8.1/A/0.1	7.9/A/0	16.1/C/1.3

Martway & Beverly Avenue (Two-Way Stop Controlled): At the Beverly Avenue intersection, the intersection delay was 2.4 sec (LOS A) in the AM and 2.7 sec (LOS A) in the PM for the pre-development scenarios. The post-development scenarios intersection delays increased marginally to 3.2 sec (LOS A) in the AM and 3.5 sec (LOS A) in the PM. Eastbound and westbound movements were free except for the left-turns which had to yield to oncoming traffic. EB and WB average delay for left-

turns ranged from 7.6 sec (LOS A) to 8.1 sec (LOS A) throughout all scenarios. Northbound delays increased to 12.4 sec in the AM and 15.3 sec in the PM for the post-development scenario. Southbound delays increases to 11.2 sec in the AM and 16.1 sec in the PM for the post-development scenario. The longest 95th percentile queue length of any of the scenarios was 1.3 vehicle lengths.

Martway & Dearborn Street Avenue (Two-Way Stop Controlled)

Scenario	Intersection Delay (sec)	NBL D-LOS-Q	EBL D-LOS-Q	WBL D-LOS-Q	SBL D-LOS-Q
1-AM-Pre	1.2	0/A/0	7.6/A/0	0/A/0	9.5/A/0.1
2-AM-Post	2.3	11.1/B/0.2	7.6/A/0	7.6/A/0	9.7/A/0.1
3-PM-Pre	1.1	0/A/0	7.9/A/0.1	0/A/0	11.7/B/0.2
4-PM-Post	1.8	14.6/B/0.2	7.9/A/0.1	7.9/A/0	12.5/B/0.3

Martway & Dearborn Street (Two-Way Stop Controlled): At the Dearborn Street intersection, the intersection delay was 1.4 sec (LOS A) in the AM and 1.3 sec (LOS A) in the PM for the pre-development scenarios. The post-development scenarios intersection delays increased marginally to 2.3 sec (LOS A) in the AM and 1.8 sec (LOS A) in the PM. Eastbound and westbound movements were free except for the left-turns which had to yield to oncoming traffic. EB and WB average delay for left-turns ranged from 7.6 sec (LOS A) to 7.9 sec (LOS A) throughout all scenarios. Northbound delays increased to 11.1 sec in the AM and 14.6 sec in the PM for the post-development scenario. Southbound delays increases to 9.7 sec in the AM and 12.5 sec in the PM for the post-development scenario. The longest 95th percentile queue length of any of the scenarios was 0.3 vehicle lengths.

Traffic Accident History

Traffic Accident History: No accident report were reviewed in the preparation of this study.

Internal Circulation and Parking

Proposed Site Access: The proposed Martway Mixed Use parking area would have two entranced drives coinciding with the existing entrances to the office buildings at 6009 and 6045 Martway. The entrances would be open without any security gating. The parking configuration would include head-in parking spaces around the outer perimeter with an inside tier of head-to-head parking spaces which would allow the service drive to loop around the central spaces and connect to both the east and west access driveway back to Martway Street. The proposed apartment building would be perched above supported by piers.

The proposed building would consist of 3,491 sqft of lower-floor general office space with 156 apartment units on the upper floors. Per the City of Mission's MS-2 Parking Regulations, Chapter 410.250, the proposed development would require the following number of parking spaces:

Parking Requirements

Building Use	Space Requirements	Parking Required
General Office	4 per 1000 sqft * 3,491 sqft	14 spaces
Apartments (156 Total Units)		
Studio Apartments (24 Units)	1 space per unit * 24 units	24 spaces
One Bedroom (92 Units)	1 space per unit * 92 units	92 spaces
Two Bedroom (40 Units)	2 spaces per unit * 40 units	80 spaces
		210 spaces

The proposed parking lot plan has a total of 166 spaces (including five ADA accessible spaces and one ADA van-accessible space), so the developer would need to lease an additional 44 off-site parking spaces to meet the City's total 210 space requirement for the proposed apartments and general office space. Superimposing the 100-year FEMA floodplain elevations from Rock Creek onto the proposed parking lot grading indicated that 40 spaces would be within the floodplain limits, however, no space would have more than the allowable 7 inches of water during the 100-year event.

Traffic Operations and Geometric Improvements

Driveways: The proposed west driveway entrance would be re-aligned to match Beverly Avenue and the proposed east driveway would remain close to its existing location. The east and west driveways are spaced approximately 300 ft apart and both entrances would be two-lane, full-access connections. Security gating would not be installed at either driveway entrance.

Right-Turn Lane for eastbound Martway Street at East or West Entrance Driveway: A review of KDOT's Access Management Policy indicated that neither driveway entrance would warrant the addition of a right-turn lane. The design speed for Martway Street coupled with the relatively low traffic volumes would not meet the minimum threshold levels on the KDOT Access Management Policy's Table 4-25, Right-Turn Treatment Guidelines for Two-Lane Highways.

Left-Turn Lane for westbound Martway Street at East or West Entrance Driveway: A review of KDOT's Access Management Policy indicated that neither driveway entrance would warrant the addition of a left-turn lane. The design speed for Martway Street coupled with the relatively low traffic volumes would not meet the minimum threshold levels on the KDOT Access Management Policy's Table 4-27, Recommended Left-Turn Lane Warrants for Two-Lane Highways.

Signalization: With the relatively low volume of traffic on Martway Street and the trips that would be generated from the proposed Martway Mixed Use development, signals are not warranted on Martway Street at either of the intersections with Beverly Avenue or with Dearborn Street.

Summary and Recommendations

Summary: This study addressed the street access and potential traffic congestion for the proposed Martway Mixed Use Development at 6045 Martway Street in Mission, Kansas. The site would call for the demolition of three existing single-story office buildings and replacing them with a multi-story apartment building perched above a ground-floor parking lot. The apartment building would have 156 units comprised of 24 studio, 92 single and 40 double bedroom apartments. The development would need a total of 210 spaces and the proposed below-building parking lot would provide 166 spaces, with the developer obtaining off-site parking agreements to make-up the additional 44 spaces required.

An assessment of the proposed trip generation traffic and the traffic volumes on Martway Street at the intersections with Beverly Avenue and with Dearborn Street indicated that no right or left-turn auxiliary lanes would be warranted for the proposed driveway entrances to the site. Level-of-service ratings at the intersections would remain at the LOS-A or B levels, and queued traffic would be kept at low levels.

Recommendations: The following recommendations are made for the Martway Mixed Use Development and the surrounding area:

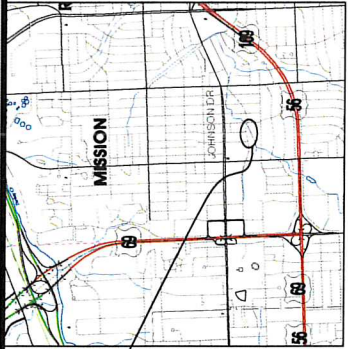
- The proposed west driveway entrance would be re-aligned to match Beverly Avenue and the east driveway entrance should remain at the present locations for the existing buildings at 6009 and 6045 Martway. Both driveways should be full-access entrances.
- The proposed development requires 210 parking spaces, and the proposed parking lot provides 166 spaces. The developer would need to lease an additional 44 off-site parking spaces to meet the City's total 210 space requirement.
- The existing Rock Creek walking trail running along the front side of the proposed building would remain unaltered by the development. During construction, the developer must make provisions to close the trail and divert pedestrian traffic to the northern side of Martway Street. The developer shall make all reasonable efforts to re-open the trail as quickly as possible once construction has been substantially completed and there would be no hazards to pedestrians.

**Appendix I - Exhibit Maps (Site Plan, FEMA
FIRM Map)**

MARTWAY MIXED USE

PRELIMINARY DEVELOPMENT PLAN
6009-6025 MARTWAY, MISSION, KS 66200

PROJECT LOCATION



VICINITY MAP

LEGAL DESCRIPTION:
LOTS 1, 2 AND 3 OF MARTWAY OFFICE BUILDINGS A SUBDIVISION OF LAND IN THE NORTHWEST QUARTER OF SECTION 16, TOWNSHIP 18 NORTH, RANGE 10 WEST OF THE SIXTH PRINCIPAL MERIDIAN IN THE CITY OF MISSION, JOHNSON COUNTY, KANSAS

SITE DEVELOPMENT SUMMARY TABLE

EXISTING ZONING	MS-2
LAND AREA	1.787 ACRES OR 76,971 SQUARE FEET MORE OR LESS
LAND USE	
EXISTING OFFICE	
PROPOSED OFFICE	A MIXED USE DEVELOPMENT WITH A 3-STORY APARTMENT COMPLEX WITH COMMERCIAL SPACE AND PARKING DECK ON THE FIRST FLOOR
BUILDING HEIGHT	
MAXIMUM BUILDING HEIGHT: 3-STORY/45'-0"	
MAXIMUM BUILDING HEIGHT: 3-STORY/45'-0"	
BUILDING FLOOR AREA	1,041 S.F. 3,877 S.F. 3,877 S.F. 3,877 S.F. TOTAL FLOOR AREA: 15,772 S.F.
FLOOR AREA RATIO	2.67
PARKING	297
PROPOSED PARKING RATIO: 0.79	

PROPERTY	OWNER	ADDRESS	PHONE	EMAIL
6009-6025 MARTWAY	6009-6025 MARTWAY LLC	12205 BUENA VISTA ST. LEAWOOD, KS 66209		
6101 MARTWAY	6101 MARTWAY LLC	6101 MARTWAY ST. MISSION, KS 66202		
6130 W. 61ST STREET	6130 W. 61ST STREET LLC	6130 W. 61ST STREET MISSION, KS 66202		
6150 W. 61ST STREET	6150 W. 61ST STREET LLC	6150 W. 61ST STREET MISSION, KS 66202		
6170 W. 61ST STREET	6170 W. 61ST STREET LLC	6170 W. 61ST STREET MISSION, KS 66202		
6180 W. 61ST STREET	6180 W. 61ST STREET LLC	6180 W. 61ST STREET MISSION, KS 66202		
6190 W. 61ST STREET	6190 W. 61ST STREET LLC	6190 W. 61ST STREET MISSION, KS 66202		
6200 W. 61ST STREET	6200 W. 61ST STREET LLC	6200 W. 61ST STREET MISSION, KS 66202		
6210 W. 61ST STREET	6210 W. 61ST STREET LLC	6210 W. 61ST STREET MISSION, KS 66202		
6220 W. 61ST STREET	6220 W. 61ST STREET LLC	6220 W. 61ST STREET MISSION, KS 66202		
6230 W. 61ST STREET	6230 W. 61ST STREET LLC	6230 W. 61ST STREET MISSION, KS 66202		
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6430 W. 61ST STREET	6430 W. 61ST STREET LLC	6430 W. 61ST STREET MISSION, KS 66202		
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6490 W. 61ST STREET	6490 W. 61ST STREET LLC	6490 W. 61ST STREET MISSION, KS 66202		
6500 W. 61ST STREET	6500 W. 61ST STREET LLC	6500 W. 61ST STREET MISSION, KS 66202		

OWNER:
6009-6025 MARTWAY LLC
12205 BUENA VISTA ST. LEAWOOD, KS 66209

ARCHITECT:
ENGINEER/LANDSCAPE ARCHITECT/SURVEYOR/PLANNER
141 E. 10TH STREET, SUITE 100
KANSAS CITY, MO 64111

DEVELOPER:
CFS ENGINEERS
141 E. 10TH STREET, SUITE 100
KANSAS CITY, MO 64111

REQUESTED DEVIATIONS:
THE DEVELOPER REQUESTS THE FOLLOWING DEVIATIONS TO THE CITY OF MISSION'S MUNICIPAL CODE:
1. THE OFFICE PARKING SPACE REQUIREMENT BE REDUCED FROM 235 SPACES TO 166 OFFICE PARKING SPACES. ADDITIONAL 48 SPACES ARE OBTAINED IN AN OFF-SET PARKING SUBSTANTIATION.
2. THE REAR YARD SETBACK REQUIREMENT BE REDUCED FROM 25 TO 0' SETBACK.
3. THE MAXIMUM BUILDING HEIGHT REQUIREMENT BE RAISED FROM A 3-STORY 45 FOOT TO A 3-STORY 45 FOOT MAXIMUM BUILDING HEIGHT.
4. ACCESS TO THE LOT FROM THE ADJACENT MULTI-FAMILY DWELLING BE RAISED FROM 15 UNITS PER ACRE TO 18 UNITS PER ACRE.
5. THE PARKING LOT SETBACK BE REDUCED FROM 4' TO 2'.
6. THE MINIMUM GREEN SPACE BETWEEN PARKING AND INTERIOR LOT LINES BE REDUCED FROM 4' TO 0'.
7. THE INTERIOR PARKING LOT TRAIL REQUIREMENTS.
8. THE PARKING LOT INTERIOR OPEN SPACE REQUIREMENT.

LEGEND:
LIMITS OF DEVELOPMENT



SCALE: 1" = 50'

0 50' 100'

LEGEND:
LIMITS OF DEVELOPMENT

CFS ENGINEERS
cfe.com
141 E. 10th Street, Ste. 100 64111
816-333-2477 / 816-333-9668

OVERALL SITE PLAN

6009-6025 Martway
Mission, KS 66202

Clockwork
433 Delaware St. Ste. 102
Kansas City MO 64105
www.clockwork-ks.com

LUCAS W. WILLIAMS - ENGINEER
KS PE # 20382

16.05.Murphy

C100

8/12/2017

8/12/2017

8/12/2017

8/12/2017

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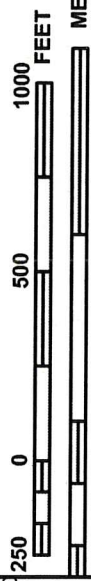
8/12/2017

8/12/2017

8/12/2017



MAP SCALE 1" = 500'



NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0024G

FIRM

FLOOD INSURANCE RATE MAP
JOHNSON COUNTY,
KANSAS
AND INCORPORATED AREAS

PANEL 24 OF 161
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

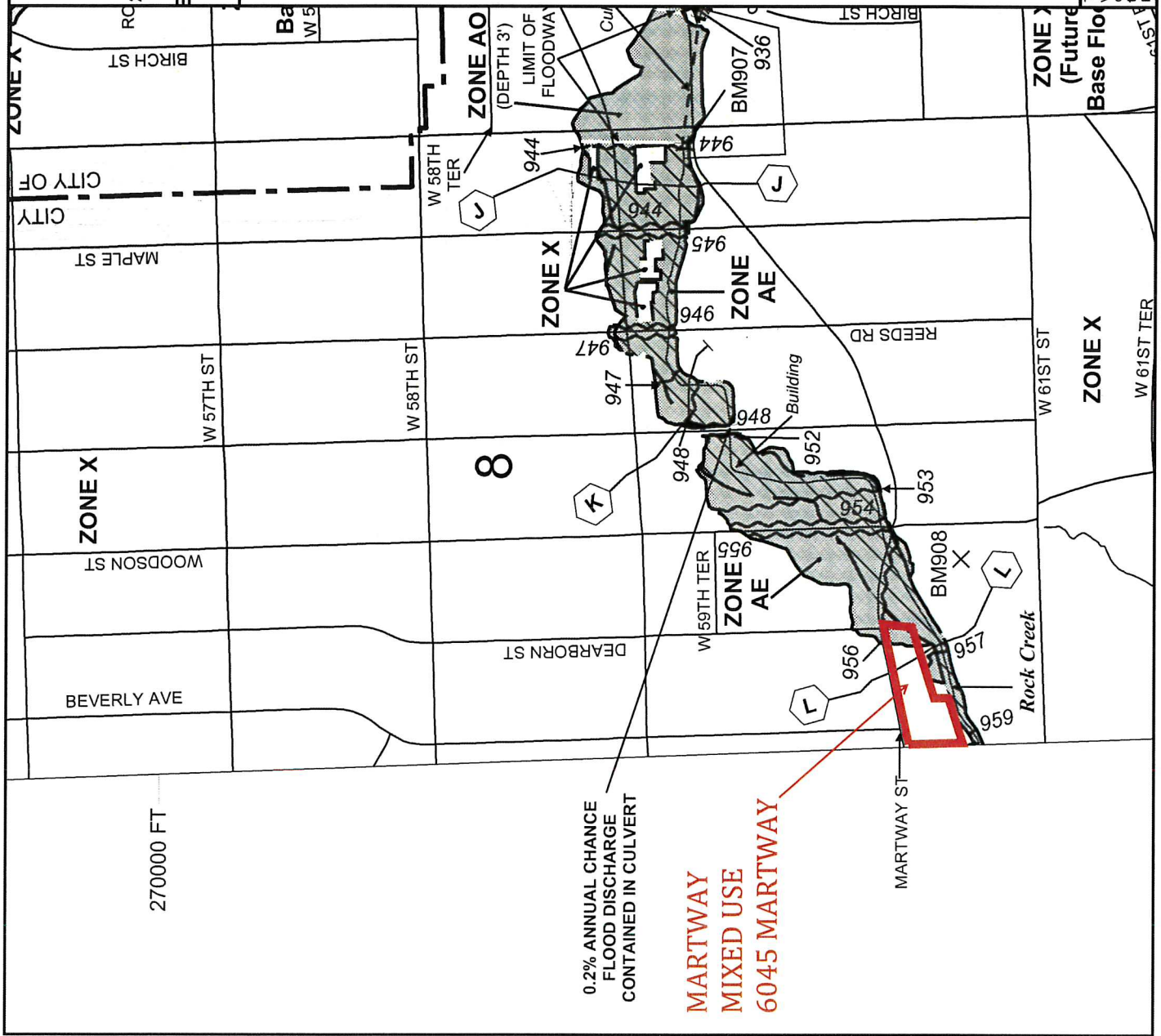
COMMUNITY	NUMBER	PANEL	SUFFIX
FARMWAY, CITY OF	200185	0024	G
MISSION, CITY OF	200171	0024	G
MISSION, CITY OF	200174	0024	G
OVERLAND PARK, CITY OF	200174	0024	G
PRAIRIE VILLAGE, CITY OF	200175	0024	G
ROELAND PARK, CITY OF	200176	0024	G

Notices to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
20091C0024G
MAP REVISED
AUGUST 3, 2009
Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



Appendix II – Traffic Counts

Martway St, Mission, Kansas - 2017 Traffic Counts

Wed 6-14-2017	Martway St & Beverly Ave Turning Movement Counts												Total Sum
Time	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
7:00 AM	3	17	1	0	20	1	0	0	0	4	1	0	47
7:15 AM	7	20	0	1	24	3	0	0	0	2	0	6	63
7:30 AM	10	34	2	0	30	9	0	0	0	4	0	15	104
7:45 AM	12	46	0	0	38	13	0	0	0	3	0	6	118
8:00 AM	15	37	0	0	23	5	0	0	0	8	0	11	99
8:15 AM	16	37	1	2	31	11	0	0	0	5	0	7	110
8:30 AM	13	40	1	1	32	6	1	0	1	3	0	17	115
8:45 AM	5	30	0	1	24	7	0	0	1	2	1	17	88
PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
0.94	56	160	2	3	124	35	1	0	1	19	0	41	

Max													118
Hourly Sum	32	117	3	1	112	26	0	0	0	13	1	27	332
Hourly Sum	44	137	2	1	115	30	0	0	0	17	0	38	384
Hourly Sum	53	154	3	2	122	38	0	0	0	20	0	39	431
Hourly Sum	56	160	2	3	124	35	1	0	1	19	0	41	442
Hourly Sum	49	144	2	4	110	29	1	0	2	18	1	52	412

Wed 6-14-2017	Martway St & Beverly Ave Turning Movement Counts												Total Sum
Time	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
4:00 PM	2	50	2	0	59	5	3	0	3	4	0	15	143
4:15 PM	9	37	0	0	45	8	0	0	1	5	0	14	119
4:30 PM	8	70	0	0	62	7	1	0	0	7	0	15	170
4:45 PM	9	61	0	0	70	9	0	0	0	10	0	16	175
5:00 PM	8	58	0	0	67	9	0	0	2	10	0	25	179
5:15 PM	11	64	0	0	75	11	0	0	1	15	0	20	197
5:30 PM	4	59	0	0	72	4	1	0	0	6	0	13	159
5:45 PM	4	68	0	0	45	9	0	0	1	5	0	8	140
PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
0.91	36	253	0	0	274	36	1	0	3	42	0	76	

Max													197
Hourly Sum	28	218	2	0	236	29	4	0	4	26	0	60	607
Hourly Sum	34	226	0	0	244	33	1	0	3	32	0	70	643
Hourly Sum	36	253	0	0	274	36	1	0	3	42	0	76	721
Hourly Sum	32	242	0	0	284	33	1	0	3	41	0	74	710
Hourly Sum	27	249	0	0	259	33	1	0	4	36	0	66	675

Thur 6-15-2017	Martway St & Dearborn St Turning Movement Counts												Total Sum
Time	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
7:00 AM	2	15	2	0	23	0	0	0	0	0	0	2	44
7:15 AM	3	22	0	0	32	0	0	0	0	1	0	3	61
7:30 AM	4	19	0	0	34	0	0	0	0	1	0	7	65
7:45 AM	5	25	3	0	47	1	0	0	0	2	0	7	90
8:00 AM	4	38	2	1	32	1	1	0	1	1	1	7	89
8:15 AM	5	34	1	2	26	2	0	0	0	0	0	5	75
8:30 AM	2	34	1	0	32	1	0	0	0	2	0	5	77
8:45 AM	8	30	0	0	31	3	0	0	0	1	0	4	77
PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
0.92	16	131	7	3	137	5	1	0	1	5	1	24	

Max													90
Hourly Sum	14	81	5	0	136	1	0	0	0	4	0	19	260
Hourly Sum	16	104	5	1	145	2	1	0	1	5	1	24	305
Hourly Sum	18	116	6	3	139	4	1	0	1	4	1	26	319
Hourly Sum	16	131	7	3	137	5	1	0	1	5	1	24	331
Hourly Sum	19	136	4	3	121	7	1	0	1	4	1	21	318

Thur 6-15-2017	Martway St & Dearborn St Turning Movement Counts												Total Sum
Time	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
4:00 PM	3	46	0	0	53	2	3	0	1	2	0	4	114
4:15 PM	5	63	1	0	49	2	0	0	1	0	0	3	124
4:30 PM	1	56	0	0	61	3	0	0	0	2	0	9	132
4:45 PM	6	72	0	0	58	2	1	0	1	2	0	7	149
5:00 PM	3	70	0	0	67	4	1	0	0	4	0	9	158
5:15 PM	8	72	0	1	67	6	4	0	1	3	0	3	165
5:30 PM	15	54	0	0	52	4	0	0	1	3	0	7	136
5:45 PM	14	50	0	0	61	1	3	0	0	1	0	5	135
PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
0.92	32	268	0	1	244	16	6	0	3	12	0	26	

Max													165
Hourly Sum	15	237	1	0	221	9	4	0	3	6	0	23	519
Hourly Sum	15	261	1	0	235	11	2	0	2	8	0	28	563
Hourly Sum	18	270	0	1	253	15	6	0	2	11	0	28	604
Hourly Sum	32	268	0	1	244	16	6	0	3	12	0	26	608
Hourly Sum	40	246	0	1	247	15	8	0	2	11	0	24	594

Wed 6-14-2017	Martway St & Beverly Ave Turning Movement Counts											
PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
0.94	56	160	2	3	124	35	1	0	1	19	0	41

Wed 6-14-2017	Martway St & Beverly Ave Turning Movement Counts											
PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
0.91	36	253	0	0	274	36	1	0	3	42	0	76

Thur 6-15-2017	Martway St & Dearborn St Turning Movement Counts											
PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
0.92	16	131	7	3	137	5	1	0	1	5	1	24

Thur 6-15-2017	Martway St & Dearborn St Turning Movement Counts											
PHF	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
0.92	32	268	0	1	244	16	6	0	3	12	0	26

Appendix III – Trip Generation & Traffic Distribution

Trip Generation Calculation - Weekday Peak AM and PM Hour

Martway Mixed-Use - 6045 Martway, Mission, Kansas

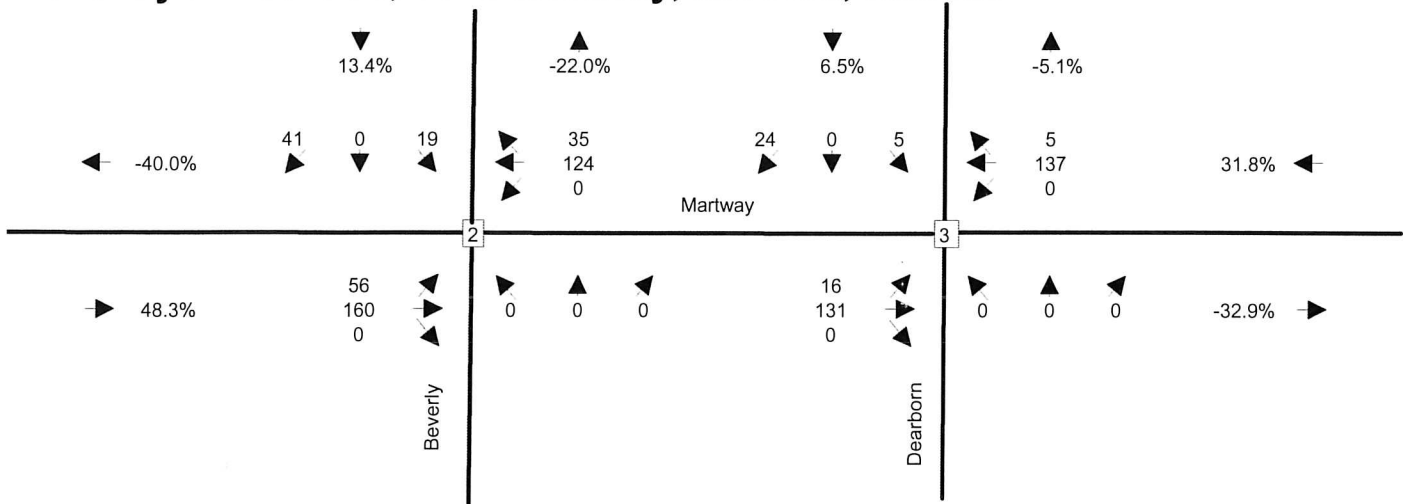
Cook Platt and Strobel, Engineers
 CFS Project No. 17-5085
 Date: 09/13/17

Land Use	ITE Land Use Code	Square Footage or Unit Quantity	Total Daily Traffic	Pass-By Traffic Percent	AM Peak Hour (7-9 AM)						PM Peak Hour (4-6 PM)						Notes							
					New-Gen			Pass-By			New-Gen			Pass-By										
					Total 2-Way PHV	Enter PHV	Exit PHV	Total 2-Way PHV	Enter PHV	Exit PHV	Total 2-Way PHV	Enter PHV	Exit PHV	Total 2-Way PHV	Enter PHV	Exit PHV								
Pre-Development Conditions General Office (KSF)	710	34,465	1527	0%	54	0	88%	48	48	0	12%	6	6	0	51	0	17%	9	9	0	83%	42	42	0
Total					54	0	88%	48	48	0	12%	6	6	0	51	0	17%	9	9	0	83%	42	42	0
Post-Development Conditions Apartments (Dwelling Units) (Equations)	220	156	1069	0%	87	0	29%	25	25	0	71%	62	62	0	109	0	61%	66	66	0	39%	43	43	0
General Office (KSF)	710	3,491	1069	0%	5	0	88%	4	4	0	12%	1	1	0	5	0	17%	1	1	0	83%	4	4	0
Total			1069		92	0	88%	29	29	0	12%	63	63	0	114	0	67%	67	67	0	83%	47	47	0

Notes:
 ITE 9th Edition Trip Generation

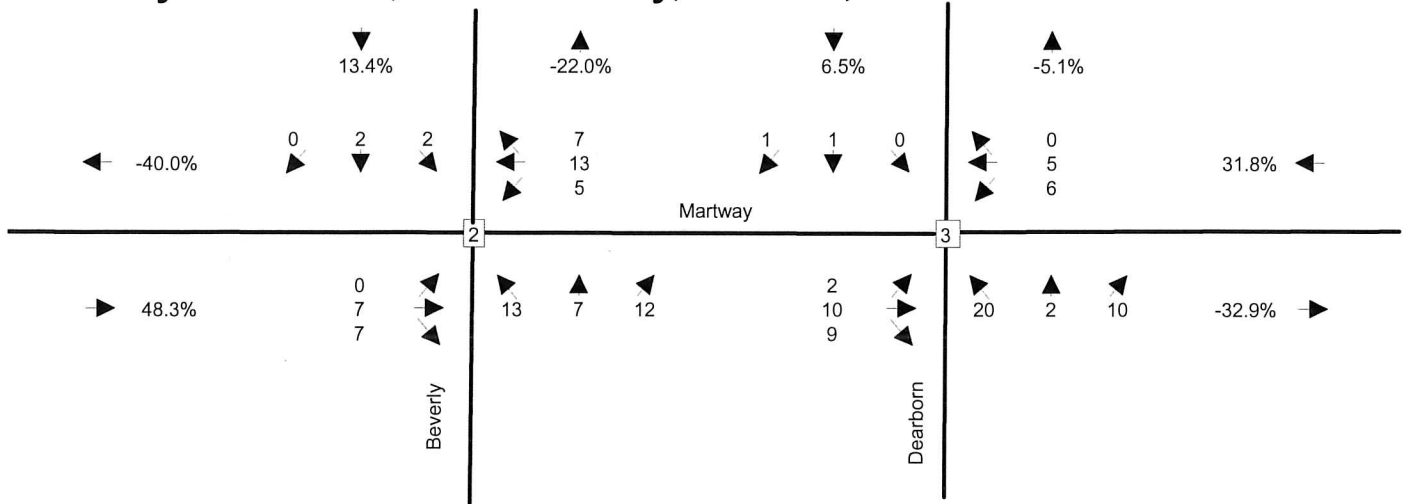
AM Peak Hour Existing Traffic

Martway Mixed-Use, 6045 Martway, Mission, Kansas



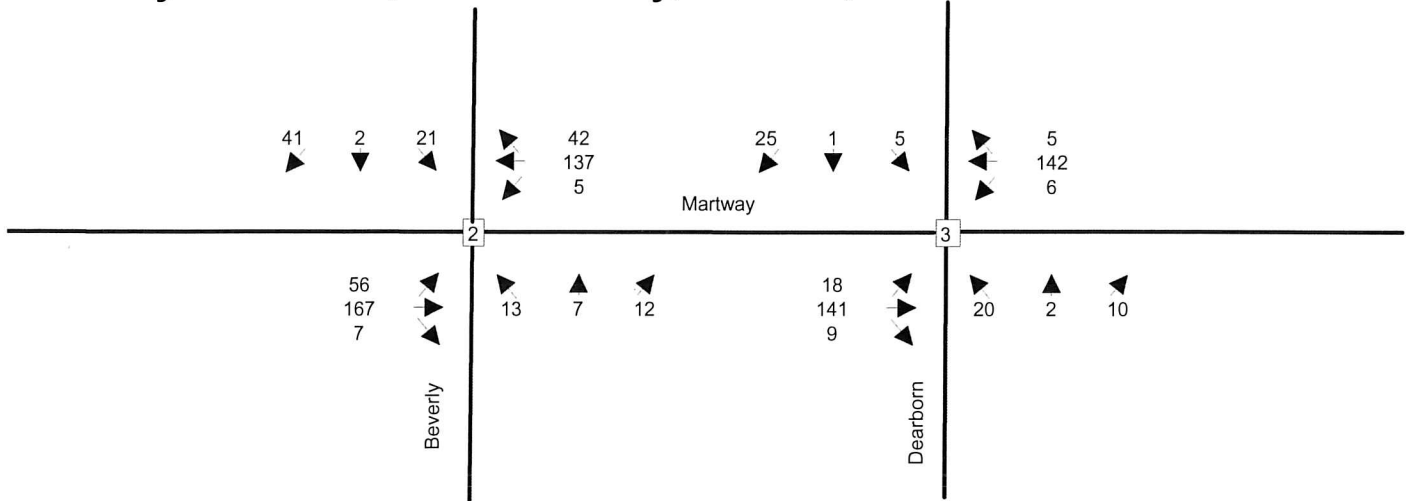
AM Peak Hour Site-Generated Traffic

Martway Mixed-Use, 6045 Martway, Mission, Kansas



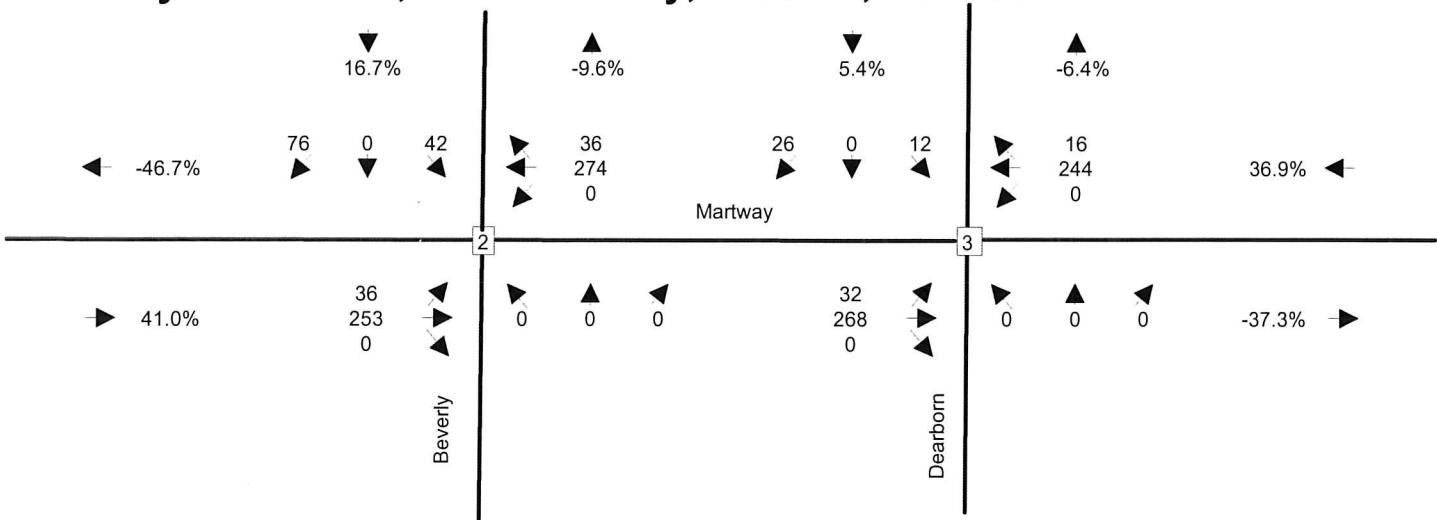
AM Peak Hour Existing Plus Site-Generated Traffic

Martway Mixed-Use, 6045 Martway, Mission, Kansas



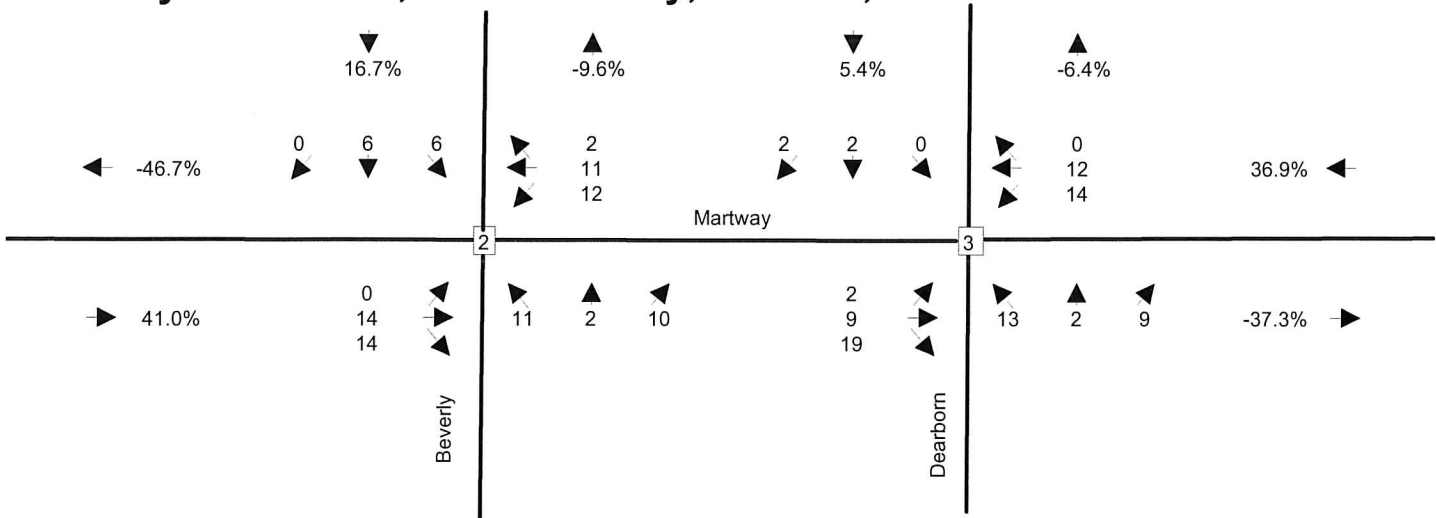
PM Peak Hour Existing Traffic

Martway Mixed-Use, 6045 Martway, Mission, Kansas



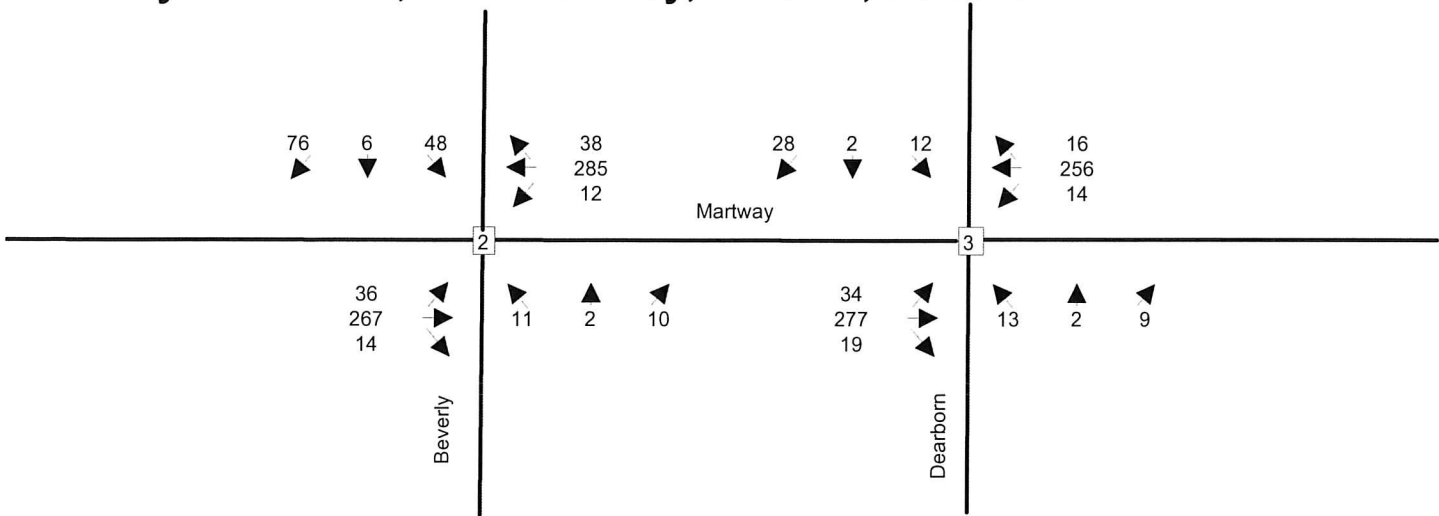
PM Peak Hour Site-Generated Traffic

Martway Mixed-Use, 6045 Martway, Mission, Kansas

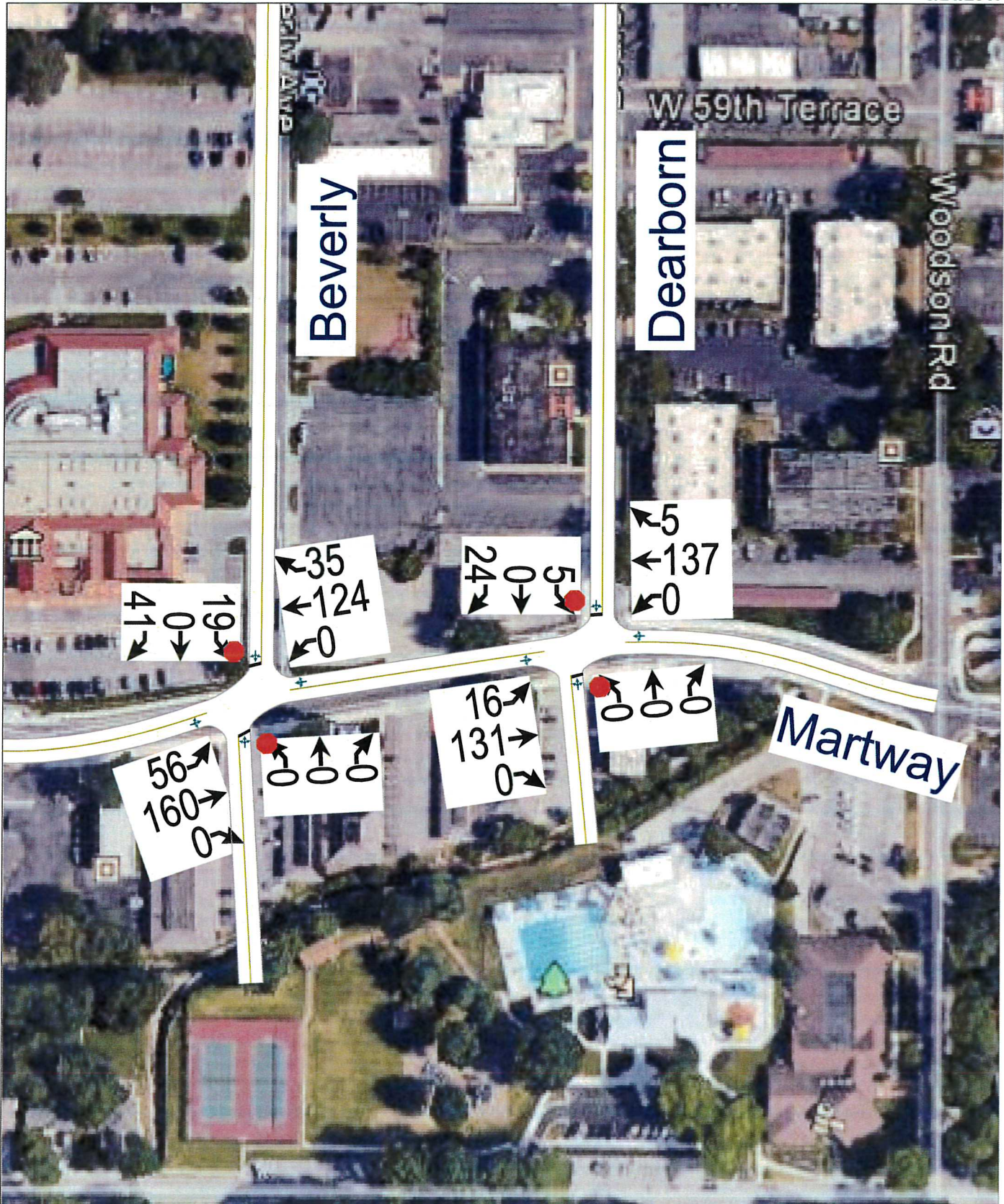


PM Peak Hour Existing Plus Site-Generated Traffic

Martway Mixed-Use, 6045 Martway, Mission, Kansas



Appendix-IV - Synchro Results, AM Peak Traffic Conditions / Pre-Development



Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	56	160	0	0	124	35	0	0	0	19	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	174	0	0	135	38	0	0	0	21	0	45

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	173	0	0	174	0	0	472	469	174	450	450	154
Stage 1	-	-	-	-	-	-	296	296	-	154	154	-
Stage 2	-	-	-	-	-	-	176	173	-	296	296	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1404	-	-	1403	-	-	502	492	869	519	504	892
Stage 1	-	-	-	-	-	-	712	668	-	848	770	-
Stage 2	-	-	-	-	-	-	826	756	-	712	668	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1404	-	-	1403	-	-	459	468	869	500	480	892
Mov Cap-2 Maneuver	-	-	-	-	-	-	459	468	-	500	480	-
Stage 1	-	-	-	-	-	-	678	636	-	807	770	-
Stage 2	-	-	-	-	-	-	785	756	-	678	636	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0	0	10.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1404	-	-	1403	-	-	715
HCM Lane V/C Ratio	-	0.043	-	-	-	-	-	0.091
HCM Control Delay (s)	0	7.7	0	-	0	-	-	10.5
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.3

HCM 2010 TWSC
3: Martway & Dearborn

8/21/2017

Intersection

Int Delay, s/veh 1.2

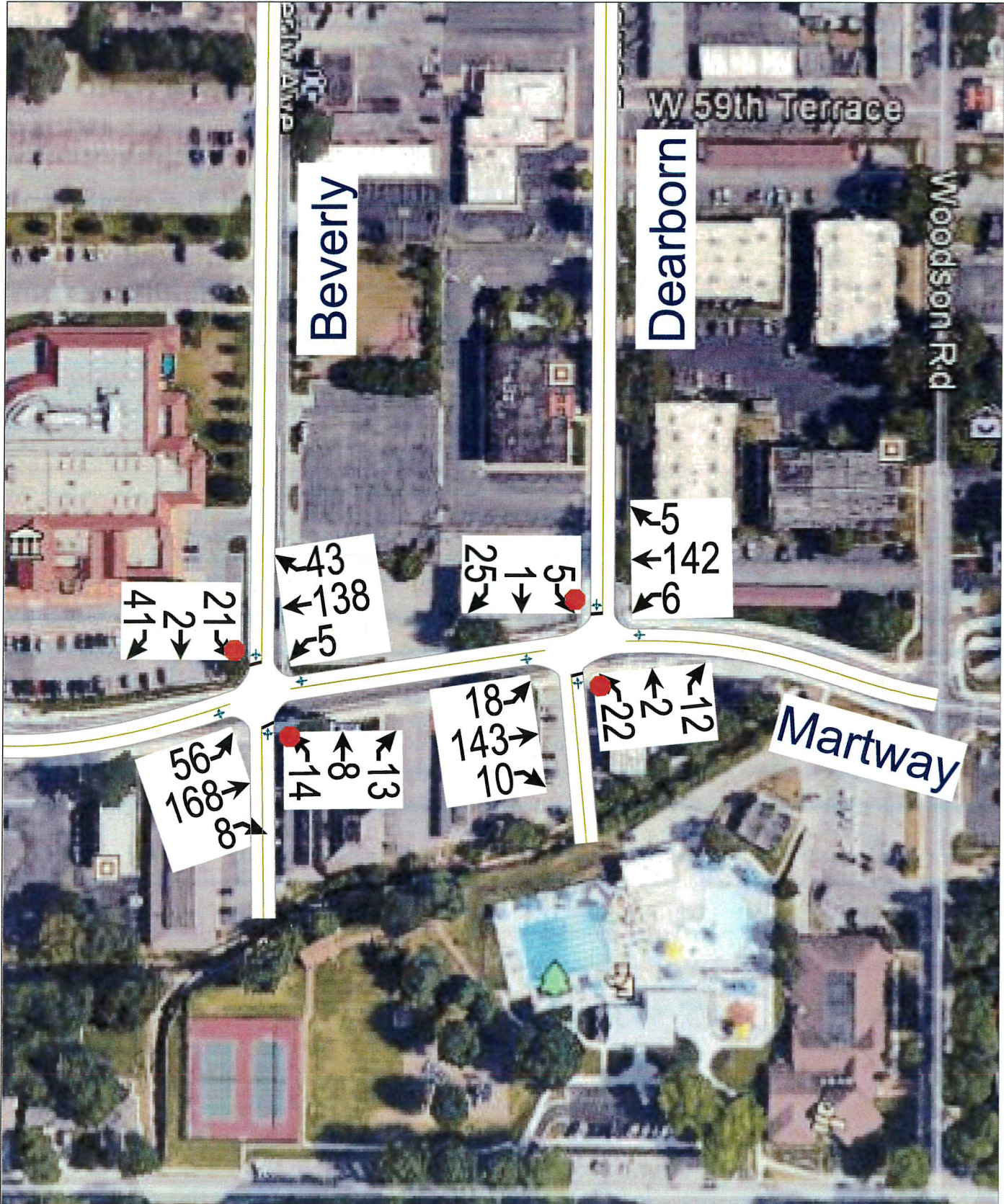
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	16	131	0	0	137	5	0	0	0	5	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	142	0	0	149	5	0	0	0	5	0	26

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	154	0	0	142	0	0	342	331	142	329	329	152
Stage 1	-	-	-	-	-	-	177	177	-	152	152	-
Stage 2	-	-	-	-	-	-	165	154	-	177	177	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1426	-	-	1441	-	-	612	588	906	624	590	894
Stage 1	-	-	-	-	-	-	825	753	-	850	772	-
Stage 2	-	-	-	-	-	-	837	770	-	825	753	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1426	-	-	1441	-	-	588	580	906	618	582	894
Mov Cap-2 Maneuver	-	-	-	-	-	-	588	580	-	618	582	-
Stage 1	-	-	-	-	-	-	814	743	-	839	772	-
Stage 2	-	-	-	-	-	-	813	770	-	814	743	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	0	9.5
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1426	-	-	1441	-	-	830
HCM Lane V/C Ratio	-	0.012	-	-	-	-	-	0.038
HCM Control Delay (s)	0	7.6	0	-	0	-	-	9.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0.1

Appendix V - Synchro Results, AM Peak Traffic Conditions / Post-Development



HCM 2010 TWSC
2: Martway & Beverly

8/21/2017

Intersection

Int Delay, s/veh 3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	56	168	8	5	138	43	14	8	13	21	2	41
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	61	183	9	5	150	47	15	9	14	23	2	45

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	197	0	0	191	0	0	517	517	187	504	497	173
Stage 1	-	-	-	-	-	-	309	309	-	184	184	-
Stage 2	-	-	-	-	-	-	208	208	-	320	313	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1376	-	-	1383	-	-	469	462	855	478	475	871
Stage 1	-	-	-	-	-	-	701	660	-	818	747	-
Stage 2	-	-	-	-	-	-	794	730	-	692	657	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1376	-	-	1383	-	-	425	437	855	444	449	871
Mov Cap-2 Maneuver	-	-	-	-	-	-	425	437	-	444	449	-
Stage 1	-	-	-	-	-	-	666	627	-	777	744	-
Stage 2	-	-	-	-	-	-	748	727	-	638	624	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0.2	12.4	11.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	527	1376	-	-	1383	-	-	648
HCM Lane V/C Ratio	0.072	0.044	-	-	0.004	-	-	0.107
HCM Control Delay (s)	12.4	7.7	0	-	7.6	0	-	11.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.4

HCM 2010 TWSC
3: Martway & Dearborn

8/21/2017

Intersection												
Int Delay, s/veh	2.3											

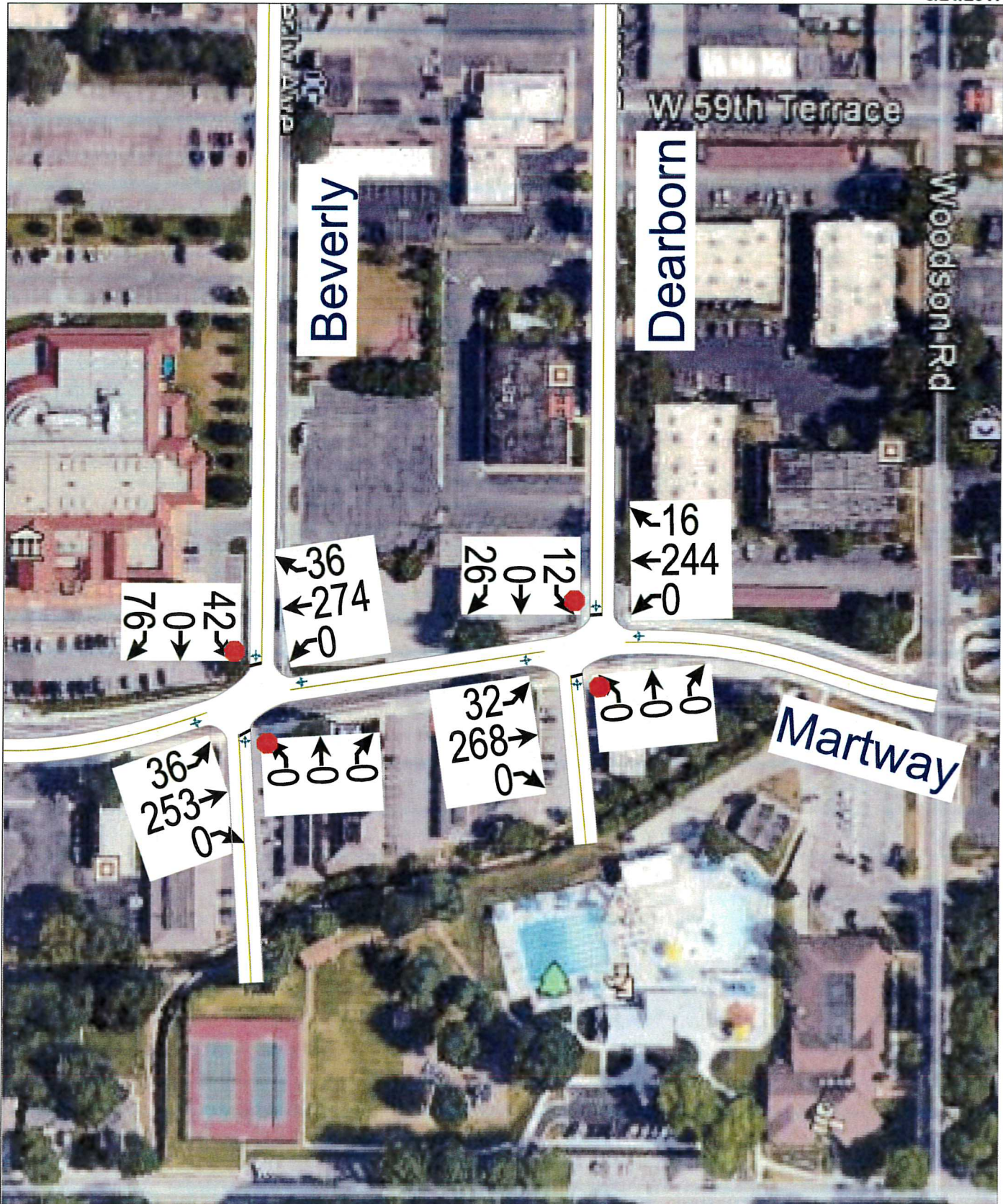
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	18	143	10	6	142	5	22	2	12	5	1	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	155	11	7	154	5	24	2	13	5	1	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	160	0	0	166	0	0	384	373	161	378	375	157
Stage 1	-	-	-	-	-	-	200	200	-	170	170	-
Stage 2	-	-	-	-	-	-	184	173	-	208	205	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1419	-	-	1412	-	-	574	557	884	580	556	889
Stage 1	-	-	-	-	-	-	802	736	-	832	758	-
Stage 2	-	-	-	-	-	-	818	756	-	794	732	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1419	-	-	1412	-	-	547	545	884	561	544	889
Mov Cap-2 Maneuver	-	-	-	-	-	-	547	545	-	561	544	-
Stage 1	-	-	-	-	-	-	789	724	-	819	754	-
Stage 2	-	-	-	-	-	-	788	752	-	767	720	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.3	11.1	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	626	1419	-	-	1412	-	-	797
HCM Lane V/C Ratio	0.063	0.014	-	-	0.005	-	-	0.042
HCM Control Delay (s)	11.1	7.6	0	-	7.6	0	-	9.7
HCM Lane LOS	B	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Appendix VI - Synchro Results, PM Peak Traffic Conditions / Pre-Development



HCM 2010 TWSC
2: Martway & Beverly

8/21/2017

Intersection

Int Delay, s/veh 2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	36	253	0	0	274	36	0	0	0	42	0	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	275	0	0	298	39	0	0	0	46	0	83

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	337	0	0	275	0	0	712	690	275	670	670	317
Stage 1	-	-	-	-	-	-	353	353	-	317	317	-
Stage 2	-	-	-	-	-	-	359	337	-	353	353	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1222	-	-	1288	-	-	347	368	764	371	378	724
Stage 1	-	-	-	-	-	-	664	631	-	694	654	-
Stage 2	-	-	-	-	-	-	659	641	-	664	631	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1222	-	-	1288	-	-	298	354	764	360	364	724
Mov Cap-2 Maneuver	-	-	-	-	-	-	298	354	-	360	364	-
Stage 1	-	-	-	-	-	-	639	607	-	668	654	-
Stage 2	-	-	-	-	-	-	584	641	-	639	607	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	0	13.9
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1222	-	-	1288	-	-	532
HCM Lane V/C Ratio	-	0.032	-	-	-	-	-	0.241
HCM Control Delay (s)	0	8	0	-	0	-	-	13.9
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.9

HCM 2010 TWSC
3: Martway & Dearborn

8/21/2017

Intersection

Int Delay, s/veh 1.1

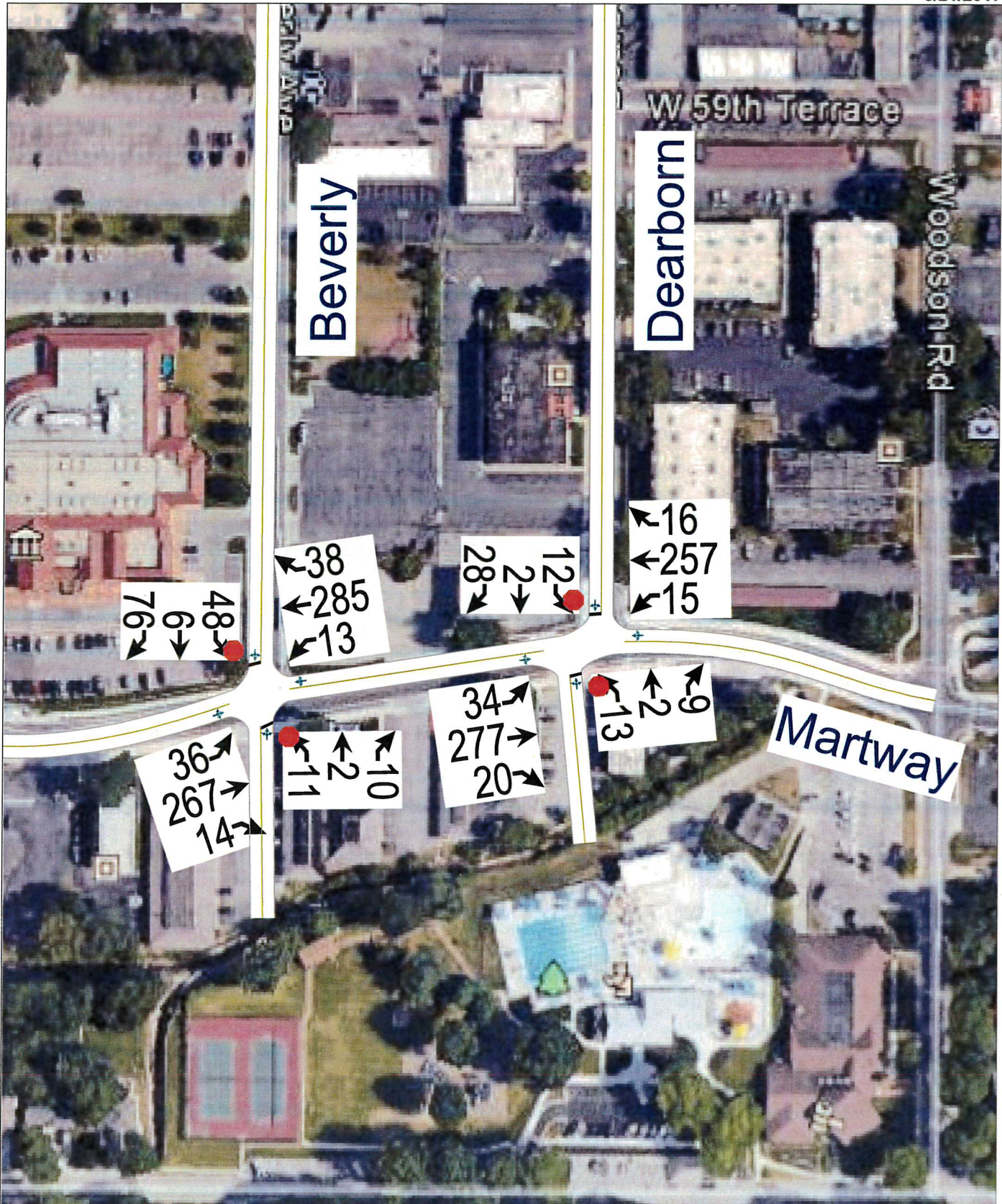
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	32	268	0	0	244	16	0	0	0	12	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	291	0	0	265	17	0	0	0	13	0	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	283	0	0	291	0	0	649	644	291	635	635	274
Stage 1	-	-	-	-	-	-	361	361	-	274	274	-
Stage 2	-	-	-	-	-	-	288	283	-	361	361	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1279	-	-	1271	-	-	383	391	748	391	396	765
Stage 1	-	-	-	-	-	-	657	626	-	732	683	-
Stage 2	-	-	-	-	-	-	720	677	-	657	626	-
Platoon blocked, %												
Mov Cap-1 Maneuver	1279	-	-	1271	-	-	360	378	748	381	383	765
Mov Cap-2 Maneuver	-	-	-	-	-	-	360	378	-	381	383	-
Stage 1	-	-	-	-	-	-	635	605	-	708	683	-
Stage 2	-	-	-	-	-	-	693	677	-	635	605	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	0	11.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1279	-	-	1271	-	-	580
HCM Lane V/C Ratio	-	0.027	-	-	-	-	-	0.071
HCM Control Delay (s)	0	7.9	0	-	0	-	-	11.7
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.1	-	-	0	-	-	0.2

Appendix VII - Synchro Results, PM Peak Traffic Conditions / Post-Development



HCM 2010 TWSC
2: Martway & Beverly

8/21/2017

Intersection

Int Delay, s/veh 3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	36	267	14	13	285	38	11	2	10	48	6	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	290	15	14	310	41	12	2	11	52	7	83

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	351	0	0	305	0	0	779	755	298	742	743	330
Stage 1	-	-	-	-	-	-	376	376	-	359	359	-
Stage 2	-	-	-	-	-	-	403	379	-	383	384	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1208	-	-	1256	-	-	313	338	741	332	343	712
Stage 1	-	-	-	-	-	-	645	616	-	659	627	-
Stage 2	-	-	-	-	-	-	624	615	-	640	611	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1208	-	-	1256	-	-	262	320	741	312	325	712
Mov Cap-2 Maneuver	-	-	-	-	-	-	262	320	-	312	325	-
Stage 1	-	-	-	-	-	-	620	592	-	633	618	-
Stage 2	-	-	-	-	-	-	538	606	-	604	587	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.3	15.3	16.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	1208	-	-	1256	-	-	466
HCM Lane V/C Ratio	0.067	0.032	-	-	0.011	-	-	0.303
HCM Control Delay (s)	15.3	8.1	0	-	7.9	0	-	16.1
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	1.3

HCM 2010 TWSC
3: Martway & Dearborn

8/21/2017

Intersection

Int Delay, s/veh 1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	34	277	20	15	257	16	13	2	9	12	2	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	301	22	16	279	17	14	2	10	13	2	30

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	297	0	0	323	0	0	723	715	312	713	718	288
Stage 1	-	-	-	-	-	-	386	386	-	321	321	-
Stage 2	-	-	-	-	-	-	337	329	-	392	397	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1264	-	-	1237	-	-	342	356	728	347	355	751
Stage 1	-	-	-	-	-	-	637	610	-	691	652	-
Stage 2	-	-	-	-	-	-	677	646	-	633	603	-
Platoon blocked, %												
Mov Cap-1 Maneuver	1264	-	-	1237	-	-	314	338	728	327	337	751
Mov Cap-2 Maneuver	-	-	-	-	-	-	314	338	-	327	337	-
Stage 1	-	-	-	-	-	-	614	588	-	666	642	-
Stage 2	-	-	-	-	-	-	637	636	-	600	581	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.4	14.6	12.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	402	1264	-	-	1237	-	-	526
HCM Lane V/C Ratio	0.065	0.029	-	-	0.013	-	-	0.087
HCM Control Delay (s)	14.6	7.9	0	-	7.9	0	-	12.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.3

MARTWAY MIXED USE – STORMWATER DRAINAGE MEMORANDUM

PAGE 1 OF 3

DATE: September 13th, 2017
RE: Martway Mixed Use Apartments
6045 Martway
Mission, Kansas 66202
CFS Project No. 17-5085

On behalf of the owners of the Martway Mixed Use development, CFS Engineers, P.A., requests a waiver from stormwater management based on the minimal change in surface runoff characteristics between the pre and post-development site conditions. The site is bounded on the north by Martway Street, on the south by Rock Creek, and along the east and west by low-rise commercial/office buildings. Johnson Drive and Mission's downtown shopping strip is located less than a quarter mile to the north. The Sylvester Powell Jr. Community Center is located to the northwest. The Mission Aquatic Center is located across Rock Creek to the southeast.



**Site Location Map, Mission, Kansas
Proposed Martway Mixed Use Development**

The proposed 1.767 acre site calls for the removal of three existing single story office buildings and parking lots along the southern side of Martway Street between Beverly Avenue and Dearborn Street and replacing them with a multi-story apartment complex building with business space and parking on the lower level. The apartment building would be elevated to provide

MARTWAY MIXED USE – STORMWATER DRAINAGE MEMORANDUM

PAGE 2 OF 3

parking at ground level. The changes between the pre and post-development impervious surface area was less than 5,000 sq ft per the APWA 5600, and was measured as follows:

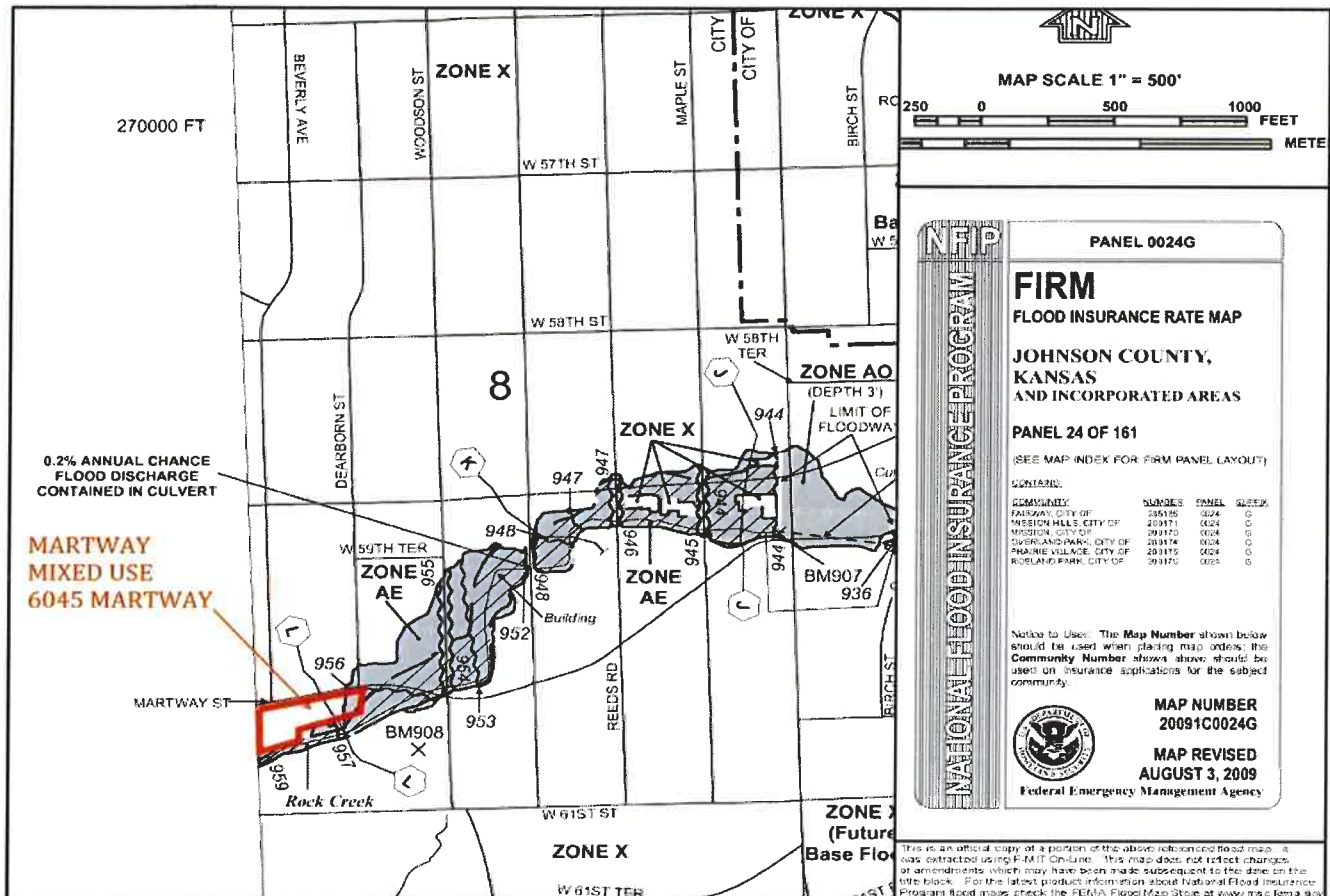
Pre-Development Conditions:

- Total Site Area = 1.767 acres
- Impervious Surface = 1.415 acres/61,653 sqft
- 80.1% Impervious

Post-Development Conditions:

- Total Site Area = 1.767 acres
- Impervious Surface = 1.494 acres/65,071 sqft (3,418 sqft increase)
- 84.6% Impervious

Under the APWA Section 5601.3.A.3, “Remodeling, repair, replacement or other improvements to any existing structure or facility and appurtenances on sites smaller than two acres that does not cause an increased area of impervious surface on the site in excess of 10 percent of that previously existing.” The 1.767 acre site is smaller than two acres and the 3,418 sqft increase in impervious surface from 80.1% to 84.6% does not exceed the allowable 5,000 sqft increase limit allowed by the APWA.




MARTWAY MIXED USE – STORMWATER DRAINAGE MEMORANDUM

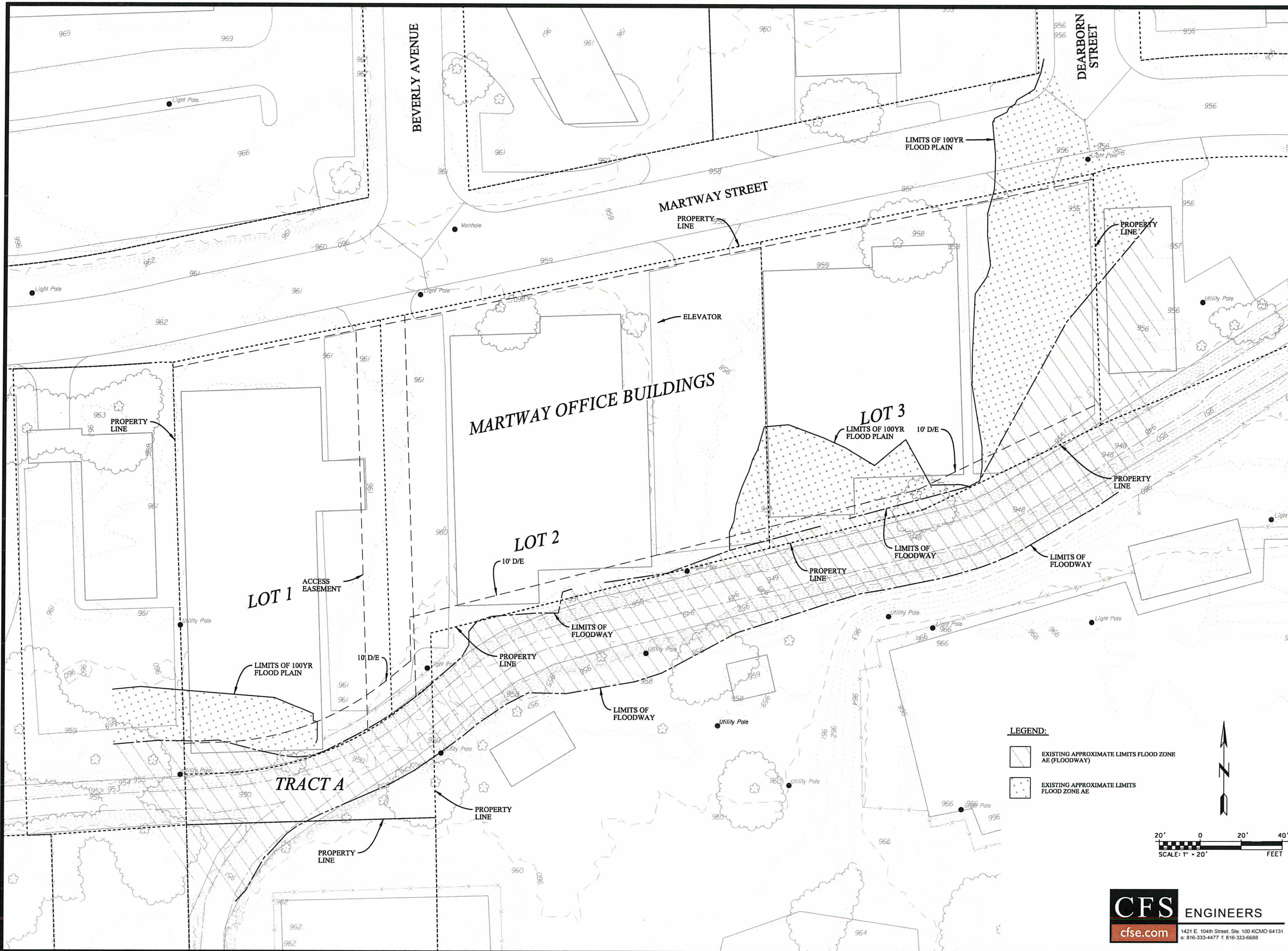
PAGE 3 OF 3

Stormwater runoff from the site's proposed parking lot and building roofs would be collected and drained directly into Rock Creek flowing eastwards along the rear of the property. The FEMA FIRM Panel 20091C0024G indicates that a small portion of the site is designated within 100-year flood zone AE from flooding during the 100-year storm event. The 3,491 sqft of business space on the ground floor would be set along the northern side of the site fronting Martway Street, and would be out of the FEMA 100-year flood zone. The upper floor apartments would be constructed on raised piers above the ground floor parking lot and would be one story above the FEMA 100-year flood zone.

The proposed parking lot plan has a total of 166 spaces (including five ADA accessible spaces and one ADA van-accessible space), so the developer would need to lease an additional 44 off-site parking spaces to meet the City's total 210 space requirement for the proposed apartments and business space. Superimposing the 100-year FEMA floodplain elevations from Rock Creek onto the proposed parking lot grading indicated that 40 spaces would be within the floodplain limits, however, no space would have more than the allowable 7 inches of water during the 100-year event.





Lucas W. Williams
9/13/17

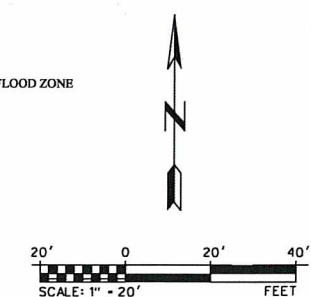


Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

LEGEND:

-  EXISTING APPROXIMATE LIMITS FLOOD ZONE AE (FLOODWAY)
-  EXISTING APPROXIMATE LIMITS FLOOD ZONE AE



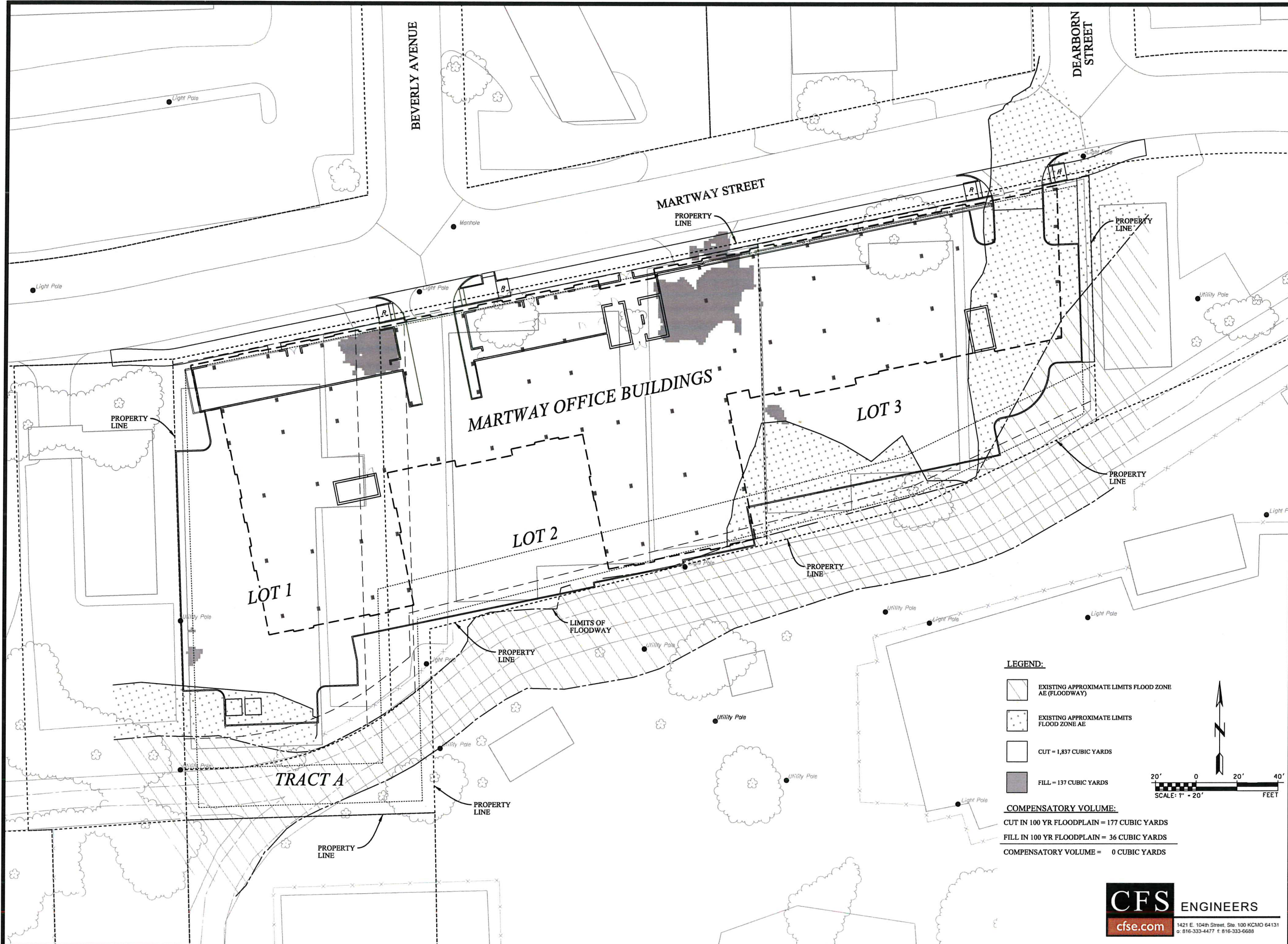
REV	ISSUE	DATE
	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017

16.05.Martway

C202

EXISTING FLOOD PLAIN PLAN





CFS ENGINEERS
 cfse.com
 1421 E. 104th Street, Ste. 100 KCMO 64131
 p. 816-333-4477 f. 816-333-6688

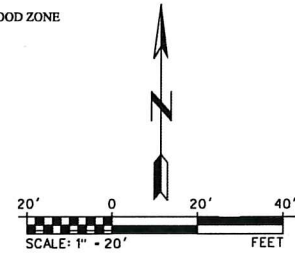


Martway Mixed Use

6009 - 6045 Martway
 Mission, KS 64202

LEGEND:

-  EXISTING APPROXIMATE LIMITS FLOOD ZONE AE (FLOODWAY)
-  EXISTING APPROXIMATE LIMITS FLOOD ZONE AE
-  CUT = 1,837 CUBIC YARDS
-  FILL = 137 CUBIC YARDS



COMPENSATORY VOLUME:

CUT IN 100 YR FLOODPLAIN = 177 CUBIC YARDS
 FILL IN 100 YR FLOODPLAIN = 36 CUBIC YARDS
 COMPENSATORY VOLUME = 0 CUBIC YARDS

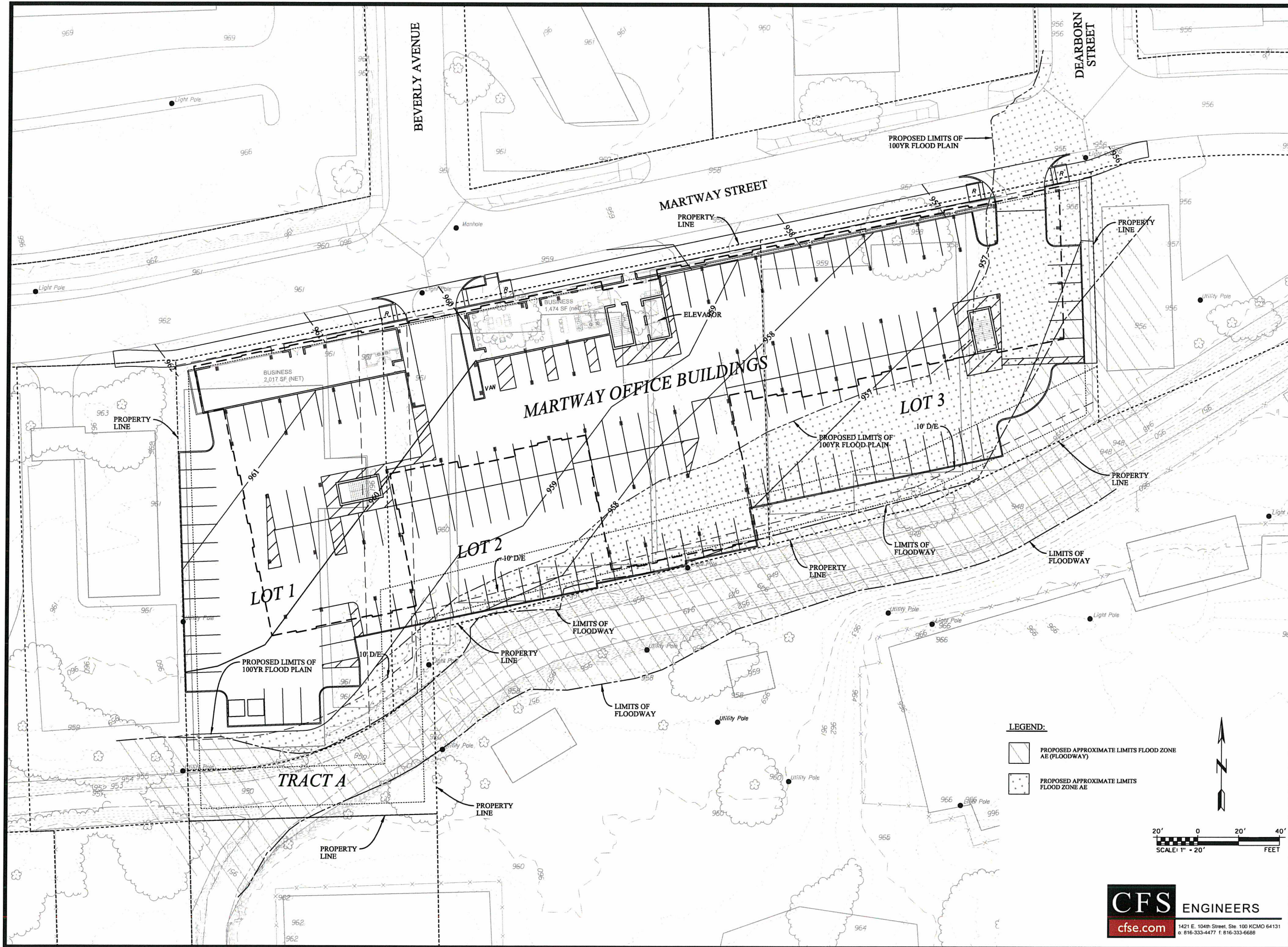
REV	ISSUE	DATE
	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017

16.05.Martway

C201

CUT & FILL PLAN

CFS ENGINEERS
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clockwork
 423 Delaware St Ste 102
 Kansas City MO 64105
 www.clockwork-ad.com

LUCAS W. WILLIAMS - ENGINEER
 KS PE # 20382

Martway Mixed Use
 6009 - 6045 Martway
 Mission, KS 64202

REV	ISSUE	DATE
	PRELIM. DEV. PLAN SUBMITTAL	07.12.2017

16.05.Martway

C203

PROPOSED FLOOD PLAIN PLAN

LEGEND:

- PROPOSED APPROXIMATE LIMITS FLOOD ZONE AE (FLOODWAY)
- PROPOSED APPROXIMATE LIMITS FLOOD ZONE AE

SCALE: 1" = 20' FEET

North Arrow

CFS ENGINEERS
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