CITY OF BLOOMINGTON

PLAN COMMISSION

June 12, 2017 @ 5:30 p.m.
COUNCIL CHAMBERS #115
CITY HALL

CITY OF BLOOMINGTON
PLAN COMMISSION
June 12, 2017 @ 5:30 p.m. ❖ **City Council Chambers - Room #115**

ROLL CALL

MINUTES TO BE APPROVED:

January 9, 2017
February 13, 2017
March 6, 2017
April 20, 2017 – PC Special Hearing Comprehensive Plan

REPORTS, RESOLUTIONS AND COMMUNICATIONS:

PETITIONS CONTINUED TO: July 10, 2017

SP-06-17 **Mara Jade Holdings, LLC**
318 E. 3rd St.
Site plan approval for a 4-story mixed-use building.
Case Manager: Eric Greulich

SP-07-17 **Annex Student Living (Kyle Bach)**
313, 317, 325, 403 & 409 E 3rd St., and 213 S. Grant St.
Site plan approval for a 4-story mixed-use building and a 5-story mixed-use building.
Case Manager: Amelia Lewis

CONSENT AGENDA:

SP-16-17 **Lewis Development Co.**
200 S. Washington St., 114 E. 4th St., 121 E. 3rd St.
Site plan approval for two, 4-story mixed-use buildings.
Case Manager: Jackie Scanlan

PETITIONS:

PUD-08-17 **Mecca Companies (Kyle Bach)**
1100 N. Crescent Dr.
Rezone 8 acres from Residential Single-family (RS) to Planned Unit Development (PUD) and to approve a PUD District Ordinance. Also requested is preliminary plan approval to allow a new affordable housing multi-family apartment complex.
Case Manager: Eric Greulich

ZO-09-17 **City of Bloomington**
UDO Amendment (Accessory Dwelling Units)
Amendments to the City's Unified Development Ordinance to permit limited numbers of Accessory Dwelling Units (ADUs) within single-family zoning districts.
Case Manager: James Roach

Next Meeting July 10, 2017 **Last Updated: 6/9/2017**

Auxiliary aids for people with disabilities are available upon request with adequate notice. Please call 812-349-3429 or e-mail human.rights@bloomington.in.gov.

ZO-11-17 **City of Bloomington**
UDO Amendment (Pocket Neighborhoods)
Amendments to the City's Unified Development Ordinance to permit Pocket Neighborhoods as conditional uses within the Residential Core (RC) and Single-family Residential (RS) zoning districts.
Case Manager: James Roach

SP-17-17 **Tariq Khan**
201 S. College Ave.
Site plan approval for one, 4-story mixed-use building.
Case Manager: Jackie Scanlan

Next Meeting July 10, 2017 **Last Updated: 6/9/2017**

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BLOOMINGTON PLAN COMMISSION **CASE #: PUD-08-17**
STAFF REPORT – Second Hearing **DATE: June 12, 2017**
Location: 1100 N. Crescent Dr.

PETITIONER: Mecca Companies, Inc.
2417 Fields South Drive, Champaign, IL

CONSULTANT: Smith Brehob & Associates, Inc.
453 S. Clarizz Blvd., Bloomington

REQUEST: The petitioner is requesting to rezone 8 acres from Residential Single-family (RS) to Planned Unit Development (PUD) and to approve a PUD District Ordinance and preliminary plan to allow a new affordable housing multi-family apartment complex.

BACKGROUND:

Area:	8 acres
Current Zoning:	RS
GPP Designation:	Urban Residential
Existing Land Use:	Vacant, wooded
Proposed Land Use:	Multi-family residences
Surrounding Uses:	North – Single family residences (Crescent Point)
	West – Industrial and Single family residences
	East – Single family residences
	South – Industrial and Single family residences

CHANGES SINCE FIRST HEARING: At the first hearing the Plan Commission expressed concern about the encroachments into the riparian buffer and karst features, the length of affordability for the housing, and what best management practices could be incorporated to mitigate the proposed environmental encroachments. To that end the petitioner has submitted the following information and changes:

- The preliminary plan has been modified to completely remove one of the proposed buildings. The result of this is removal of some of the proposed encroachments into the riparian buffer as a result of the construction of the building.
- As a result of the removal of one of the buildings, the central building has increased in height to a 5-story building with a lower level walkout and a total height of 62'. This has also resulted in an additional building expense since the building will now have to have an elevator as a result of the 5-stories.
- 3 units and 12 bedrooms have been removed. The reduction of 3 units also will allow 3 parking spaces to be removed which has not been reflected in the plans yet.
- Several borings have been performed across the site to determine depth to bedrock and suitability of the site for the location of the proposed foundations for the buildings. The borings did not reveal any unstable building locations or unusual features.

- A written response to the previous Environmental Commission memo was submitted outlining several responses to their comments.
- A tree inventory was submitted showing the location of all trees in the proposed disturbed area larger than 10" in caliper. Staff will use this exhibit to identify trees on the site that can possibly be saved through the use of retaining walls or other means during PUD final plan stage.

REPORT: The property is located at 1100 N. Crescent Road. The property is zoned Residential Single-family (RS). Surrounding land uses include single family residences to the north, industrial offices and single family residences to the west and south, and single family residences to the east.

The site is 90% wooded and contains a compound sinkhole in the southwest corner of the site and an off-site sinkhole to the southeast of this site which have karst buffers that extend onto this site. There are also 2 areas of steep slopes (greater than 18%) and several areas of 12-18% slope on this site. There is an intermittent stream on the north side of the site with a regulated riparian buffer.

The petitioner is requesting to rezone the property to Planned Unit Development in order to develop the site with four buildings with a total of 146 units and 245 bedrooms. The proposed density is 10 D.U.E per acre. There will be 67 one-bedroom units, 59 two-bedroom units, and 20 three-bedroom units. A total of149 parking spaces will be provided. Approximately 70-80% of the units will be used for affordable housing for tenants who are at or below the area median income. The petitioner will be applying for Low Income Housing Tax Credits and HOME funds through the City. These programs would carry with them a 20-30 year commitment for affordability.

GROWTH POLICIES PLAN: This property is designated as "*Urban Residential*". The GPP notes that redevelopment in these areas should include the following-

- *"when development occurs in new urban growth areas, the goal should be to encourage higher densities, ensure street connectivity, and protect existing residential fabric."* Although the density at this location is higher than what the underlying zoning district would allow, this location is unique in that it is a large site and there are 3 public street connections proposed with this development that would help ensure connectivity for this site. This petition also provides affordable housing for the community which furthers many goals of the GPP.

- *"Optimize street, bicycle, and pedestrian connectivity to adjacent neighborhoods as well as to commercial activity centers."* This petition includes public street connections that include extending a road stub that was provided to the north that will connect through this site to 14th Street to the east. Due to the environmental constraints on this property, it is very unlikely that any petition for this site other than a multi-family project would be able to accomplish all of the street connections proposed.

- *"Provide for marginally higher development densities while ensuring the preservation of sensitive environmental features and taking into consideration infrastructure capacity as well as the relationship between the new development and adjacent existing neighborhoods."* As mentioned, due to the environmental constraints on this site only a tall clustered development could be constructed on this site that would be able to afford the infrastructure costs. The ability to provide a significant level of affordable housing with this petition accomplishes many goals of the GPP and the City. This petition aggregates the development into a central cluster rather than spread out across the site as a single family subdivision.

The GPP notes that in regards to environmental protection when development does occur near sensitive areas, conservation techniques and best management practices must be employed to encourage the protection of environmental quality. The Department will continue to seek possible solutions that can be incorporated at final plan stage to help mitigate the requested deviations from environmental standards. Items such as additional erosion control measures will help mitigate the impacts to development in the steep slope areas.

This petition incorporates many goals described within the GPP including development of vacant property, completing road networks, providing alternative transportation paths, protected open space, and compact urban form. The GPP also encourages, when possible, to improve the capacity and aesthetics of all urban services, including new sidewalk links, new bike baths, and replacement of utility infrastructure.

DISTRICT ORDINANCE/ PRELIMINARY PLAN ISSUES:

Development Standards: This PUD would use the Residential High-Density Multifamily (RH) district standards with the modifications listed in the district ordinance. The proposed modifications to the RH standards include an increased building height of 62' which results from the walk-out design and is only present along the back side of the buildings. The other requested deviations are related to the Environmental Standards related to karst buffer, riparian buffer, and steep slope regulations. The petitioner is requesting to allow disturbance within the 25' karst buffer area and 10' no-build area for the compound sinkhole in the southwest corner of the site to allow a small portion of a parking lot and a covered bike rack to be in the required buffer area. In addition, there is an off-site sinkhole to the east of this site that would have a required buffer and 10' no-build around it as well that the petitioner is also requesting to allow a portion of a proposed parking lot to encroach within. Staff believes that there are 3 parking spaces adjacent to that sinkhole that can be removed to minimize impacts, a condition of approval has been included to that effect. There are 2 areas of steep slopes (greater than 18% slope) that are on the site and there is one proposed building that would be constructed within one of these steep slope areas. There is also an intermittent stream on the north side of the site with a required 75' buffer that a portion of a parking lot and drive aisle are proposed to be located within.

	RH requirement	Proposed
Height	50’	62’
Karst Preservation	25’ from closed contour + 10’ no-build	Partial encroachment into easement and 10’ no-build
Steep Slopes	No disturbance allowed	Partial encroachment
Riparian Buffer	75’ on both sides of streambank	Partial encroachment

Architecture/Design: Renderings have been submitted for all 3 of the proposed buildings. The buildings will be finished with stone veneer, lap siding, and fiber cement panels. All of the buildings will have a pitched roof with asphalt shingles. The buildings will be mostly 3, 4 and 5-story buildings with the 5-story building proposed to be 62’ tall rather than the 50’ height limit of the RH district. The increased height comes from the walk-out design and added story as a result of the removed building. The height is measured from the lowest point along the back side of the building to the peak of the roof. From the front, the buildings will be 3, 4 and 5-stories with a maximum height of 62’. The petitioner has requested in their district ordinance that the buildings deviate from the typical 50’ height limit of the RH district to allow the 62’ tall buildings.

Access: The project will be accessed at several points. There will be one access drive on Crescent Drive to the west as well as an extension of the road stub from Glandore Drive to the north into the parking lot. There will also be a connection provided through an unbuilt part of 14th Street to the east that connects to Oolitic Drive. The internal drive will be a private drive with parking along the drive aisle. An access easement must be recorded for the parking area to ensure cross access through the site and a condition of approval has been included to that effect.

Affordable Housing: With this petition at least 70% of units would be affordable housing for a minimum of 30-years. The project will be using the Indiana Housing and Community Development (IHCDA) guidelines for Low Income Housing Tax Credits (LIHTC) which means the tenants must be at or below 60% of the area median income to qualify. At this time the petitioner can only commit to a 30-year commitment. The petitioner has not committed to a length of time for the affordable housing commitment beyond the minimum 30-year program requirements, however the Department recommends a 99-year commitment be required for this petition. Additional information may be available by the Plan Commission hearing for further arrangements.

Environmental:

Tree Preservation: The site is 90% wooded and the UDO requires at least 50% of the canopy to be preserved. The preliminary plan meets that requirement.

Karst Features: There is a sinkhole in the southwest corner of the site and a sinkhole just south of this site that is within 100’ of the sinkhole on this site which would require an easement and buffer that includes both features. Due to the off-site sinkhole, the karst conservation area must include both features which places a portion of the proposed parking lot and a covered bike rack in the

easement and 10’ no-build area. There is also a sinkhole to the east of this site which has a karst buffer and 10’ no-build area that also extends onto this site. This off-site sinkhole also has several existing residences within the sinkhole with no negative impacts. A portion of the parking lot at the southeast corner of the site encroaches into the required preservation area and the actual closed contour of the sinkhole.

Steep Slopes: There are 2 areas of steep slopes (greater than 18%) and several areas of 12-18% slope on this site. The UDO allows 50% disturbance within slopes of 12-18% and the petitioner does not exceed that allowance. There are 2 areas of steep slope on the site that are greater than 18% which the UDO does not allow any disturbance within. The petitioner is requesting to allow a portion of one of the buildings and parking area within these steep slope areas. The Department believes these encroachments are appropriate when mitigated appropriately.

Riparian Buffer: There is an intermittent stream on the north side of the site with a regulated riparian buffer. The UDO does not allow disturbance within 75’ of the top of bank along both sides of the stream. The petitioner is requesting to allow a portion of a parking area and drive aisle to be in the riparian buffer. The Department believes these encroachments are appropriate. The Department agrees that it would be counterintuitive to take down additional trees in order to create a planted riparian buffer. The incorporation of some understory plantings could be implemented to improve the vegetation in the area and a condition of approval (condition #7) has been included to that effect.

Right-of-Way Dedication: With this petition there would be 25’ of right-of-way that would be required to be dedicated for Crescent Drive. This would be required within 180 days of the Council approval of this rezoning request and a condition of approval (condition #2) has been included.

Parking: The petitioner is proposing to provide 146 on-site parking spaces which equals one space per unit and 0.58 parking spaces per bedroom. A total of 43 bicycle parking spaces are required. There will be 34 Class I surface bike parking spaces and 20 covered bike parking spaces for a total of 54 bicycle parking spaces provided which meets the UDO requirements.

Pedestrian Facilities: A 10' wide asphalt sidepath and minimum 5’ wide tree plot will be built along Crescent Drive frontage. The 10’ sidepath will be part of an extended network in this area to connect to the B-Line trail. Internal sidewalks have been shown to connect the proposed buildings to the sidepath along Crescent Drive.

Traffic Study: A brief traffic analysis for the proposed development shows an average number of daily trips of 483 versus a possible single family subdivision for 12 lots with an average number of daily trips of 114. Most of this traffic is expected to use Crescent Drive, however there will also be traffic directed south to Oolitic Dr. through 14th Street.

Utilities: Utility plans have been submitted to the City of Bloomington Utility Department. These specific details will be reviewed with the PUD final plan approval

process. City of Bloomington Utilities can adequately serve the site. Stormwater detention will be handled through underground detention.

Lighting: A specific lighting plan has not been received. Staff has encouraged the petitioner to incorporate pedestrian scale lighting throughout the interior of the site and to appropriately place lighting along the public street frontages as well. All interior site lighting will be powered by solar power collected on-site. A final lighting and photometric plan will be reviewed at PUD final plan stage.

ENVIRONMENTAL COMMISSION RECOMMENDATIONS: The Bloomington Environmental Commission (EC) has made several recommendations concerning this development.

1. Conduct a study of Indiana bat habitat. Because federal money will be used for this apartment complex, a study regarding endangered species, particularly Indiana bat, must be completed. This site boasts several potential roost trees, is large enough, and is within close enough proximity to hibernacula and other roosting sites that a habitat survey merits completion.

   Response: The petitioner has stated that no tree clearing work would occur from March 31 through October 15 to minimize disturbance.

2. Conduct a tree inventory that identifies the species of all trees greater than 6 inches diameter at breast height (DBH) that will be removed with development. Also identify any trees on the edges of development that are greater than 10 inches DBH that could potentially be protected with some minor adjustments.

   Response: The Department will work with the petitioner toward minimizing any excess tree clearing during the PUD Final Plan review.

3. State in the PUD District Ordinance a commitment to specific innovative green building practices that will reduce not only the carbon footprint, but the cost of energy for residents

   Response: The petitioner has submitted a list of Green Development features and that is outlined in their Petitioner Statement that is included in this packet.

4. Provide the Phase 1 Environmental Assessment that was conducted.

   Response: The petitioner must submit this with the final plan approval request and a condition of approval (condition #9) has been included to that effect.

5. Provide the number of units within a 1-mile radius of the site that currently has any kind of financially-subsidized housing.

   Response: The Monroe County School Cooperation was forwarded a copy of the proposal through the Development Review Committee and no comments were received.

6. Knowing that the Petitioner has not yet crafted a grading plan, erosion and sediment control plan (E/SCP), or stormwater pollution prevention plan for the site, a commitment in the PUD District Ordinance that describes the erosion control best practices intended for use should be provided. These practices shall employ, at the minimum, all requirements in the BMC Titles 10 and 20, and 327 IAC 15-5. All practices adjacent to environmentally sensitive areas are required to apply redundant erosion control measurements and be appropriate to the characteristics of the site.

   Response: The Department recommends that the petitioner incorporate this recommendation and this will be reviewed with the PUD Final Plan. A condition of approval (condition #10) has been included to that effect.

20.04.080(h) Planned Unit Development Considerations

The UDO outlines that in their consideration of a PUD District Ordinance and Preliminary Plan, the Plan Commission and Common Council shall consider as many of the following as may be relevant to the specific proposal. The following list shall not be construed as providing a prioritization of the items on the list. Each item shall be considered individually as it applies to the specific Planning Unit Development proposal.

(1) The extent to which the proposed Preliminary Plan meets the requirements, standards, and stated purpose of Chapter 20.04: Planned Unit Development Districts.

   COMMENTS: This petition meets the requirements for a Planned Unit Development and accomplishes the purposes of a PUD which is to provide a unique land use and petition that would not be allowed in a regular zoning district. The design of this PUD provides a high density affordable housing project which is a direct benefit to the community.

(2) The extent to which the proposed Preliminary Plan departs from the Unified Development Ordinance provisions otherwise applicable to the subject property, including but not limited to, the density, dimension, bulk, use, required improvements, and construction and design standards and the reasons why such departures are or are not deemed to be in the public interest.

   COMMENTS: The proposed deviations from the UDO that are outlined in the PUD District Ordinance are necessary to further the purpose of the PUD which is to provide an affordable housing apartment complex.

(3) The extent to which the Planned Unit Development meets the purposes of this Unified Development Ordinance, the Growth Policies Plan, and any other adopted planning objectives of the City. Any specific benefits shall be specifically cited.

   COMMENTS: The PUD meets the purposes of the City by providing an affordable housing project and that is on a Bloomington Transit service line.

This petition includes affordable housing, infill development, appropriate mitigation of impacts to environmental features, and several connection points to adjacent streets.

(4) The physical design of the Planned Unit Development and the extent to which it:
   a. Makes adequate provision for public services;
   b. Provides adequate control over vehicular traffic;
   c. Provides for and protects designated common open space; and
   d. Furthers the amenities of light and air, recreation and visual enjoyment.

COMMENTS: The PUD provides adequate public services by providing sidewalks surrounding the project, including a new 10' asphalt sidepath along Crescent Drive. In addition new vehicular connections to Glandore Drive to the north and Oolitic Drive/14th Street to the east will be created. Through the removal of one of the buildings, a common area has been created that can be used as a community garden or neighborhood park. Details surrounding that will be determined at the PUD Final Plan stage.

(5) The relationship and compatibility of the proposed Preliminary Plan to the adjacent properties and neighborhood, and whether the proposed Preliminary Plan would substantially interfere with the use or diminish the value of adjacent properties and neighborhoods.

COMMENTS: This site is not imbedded within a single family neighborhood and the size of the project site allows it to mitigate any impacts to the adjacent neighborhoods. The large amount of open space surrounding the development site helps mitigate impacts from the use of the site. There is a buffer yard required around the site which provided increased setbacks and additional landscaping.

(6) The desirability of the proposed Preliminary Plan to the City's physical development, tax base and economic well-being.

COMMENTS: The provision of an estimated 146 units and new construction will increase the tax base to the City and provide needed housing for Bloomington's workforce.

(7) The proposal will not cause undue traffic congestion, and can be adequately served by existing or programmed public facilities and services.

COMMENTS: This site will be accessed from 3 different access points which will help distribute the vehicular traffic to this site. The City will be undertaking improvements to the 17th Street corridor in the next year or two which will improve pedestrian and vehicular accessibility along the 17th Street corridor. The Department does not expect any substantial increases in traffic that will require improvements to the number of travel lanes or intersections. The 17th Street access to Arlington was recently improved with the installation of the roundabout.

(8) The proposal preserves significant ecological, natural, historical and architectural resources.

COMMENTS: The proposed deviations from the environmental standards are necessary to allow a reasonable development of this site. The Department will continue to work with the petitioner on incorporating as many best management practices as possible to mitigate any environmental impacts. Redundant erosion control measures can be used to mitigate the disturbance to the steep slope areas, karst features, and riparian buffers.

(9) The proposal will not be injurious to the public health, safety, and general welfare.

COMMENTS: The PUD is adequately buffered from adjacent residential properties and has centralized all of the proposed development to maximize distance from adjacent residential houses.

(10) The proposal is an effective and unified treatment of the development possibilities on the PUD site.

COMMENTS: The establishment of a PUD for this property allows a unique development that would not otherwise be accomplished within an existing zoning district and under the UDO guidelines. The creation of this PUD allows the necessary deviations from the UDO requirements to allow the construction of an affordable housing project.

RECOMMENDATION: The Department recommends forwarding PUD-08-17 to the Common Council with the following conditions of approval:

1. The three parking spaces at the southeast corner of the site need to be removed to only provide 146 on-site parking spaces.
2. Right-of-way must be dedicated within 180 days of Council approval.
3. Native species will be used for all plantings.
4. The petitioner will work with staff to preserve existing trees around the building area.
5. The Plan Commission will review the site plan approval.
6. The Phase 1 environmental study must be submitted with the final plan request.
7. Understory vegetation planting is required within the riparian buffer area to the extent practical.
8. An access easement must be recorded for the parking area to allow cross access.
9. A copy of the Phase 1 Environmental Assessment must be submitted with the PUD final plan.
10. Redundant erosion control measures will be incorporated into the site plan for protection of environmental features and must be included in the district ordinance within 10 days.
11. The petitioner shall incorporate affordable housing with this petition for no less than 99 years.

MEMORANDUM

Date: June 2, 2017

To: Bloomington Plan Commission

From: Bloomington Environmental Commission

Through: Linda Thompson, Senior Environmental Planner

Subject: PUD-08-17, Bloomington Union PUD rezone, second hearing
Mecca Companies, LLC
1100 N. Crescent Drive

PURPOSE
The purpose of this memo is to express the environmental concerns and resulting recommendations of the Environmental Commission (EC). This petition is a request to rezone eight acres from Residential Single Family (RS) to a Planned Unit Development (PUD), approve a PUD District Ordinance, and to approve a Preliminary Plan for a multi-family apartment complex.

SITE & PROJECT DESCRIPTION
The site is located on Bloomington's west side within a vicinity of financially-subsidized housing units, on a piece of property that is home to several topographically, geologically, and biologically environmentally sensitive features. This complex is advertised as low income units of 1 (675 ft^2), 2 (886 ft^2), and 3 (1050 – 1098 ft^2) bedrooms; however, neither the number of low income units, nor the length of time they are to remain low income, are committed to in the PUD District Ordinance.

The project is designed for 257 bedrooms within 149 units, situated in 3 buildings up to six stories, or 70 feet high. The PUD District Ordinance is not applying the Bloomington Municipal Code (BMC), Unified Development Ordinance (UDO) rules regarding several environmental protections, nor is it applying innovative design in green building or other forward-thinking construction practices. The green building initiatives listed in the PUD District Ordinance are customary building practices, and don't even include recycling for tenants. The buildings will be clad primarily in cast concrete to simulate the look of stone (decorative stone veneer made of Portland cement; concrete mixture; pigments; and Stalite, a lightweight expanded slate aggregate), fiber cement board, and vinyl siding. The buildings are difficult to tell the fronts from the backs, and do not offer a "sense of place".

This site has rolling, undulating topography and is almost entirely covered in medium-aged woodland. Parts of the site are heavily infested with invasive plants, including Asian bush honeysuckle and winterberry; however, there is a surprising number of different tree species

onsite, allowing for an abundance of woodland spring ephemeral wildflowers. Tree species include red oak, white oak, black cherry, sassafras, sycamore, shagbark hickory, ash, sugar maple, hackberry, and several large dead trees.

A waterway begins in a swale on the west side of the property, and follows the northern property line flowing east. On the east side, it gently incises into a ravine.

There is a large sinkhole onsite, and two more on adjacent properties. All three sinkholes have parts of their respective Karst Conservation Easements (KCEs) and their ten-foot building buffers on this development site.

Overall, the site provides habitat for a variety of wildlife, including songbirds, cavity-nesting birds, small mammals, reptiles, and woodland amphibians. It's been reported by a neighbor that copperhead snakes live on the site also.

Carbon sequestration, reduced heat island effect, flood mitigation, surface water filtration, and more, contribute to the environmental benefits of these eight acres provide.

THE PRELIMINARY PLAN

Since the first hearing, the Petitioners have modified the Preliminary Plan to eliminate one building and increase the height of the others in order to protect some of the steep (>18%) slopes, and part of the riparian buffer. However, the EC finds that there are still too many environmental-protection regulations being disregarded for this petition to be approved.

The location and scope of this Preliminary Plan do not fit this property and surrounding areas. The housing portfolio in this vicinity is made up of low-rise multi-family, single family, and publically-owned units, thus a building as large and tall as "B" is, will perceivably be out of place.

The size of this total complex is not compatible with the size of the buildable acreage on this property. To encroach into so many environmentally sensitive features for the sake of in-fill is not the most desirable urban design practice. Perhaps this complex would be better suited in a different location, or the size substantially reduced to fit into this buildable area.

RECOMMENDATION

As proposed, the EC does not support this proposal and recommends that the PUD be forwarded to the City Council with a negative recommendation for the following reasons.

RATIONALE

Please find a list of reasons below that support the EC's decision to recommend denial of the PUD rezone.

A. PUDs

The EC has maintained a stance that a PUD District Ordinance should not be allowed to use environmental regulations that are less stringent than straight zoning. The flexibility that a PUD offers should not be at the expense of environmental protection.

If the Plan Commission and City Council choose to override the established environmental regulations, it could set a disturbing and difficult precedent when considering similar petitions in the future.

B. Noncompliance of Environmental Regulations

Environmental rules from the BMC, UDO, 20.05 Environmental Standards that are still not being followed are listed below.

1. 20.05.039; Steep Slopes

The plan still includes encroachment into a large area of slopes too steep to build on in the southeastern corner of the property, albeit they are preventing some in the northern area.

2. 20.05.041; Riparian Buffer

The plan still encroaches into the riparian buffer, albeit not as much as it did in the previous version of the plan.

3. 20.05.042; Karst Geology

The plan still does not follow the UDO Karst Geology regulations in the following ways.

a. Parking lot in SE corner encroaches into a sinkhole.
b. Parking lot in the SE corner still encroaches into the Karst Conservation Easement (KCE).
c. The entire ten-foot building set back from the KCE is omitted from the PUD District Ordinance.
d. The Compound Sinkhole regulation is not being followed.

4. 20.07.070; Easement Standards

All the non-buildable areas should be placed in common, Conservation Easements on the Final Plat, and should be clearly marked with signage.

C. Lack of “green building” practices

“Affordable” housing must not only be accessible at the time of rental or purchase, but also remain affordable in the future. Green building practices not only reduce the carbon footprint, but will lower the cost of energy for residents in the long term. If the developer is serious about helping its residents, they would construct a forward-thinking “green” building to keep energy costs at a minimum, and provide homes that the residents can continue to live in as energy costs rise.

ADDITIONAL INFORMATION TO SUBMIT

If the PC chooses to forward a positive recommendation to the City Council, the EC recommends the following Conditions of Approval be adjoined.

1. Conduct a study of Indiana bat habitat. Because federal money will be used for this apartment complex, a study regarding endangered species, particularly Indiana bat, must be completed. This site boasts several potential roost trees, is large enough, and is within close enough proximity to hibernacula and other roosting sites that a habitat survey merits completion.

2. Conduct a tree inventory that identifies the species of all trees greater than 6 inches diameter at breast height (DBH) that will be removed with development. Also identify any trees on the edges of development that are greater than 10 inches DBH that could potentially be protected with some minor adjustments.

3. State in the PUD District Ordinance a commitment to specific innovative green building practices that will reduce not only the carbon footprint, but the cost of energy for residents.

4. Provide the Phase 1 Environmental Assessment that was conducted.

5. Provide the number of units within a 1-mile radius of the site that currently has any kind of financially-subsidized housing.

6. Knowing that the Petitioner has not yet crafted a grading plan, erosion and sediment control plan (E/SCP), or stormwater pollution prevention plan for the site, a commitment in the PUD District Ordinance that describes the erosion control best practices intended for use should be provided. These practices shall employ, at the minimum, all requirements in the BMC Titles 10 and 20, and 327 IAC 15-5. All practices adjacent to environmentally sensitive areas are required to apply redundant erosion control measurements and be appropriate to the characteristics of the site.

Environmental Commission memo from the first hearing

MEMORANDUM

Date: April 27, 2017

To: Bloomington Plan Commission

From: Bloomington Environmental Commission

Through: Linda Thompson, Senior Environmental Planner

Subject: PUD-08-17, Bloomington Union PUD rezone
Mecca Companies, LLC
1100 N. Crescent Drive

PURPOSE
The purpose of this memo is to express the environmental concerns and resulting recommendations of the Environmental Commission (EC). This petition is a request to rezone eight acres from Residential Single Family (RS) to a Planned Unit Development (PUD), approve a PUD District Ordinance, and to approve a preliminary plan for a multi-family apartment complex.

SITE DESCRIPTION
This site has rolling, undulating topography and is almost entirely covered in medium-aged woodland. Parts of the site are heavily infested with invasive plants, including Asian bush honeysuckle and winterberry, however there is a surprising number of different tree species onsite, allowing for an abundance of woodland spring ephemeral wildflowers. Tree species include red oak, white oak, black cherry, sassafras, sycamore, shagbark hickory, ash, sugar maple, hackberry, and several large dead trees.

A waterway begins in a swale on the west side of the property, and follows the northern property line flowing east. On the east side, it gently incises into a ravine.

There is a large flat bottomed sinkhole onsite that shows evidence of slow drainage.

Overall, the site provides habitat for a variety of wildlife, including songbirds, cavity-nesting birds, small mammals, reptiles, and woodland amphibians.

DILEMMA
This site has many environmental characteristics which provide ecological services that benefit humans, animals, and plants, but encumber development. On the other hand, the Petitioner is proposing 80% affordable housing, which is very much needed in Bloomington. The question we struggle with is what provides the most benefit: protecting the natural environment, or providing affordable housing, and at what cost.

TESTAMENT
The EC is aware that this project is intended for a low income market. The EC is absolutely supportive of that and has been a promoter of social equity and environmental justice since its inception in 1971. In fact, the mission of the EC is to advise the City of Bloomington on how its actions and policies may preserve and enhance the quality of Bloomington's environment, including the life-supporting processes that natural ecological systems provide to humans and other organisms.

RECOMMENDATION
The EC does not support this PUD and recommends that the petition be denied.

RATIONALE
The reasons why the EC has decided not to support this PUD are as follows.

1. PUDs:
It has been a generally accepted practice that the reason for developing PUDs is to accommodate those development ideas that don't work within the bounds of the established regulations. As the old example goes, the developer has a round peg idea and city regulations represent a square hole. If we can work together to slightly reshape both the peg and the hole, the joinery can work, and everyone wins.

In this case, the Petitioner is requesting a PUD instead of working within our vetted regulations because they would have to request so many variances that they would render our regulations and the public process that created them meaningless. PUDs should not be used to evade environmental design standards. The EC does not believe the offer of affordable housing is a reasonable trade for the cost of bending so many environmental regulations. This apartment complex could be built in scores of other locations in Bloomington.

If the Plan Commission and City Council choose to override environmental regulations, how many other developers will request the same thing? How could the city say no to the next request to ignore environmental regulations? This would set a very disturbing precedent.

2. Environmental Justice:
The EPA defines Environmental Justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."

In this case, the city's environmental laws would be enforced differently than on other developments solely because of income. Furthermore, because property values of environmentally-challenged land are depressed, low income people are being forced to cluster in areas that will become low income neighborhoods. This looks to be the opposite of inclusionary zoning; in other words, reverse exclusionary zoning. This proposal appears to be inconsistent with Environmental Justice.

3. Developer track record:
As of this writing, the property has a Stop Work Order (SWO) on it, which means the City has required all work including land disturbing activities to be halted. The Petitioner started clearing the woodland on April 13, 2017, without a grading permit, as required. Some of the destroyed woodland would have been protected with proper site design. The Petitioner was then required to install erosion control fence and mulch the bare ground until the City decides if additional enforcement action will be pursued. This blatant disregard for Bloomington's development

rules does not indicate a good faith effort moving forward.

4. Karst geology:
The USGS Topographic maps (1910, 1956, & city's GIS) shows that this site lies within a larger sinkhole plain. Additionally, the Geologic Map of the Bloomington 7.5-Minute Quadrangle, Indiana (2007), depicts the underlying bedrock is the lower Saint Louis Limestone, and is the most likely local bedrock to produce sinkholes. On the subject site, there are two large sinkholes that are expressed at the surface, and one that lies just offsite on the east.

The Bloomington Municipal Code, Unified Development Ordinance (UDO) 20.05.042 applies to all land-disturbing activities on properties that contain surface and subsurface karst features. A Karst Conservation Easement (KCE) of 25 feet is required around the perimeter of a sinkhole or spring. Additionally, there is a required 10 feet building setback around the outside of the KCE.

The two sinkholes on the property are within 100 feet from each other, rendering them one compound sinkhole according to the city's definition. The KCE of the sinkhole to the east of the site falls partially onto the subject property.

The proposal is to encroach into the karst conservation easement and the building setback. This is an ill-advised idea for a number of reasons, including inhibiting protection for subsurface habitats, preventing nearby floodwater alterations, attempting to ensure building stability, and possibly creating new sinkholes on someone else's property. There are many examples around town where sinkholes are growing or developing, causing damage to building foundations.

5. Riparian buffer:
There is a waterway that begins just east of Crescent Drive and flows east along the north edge of the property. This waterway requires a 75 feet riparian buffer on each side of it, but this design encroaches into the buffer. A riparian buffer serves to filter and slow down water benefiting both the quality and quantity of our water resources.

6. Steep slopes:
This site is dotted with steep slopes. Most are within the KCE and riparian buffer, but the others are being disregarded in the site design, enabling erosion problems.

7. Woodland protection:
UDO 20.05.044, Environmental Standards; Tree and Forest Preservation applies to this zoning district. It shall apply to all land disturbing activities on properties containing wooded areas. This site is about 8 contiguous acres of wooded land and associated habitat. Using the calculations in the UDO, 4 acres would need to be protected, preferably in one stand of vegetation.

8. Buffers:
As proposed, this development will be designed and used as a Residential High-Density Multifamily (RH) zoning district, adjacent to a Residential Single-family (RS) zoning district. This requires a vegetated Type 1 Buffer Yard, meaning it must have a setback of at least 10 feet in addition to the setbacks otherwise required in the UDO. The purpose of buffer yards is to

screen the single family neighborhoods from the high intensity housing encroachment proposed.

ADDITIONAL INFORMATION TO SUBMIT BEFORE THE SECOND HEARING
The EC recommends that additional environmental research be conducted at this site, and submitted to the Planning & Transportation Department before the second hearing.

1. Conduct a study of Indiana bat habitat. Because federal money will be used for this apartment complex, a study regarding endangered species, particularly Indiana bat, must be completed. This site boasts several potential roost trees, is large enough, and is within close enough proximity to hibernacula and other roosting sites that a habitat survey merits completion.

2. Conduct a geological study to determine the stability of the bedrock. Because the site is within a sinkhole plain, a bedrock stability study is necessary for the safety of the building residents.

The geologic study needs to identify karst features that may be uncovered with excavation, thus revealing the limitations such features impose on site development, and predict changes in hydrologic behavior. This will require a geologic investigation conducted by a Professional Geologist. The investigation results need to include, depict, illustrate, and/or portray at least the following to the satisfaction of the EC and the Senior Environmental Planner.

a. A karst inventory for the entire sub watershed. The site is an integral part of a regional karst system and does not stand alone; therefore, it cannot be evaluated without considering the whole surface and subsurface drainage system. This includes all karst features (sinkholes, springs, grikes, underground water conduits, fracture liniments, voids, caves, etc.) expressed on the surface and in the subsurface.

b. Due to the intensity of karst features in the vicinity, the soil borings used to portray the bedrock surface should be drilled on a densely-space grid, and drilled to refusal.

c. After identifying any newly-found karst features that will contribute to the change in behavior of the drainage regime, the stormwater and groundwater flow patterns must be identified and mapped.

d. Rock cores should be drilled so that the bedrock lithology can be described and voids can be located.

e. The results of the research and methods used to reach the conclusions of the above suggestions should be included within the environmental review plan. Examples of research methods that could be employed are:

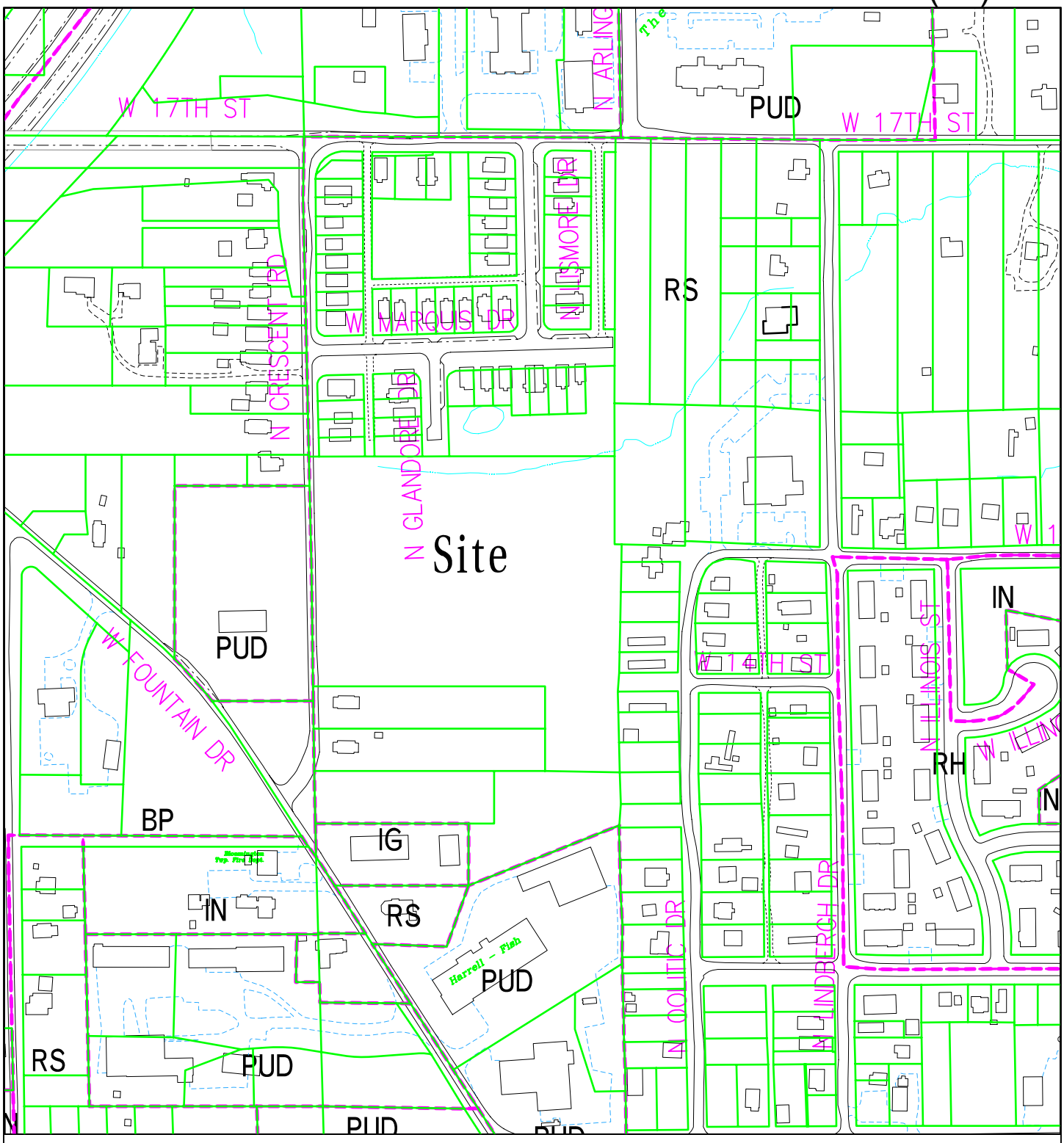
    Natural Potential (NP)
    Electrical Resistivity Tomography (ERT)
    Seismic
    Electromagnetic (EM)

Microgravity
Infrared Thermal Scanning
Dye Tracing
Exploratory Soil Boring
Exploratory Rock Coring
Ground-Penetrating Radar

3. Conduct a tree inventory. A diverse cover of hardwood trees impressively cover this site. Bloomington doesn't have very many wooded places left, and we should know before we destroy the trees and the habitat they nurture, what we intend to give up.

4. Commit to green building practices that will reduce not only the carbon footprint, but the cost of energy for residents. If the developer is serious about saving money for its residents, they would construct a very "green" building to keep energy costs at a minimum.

5. Commit to using native plants in the landscape plan because of the adjacent woodland. This is a common recommendation from the EC. If developing adjacent to a woodland, the plants should be native species to enable species interaction.



City of Bloomington
Planning & Transportation

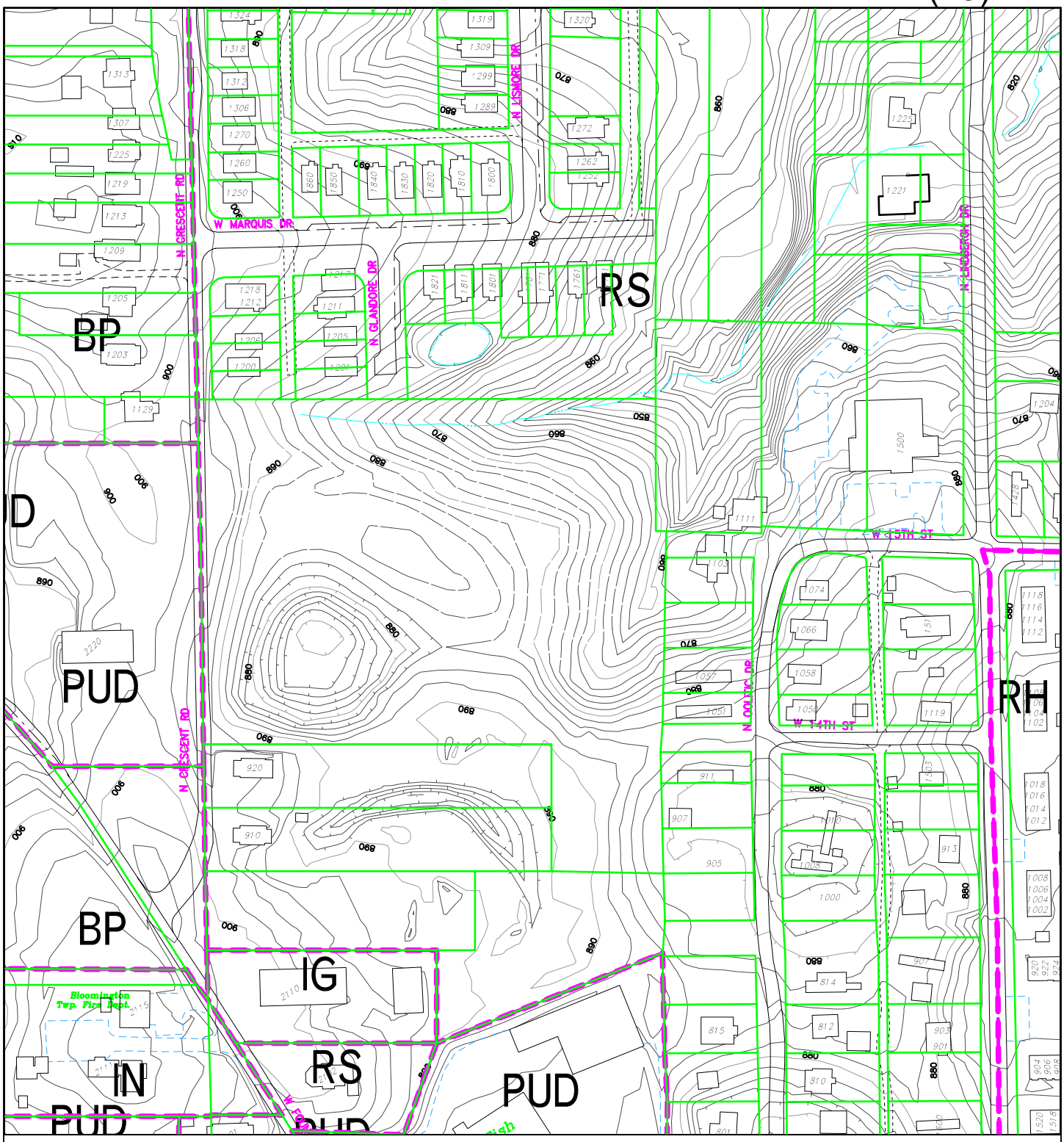
By: greulice
24 Feb 17

300 0 300 600 900

N

Scale: 1" = 300'

For reference only; map information NOT warranted.



Contour map

By: greulice
24 Feb 17

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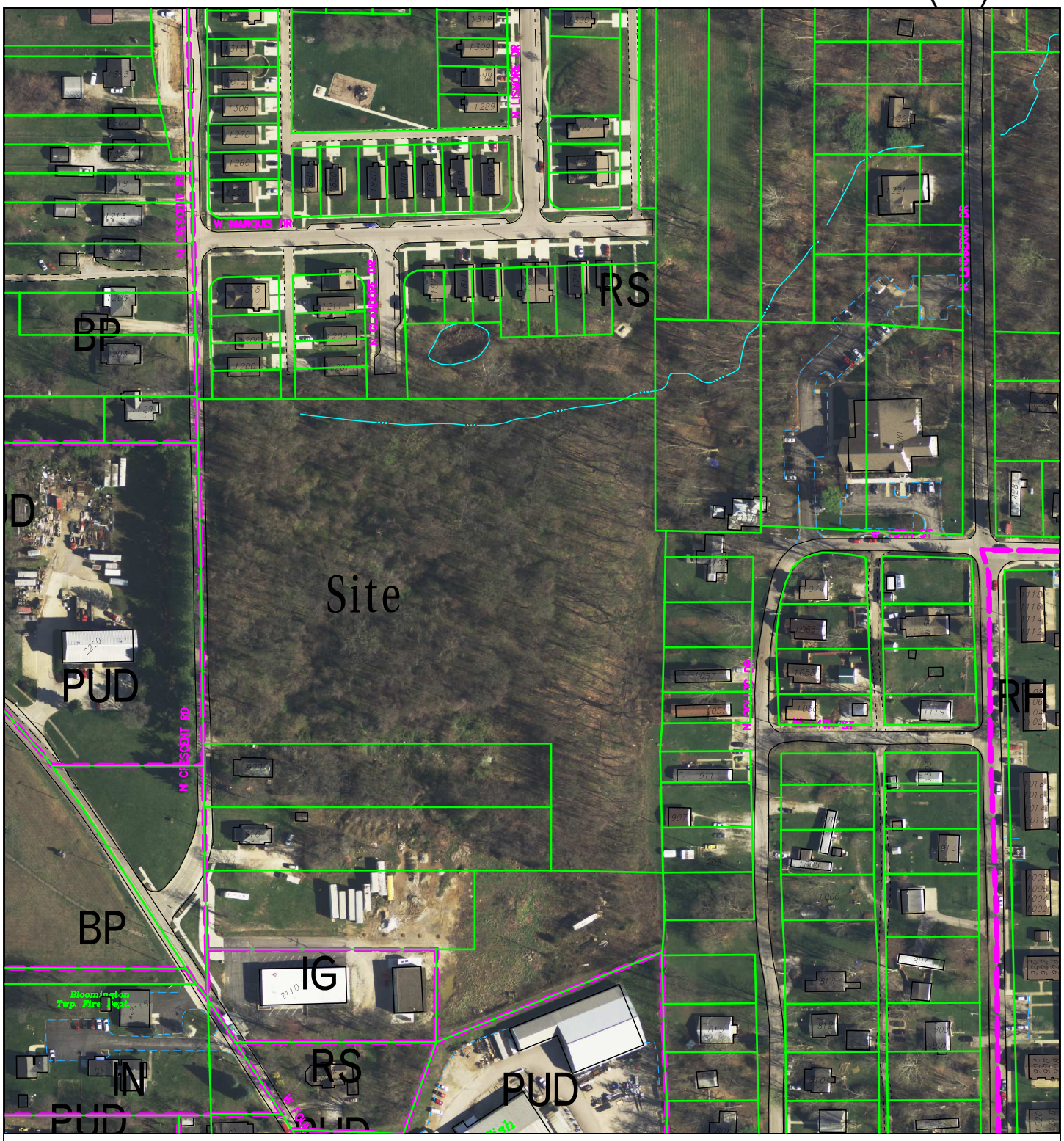
City of Bloomington
Planning & Transportation

Scale: 1" = 200'

For reference only; map information NOT warranted.



City of Bloomington
Planning & Transportation

By: greulice
24 Feb 17

200 0 200 400 600

N

Scale: 1" = 200'

For reference only; map information NOT warranted.

Smith Brehob & Associates, Inc.

Providing professional land planning, design, surveying and approval processing for a sustainable environment.

Stephen L. Smith P.E., L.S.
Steven A. Brehob B.S.Cn.T.
Todd M. Borgman PLS
Katherine E. Stein, P.E.
Donald J. Kocarek, LA.

BLOOMINGTON UNION
PUD DEVELOPMENT STANDARDS

Site Density

As this is an affordable housing project and the goal is to maximize density on site yet provide for preservation area, the proposed density is 18.62 units per acre for a total of 149 units. Use of DUE's will be permitted. The following unit mix is proposed:

65- 1 bedroom units
60 - 2 bedroom units
24- 3 bedroom units
Total beds = 257

Building Height Standards

Primary structure height limit shall be 70' to the peak of the roof

Building Standards

RH Standards shall apply to building material choices

Materials

Primary exterior finish building materials used on residential dwellings shall consist of any of the following:

(A) Horizontal lap siding (e.g. vinyl, cementitious, wood);
(B) V-grooved tongue-and-groove siding;
(C) Wood-grained vertical siding materials in a board-and-batten or reverse batten pattern;
(D) Wood or cementitious large format panels;
(E) Cedar or other wood materials;
(F) Stucco, plaster, or similar systems;
(G) Stone;
(H) Split face block, ground face block, or brick;
(I) Cast or cultured stone;
(J) Cast in place concrete;
(K) Earthen structural materials;
(L) Other materials that replicate the look and durability of the above materials, as approved by the staff.

Minimum Coverage

Siding materials listed above, or a combination of such materials, shall extend from roofline to within twenty-four (24) inches of finished grade.

453 S. Clarizz Blvd.
Bloomington, Indiana 47401
Telephone 812 336-6536
Fax 812 336-0513
www.smithbrehob.com

Roofs
(A) Structures may utilize a flat roof with a parapet or a sloped roof consisting of asphalt shingles or standing seam metal materials.

Anti-monotony standards contained in the UDO shall not apply.

Building Style
Buildings will utilize a walk-out basement style construction to transition slope from front to back and step down existing grade.

Setback Standards
Front yard building setback = 15'
Side and rear yard building setbacks = 15'
Front yard parking setback = 20' behind front wall line of building
Side yard parking standards = 10'(plus 10' buffer for total of 20')
Rear yard parking standards = 10' (plus 10' buffer for total of 20')

Maximum Impervious Surface Coverage
The site will limit impervious surface coverage to 35% through the use of taller buildings to limit footprint, permeable pavers within the parking lot area and reduced parking surface area.

Alternative Transportation
The site is located on the Bloomington Transit route along Crescent Drive. With roadway connections to the north, east and west, pedestrian and bicycle connections are viable to provide a transit opportunity for non-motorized vehicle and pedestrian use. To promote alternative transportation, the PUD will provide 20% more bicycle parking facilities on site than required by code. The PUD will also provide a covered transit stop at the project entry off of Crescent Drive.

Environmental Development
(A) The PUD shall permit the encroachment within the 75' riparian buffer area on intermittent streams the minimum extent necessary to construct roadway connection and buildings.
(B) The PUD will permit the encroachment within 18% slope areas through the use of walk-out basement style construction and retaining walls to the minimum extent necessary to construct roadway connection and buildings.
(C) The PUD will treat the existing disturbed sinkhole on adjacent property to the south that has been partially filled in as a single sinkhole and not a compound feature to the minimum extent necessary to construct drives and parking areas within the SE corner of the property.

Native Landscaping
The site landscape design will utilize all native landscape plant material to reduce the need for irrigation and water consumption.

Solar Energy
The site will utilize solar energy to generate electricity for site lighting within the site common areas including parking lot and sidewalk lighting.
Panels will likely be located on the roofs of the buildings facing in a southwesterly direction.

Green Development Initiatives
- Incorporation Green friendly building materials – This includes both materials with recycled content as well as building materials that have been harvested and manufactured within a 500 mile radius. Examples of these materials include flooring, drywall, cement, asphalt, stone, permeable pavers, and all landscaping.
- Recycling 50% of non-hazardous construction and demolition debris.
- Permeable paving materials.
- Close proximity (within 1/4 mile) to Bloomington Transit stop.
- Energy efficient "Energy Star" appliances.
- Energy efficient windows with low-E glazing.
- Use of larger window openings for natural day lighting of interior spaces to cut down on the use of artificial lighting.
- Energy efficient lighting fixtures.
- Building shell and demising wall insulation.
- Water sense labeled/low flow water fixtures
- Solar power for exterior common area lighting
- Low VOC paints

MECCA COMPANIES

May 30th, 2017

RE: Union of Bloomington, Crescent Road, Bloomington
Environmental Commission Responses

Item #1: PUD's
The original submittal contemplated was a rezone to RH with waivers. After meeting with Bloomington staff the suggestion was made to rezone to PUD in lieu of a straight zoning request with waivers.

Item #2: Environmental Justice
The project will not contain exclusively affordable housing. A portion of the units will be market rate apartments and thereby not creating a development with only low income individuals.

Item #3: Developer Track Record
The SWO was issued after the geotechnical engineer entered the site to collect the necessary information for a Karst Study and Geotechnical Study to better understand the site development issues within an area of karst features and to determine soil structure characteristics. Pre-design geotechnical studies are usual and customary in the majority of development projects, even if karst features are not present. After the stop work order was issued the geotechnical engineer met staff onsite to determine the best course of action for obtaining the necessary study data. With staff assistance, a course of action was mapped out to minimize the need for clearing and to maximize the amount of data that could be obtained. The engineer then filed for a grading permit, even though no grading was required and the work resumed with no issue. The Petitioner was unaware a grading permit was necessary to perform a standard due diligence investigation when no actual grading was required. The work that took place on site was not a blatant disregard, but simply standard testing required prior to any design effort and a usual and customary course of action. The Petitioner's local consultant indicated that obtaining a grading permit for geotechnical work had not heretofore been required on any projects that they had been involved in. The entire issue was generally a result of miscommunication between the petitioner, geotechnical consultant and the Planning department. No work was completed with malice or intent to violate a requirement.

Item #4: Karst Geology
A Karst Investigation was performed and is included in the resubmittal.

MECCA COMPANIES

Item #5: Riparian Buffer

A building has been removed from the Riparian Buffer area in an effort to reduce impacts to the undefined headwater stream area. The revised building layout gives great consideration to maintaining existing tree canopy coverage within the buffer area to the greatest extent possible to reduce the potential for degradation of the stream area.

Item #6: Steep Slopes

Removal of a building and consolidation of those units in the larger building preserves additional step slope area on site. Utilization of walk-out basement style buildings throughout the project reduces the need for mass grading and fits the buildings to the site. This type of construction lessens the impact to sloped area. Tree canopy coverage within the steep slope area where the building was removed will remain intact, thereby lessening the chance for erosion of the slope area.

Item #7: Woodland Protection

Noted. The development exceeds the tree canopy coverage preservation requirements.

Item #8: Buffers

Removal of existing tree canopy coverage for the purpose of planting a buffer yard seems counterintuitive. Even if trees within the canopy area are not mature, they likely are larger than what would be planted new. In wooded areas where buffer yard is required, it makes more sense to fill in the understory area with native shrubs and evergreen trees as opposed to remove canopy trees to replant a buffer back. The development plan has always and will continue to provide the necessary buffer between uses.

Additional information

1. **Study of Indiana Bat Habitat**. Our Phase 1 Environmental Assessment did indicate the possible presence of the Indiana Bat. Over 4 acres will remain for the potential bat habitat and per the State of Indiana regulations, tree clearing will only occur between October 15 and March 31st on the site to minimize the potential adverse effects to the Indiana bats.
2. **Geological Report:** Provided with resubmittal
3. **Tree Inventory:** A tree inventory has been completed locating all trees 10" and larger within and immediately adjacent to the development area.
4. **Commit to Green Building Practices:** Mecca Companies will commit to the following Green Building Practices.
    - Incorporation Green friendly building materials – This includes both materials with recycled content as well as building materials that have been harvested and manufactured within a 500 mile radius. Examples of these materials include flooring, drywall, cement, asphalt, stone, permeable pavers, and all landscaping.
    - Recycling 50% of non-hazardous construction and demolition debris.

- Permeable paving materials.
- Close proximity (within 1/4 mile) to Bloomington Transit stop.
- Energy efficient “Energy Star” appliances.
- Energy efficient windows with low-E glazing.
- Use of larger window openings for natural day lighting of interior spaces to cut down on the use of artificial lighting.
- Energy efficient lighting fixtures.
- Building shell and demising wall insulation.
- Water sense labeled/low flow water fixtures
- Solar power for exterior common area lighting
- Low VOC paints

a.

5. **Commit to native plants:** Provided in the Petitioner’s Statement

May 23, 2017

Mecca Companies Inc.
6235 North Guilford Road, Suite 200
Indianapolis, Indiana 46220
ATTN: Ms. Joy Skidmore

RE: Karst Survey
Proposed Union on Crescent Drive
Bloomington, Indiana
Alt & Witzig File 17IN0212

Dear Ms. Skidmore,

This document presents the results of a limited karst survey. This survey was conducted to provide opinion as to the potential impact to the hydrogeologic/geologic conditions due to proposed residential development of the site located east of Crescent Drive ("site").

Development Intent

Alt & Witzig Engineering, Inc. (Alt & Witzig) was retained by Mecca Companies Inc. to provide consulting services to assess the karst conditions at the site as they relate to the proposed multi-unit residential development entitled "Union on Crescent Drive." The surrounding areas have been developed with residential and light commercial for decades. A new residential subdivision immediately to the north of the site was constructed within the last five years.

The proposed multi-unit development includes two ~4,275 s.f. buildings and one 12,000 s.f. building. Access drives and surface parking areas are also proposed for the residential units. Buffers are provided around the mapped karst feature located in the southwest corner of the ~10 acre site. The following is a description of our findings and opinions regarding the karst setting and the proposed development.

Site Description

A site visit was made on April 13 to inspect the ground surface and topography of the site and vicinity. The site is predominantly wooded with rugged terrain with approximately fifty feet of relief across the site. The ground surface was predominantly covered with forest floor vegetation, with occasional bare areas. No rock outcrops were evident.

The elevation at the site ranges from approximately 897 feet at the northwest corner to 842 feet at the northeast corner. Drainage on the northern and eastern portion of the site is overland and to an existing drainage valley to the east-northeast. The southwestern portion of the site drains into a large closed depression that is approximately twenty feet deep and 250-300 feet in diameter. This area is mapped as the karst feature on conceptual development plans dated 3-9-17. Two smaller sinkholes were located on the northeastern and eastern bank of the larger depression.

Literature Review

In addition to the site reconnaissance, available records were reviewed to determine the geologic setting and history of the site and surrounding areas. The Indiana Geological Survey and IndianaMAP websites were referenced for available maps. The bedrock at the site is mapped as the Blue River Group of the Mississippian Age. Bedrock in the vicinity consists of sedimentary, relatively flat, "layer cake" deposits consisting predominantly of limestone with minor amounts of dolomite, chert, gypsum, and sandstone.

The limestone within the Blue River Group is prone to development of solution features and is commonly mapped as karst topography by the Indiana Geological Survey (IGS). Solution features in the area likely develop most strongly along intersections of the conjugate fracture set (vertical) and the intersection of near vertical fractures with bedding plane fractures. The Sanders Group immediately underlies the Blue River Group and is also comprised of limestone, with lesser portions of dolomite, shale, and chert.

A review of IndianaMAP indicates the inventoried sinkhole at the southwest corner of the site in addition to similar sized sinkholes immediately south and east of the site. The majority of sinkholes inventoried on this website were located south of the site within the Blue River Group bedrock unit.

The USDA Web Soil Survey was utilized to determine the expected soil types below the ground surface. The site-specific report is attached to this letter. The soils are mapped as Crider Urban Land Complex with 6-12 percent slopes. These soils are generally loess overlying clayey residuum.

Subsurface Investigation Results

Alt & Witzig conducted a subsurface investigation concurrently with the karst survey. Limited access provided for seven borings, predominantly on the ridge separating on the northern drainage valley and the sinkhole depression. The ground surface elevation of the borings ranged from 880 to 891 feet.

With the exception of boring B-1, conducted in the northwest corner of the site at elevation 891, all other borings encountered weathered rock between the elevations of 862 and 867 feet. Boring B-1 encountered auger refusal at an elevation of 881 feet. Each soil boring was cored at least five feet into bedrock to verify conditions. As expected, limestone, shale, and sandstone were encountered in the core samples. The Geotechnical Investigation report will be issued with a Boring Location Plan and Boring Logs.

Discussion

A review sinkhole topography and encountered bedrock surface along the ridge indicates that the zone of greatest dissolution/voids is likely present between elevations 860 and 870 feet. The drainage valley to the north cuts below this elevation range. Additionally, it is apparent that the two smaller sinkholes within the larger depression are indicative of collapsed soils undermined by continued water flow into the depression and along the dissolution zone. It is possible that water entering this depression exits laterally in all directions. However, based on the location of the smaller sinkholes and the existing dendritic drainage valley, it is anticipated that at least a portion of the flow along the base of the karst feature flows north to northeast beneath the proposed development.

It should be noted that the rate of dissolution/erosion is unknown, and additional collapse of surface materials may take decades or centuries to occur. It is understood that the project team will design the overland drainage at the site to "net zero" when compared to the natural conditions. Additional considerations regarding the development of the site, such as slopes, soil type, and groundwater level will be addressed in our geotechnical report.

Closing

Should you have any questions regarding the findings of this karst survey or our opinions, please do not hesitate to contact us.

Sincerely,

Alt & Witzig Engineering, Inc

David C. Harness

David C. Harness, P.E.

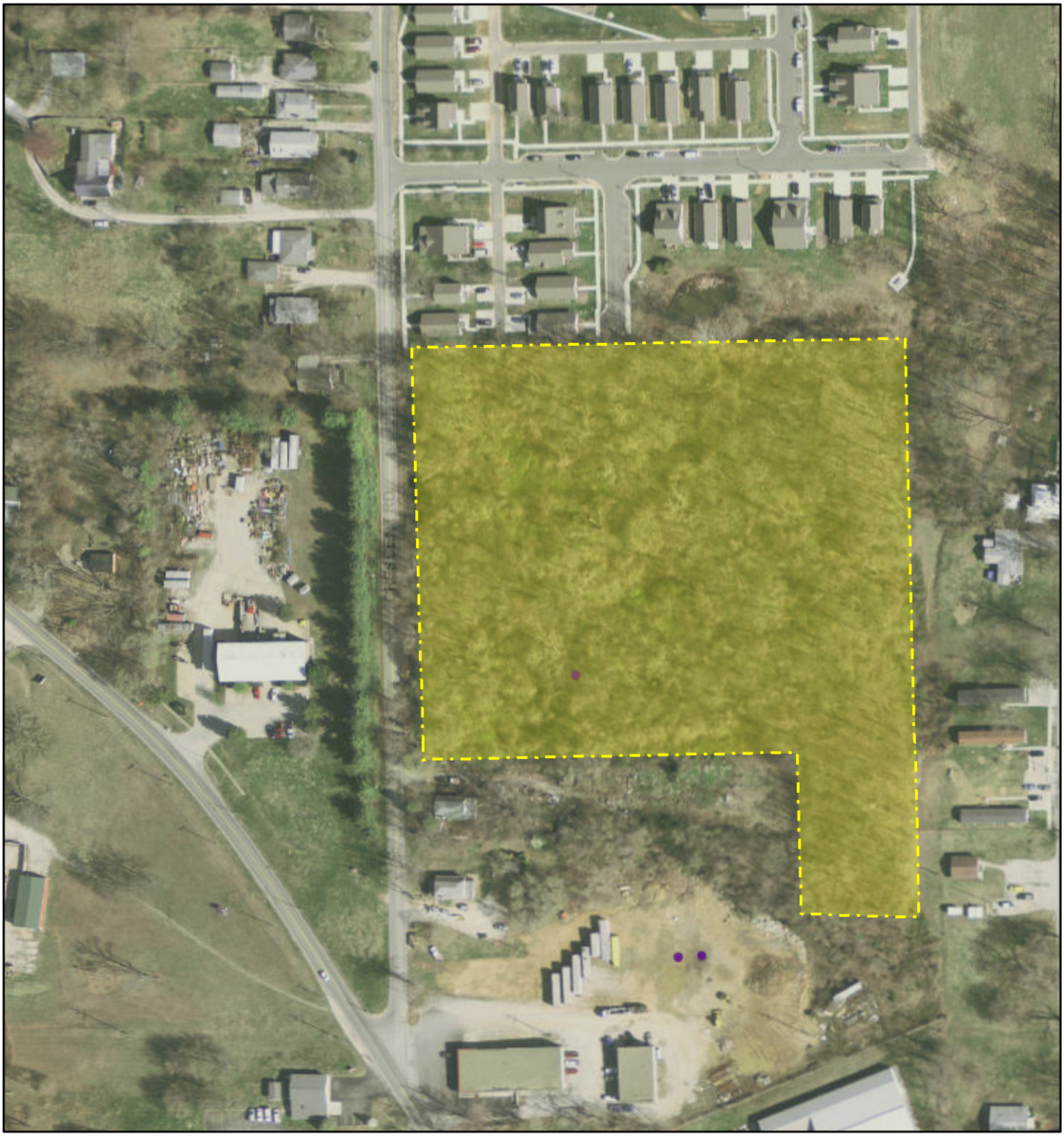
Appendix

IGS Maps
USDA Web Soil Survey

Appendix

IGS Maps
USDA Web Soil Survey

Site Location



May 23, 2017

1:2,000

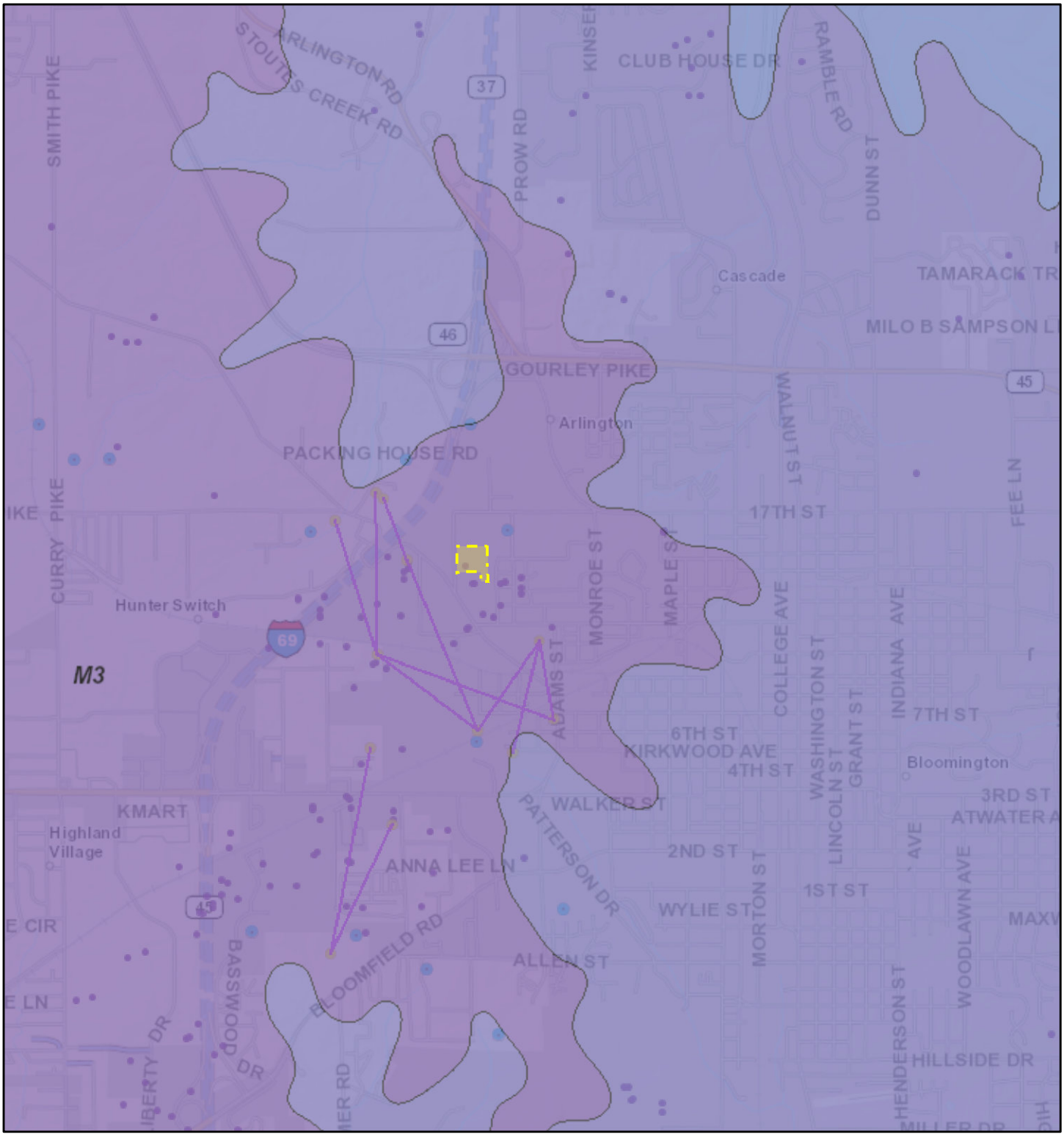
0 0.015 0.03 0.06 mi

0 0.0275 0.055 0.11 km

- Karst Area Dye Lines
- Karst Area Dye Points
- Karst Springs
- Sinkhole Inventory (2011)
- State Boundary

United States Forest Service (USFS)
Indiana Spatial Data Portal, UITS, ESRI
Indiana Department of Transportation (INDOT), U.S. Census Bureau (USCB), Indiana Geographic Information Council (IGIC), UITS, Indiana Spatial Data Portal

Bedrock Overview



May 23, 2017

1:32,000

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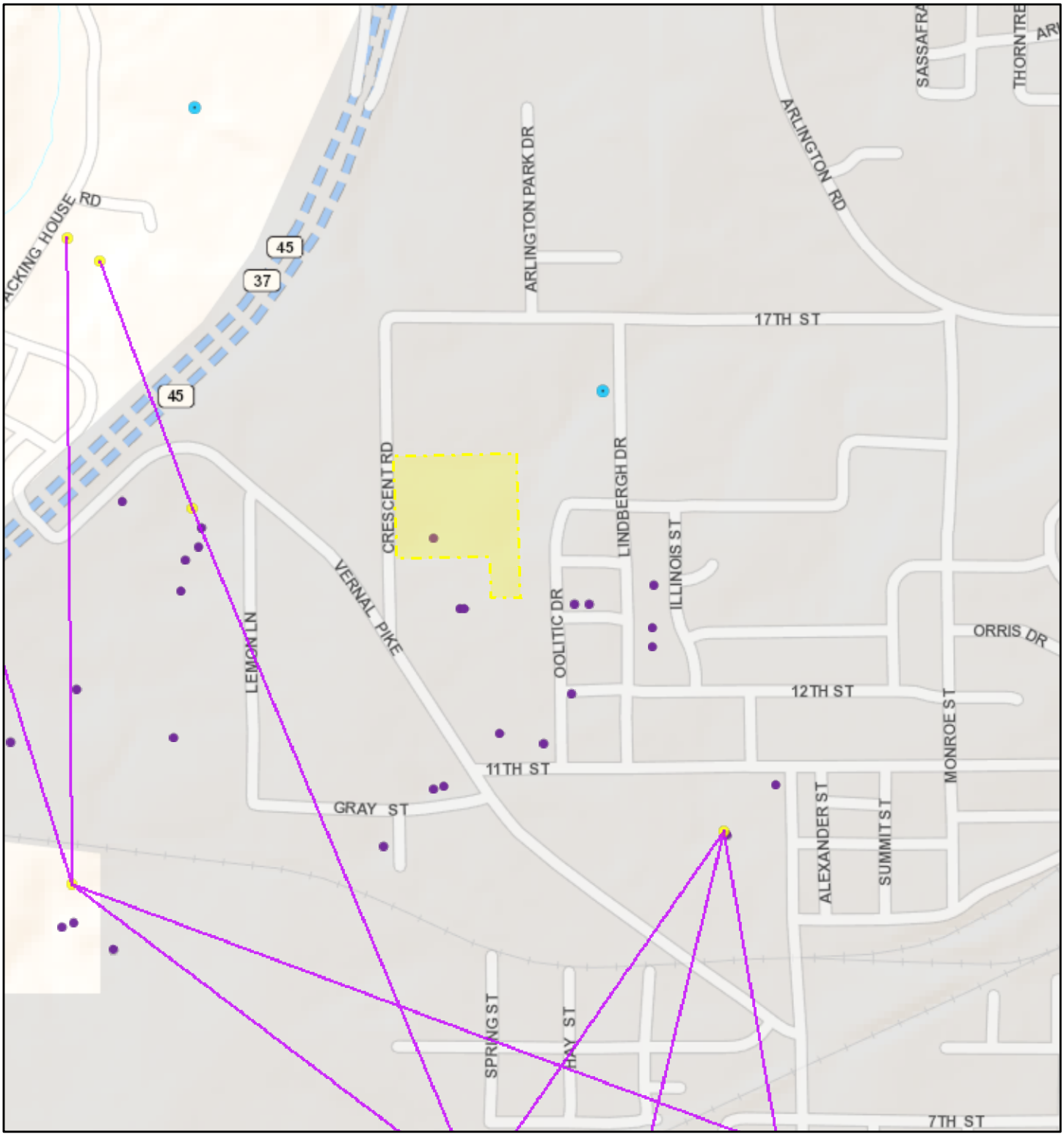
0 0.425 0.85 1.7 km

United States Forest Service (USFS)
Indiana Department of Transportation (INDOT), U.S. Census Bureau (USCB), Indiana Geographic Information Council (IGIC), UITS, Indiana Spatial Data Portal
Indiana Geological Survey

Karst Features



May 23, 2017

1:8,000

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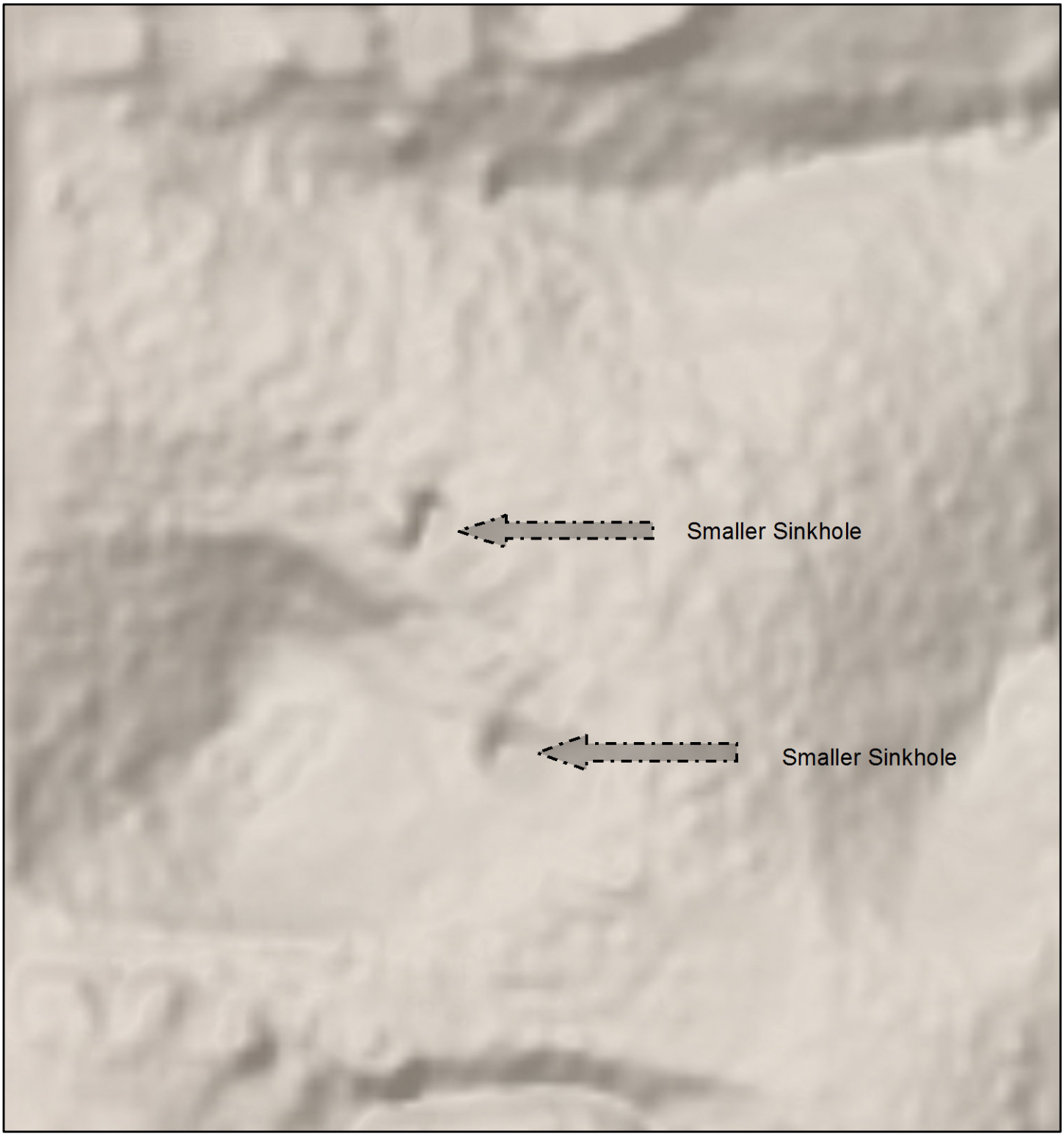
0 0.1 0.2 0.4 km

- Karst Area Dye Lines
- Karst Area Dye Points
- Karst Springs
- Sinkhole Inventory (2011)

United States Forest Service (USFS)
Indiana Department of Transportation (INDOT), U.S. Census Bureau (USCB), Indiana Geographic Information Council (IGIC), UITS, Indiana Spatial Data Portal
Indiana Geological Survey

LIDAR Image Details



May 23, 2017

1:1,000

0 0.0075 0.015 0.03 mi

0 0.0125 0.025 0.05 km

High : 1256

Low : 247

IGIC, IOT, UITS, IGS, Woolpert
United States Forest Service (USFS)
Indiana Spatial Data Portal, UITS, ESRI
Indiana Department of Transportation (INDOT), U.S. Census Bureau (USCB),
Indiana Geographic Information Council (IGIC), UITS, Indiana Spatial Data

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Monroe County, Indiana

May 23, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (17IN0212)

Map Scale: 1:1,500 if printed on A portrait (8.5" x 11") sheet.

N

0 20 40 80 120 Meters

0 50 100 200 300 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Monroe County, Indiana
Survey Area Data: Version 23, Sep 15, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 26, 2012—Mar 28, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (17IN0212)

Monroe County, Indiana (IN105)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CtB	Crider-Urban land complex, 2 to 6 percent slopes	0.2	3.2%
CtC	Crider-Urban land complex, 6 to 12 percent slopes	7.7	96.8%
Totals for Area of Interest		**7.9**	**100.0%**

Map Unit Descriptions (17IN0212)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Monroe County, Indiana

CtB—Crider-Urban land complex, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: kz84
Elevation: 370 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Crider and similar soils: 60 percent
Urban land: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crider

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over clayey residuum

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 36 inches: silty clay loam
2Bt2 - 36 to 80 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Hills

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

CtC—Crider-Urban land complex, 6 to 12 percent slopes

Map Unit Setting

National map unit symbol: kz85
Elevation: 370 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Crider and similar soils: 60 percent
Urban land: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crider

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over clayey residuum

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 36 inches: silty clay loam
2Bt2 - 36 to 80 inches: clay

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Hills

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

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PRELIMINARY SUBSURFACE INVESTIGATION & GEOTECHNICAL RECOMMENDATIONS

UNION AT BLOOMINGTON APARTMENTS
BLOOMINGTON, INDIANA
PROJECT NO: 17IN0212

PREPARED BY:
ALT & WITZIG ENGINEERING, INC.
GEOTECHNICAL DIVISION

PREPARED FOR:
MECCA COMPANIES, INC.
INDIANAPOLIS, INDIANA

MAY 26, 2017

Alt & Witzig Engineering, Inc.
4105 West 99th Street • Carmel, Indiana 46032
(317) 875-7000 • Fax (317) 876-3705

May 26, 2017

Mecca Companies, Inc.
409 Massachusetts Avenue, Suite 300
Indianapolis, Indiana 46204
Attn: Ms. Joy Skidmore

RE: Preliminary Subsurface Investigation &
Geotechnical Recommendations
Union At Bloomington Apartments
Bloomington, Indiana
Alt & Witzig File: 17IN0212

Dear Ms. Skidmore:

In compliance with your request, we have performed a subsurface investigation at the above referenced project. It is our pleasure to transmit herewith one (1) copy of our report.

The purpose of this subsurface investigation was to determine the various soils profile components, the engineering characteristics of the subsurface materials, and to provide criteria for use by the design engineers in preparing the preliminary foundation design for the proposed apartments to be constructed at the above referenced location. Further investigation in order to comply with HUD standards will be necessary.

We appreciated the opportunity to work with you on this project. Often, because of design and construction details that occur, questions arise concerning the soils conditions. If we can give further service in these matters, please contact us at your convenience.

Sincerely,
Alt & Witzig Engineering, Inc.

Brian A. Wirt, P.E.

Thomas J. Coffey, P.E.

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PRELIMINARY SUBSURFACE INVESTIGATION
AND
GEOTECHNICAL RECOMMENDATIONS

INTRODUCTION

General

This report presents the results of a subsurface investigation for the Union at Bloomington Apartments to be constructed in Bloomington, Indiana. The investigation was conducted for Mecca Companies, Inc. of Indianapolis, Indiana.

The scope of this investigation included a review of geological maps of the area; a review of geologic and related literature; a reconnaissance of the immediate site; a subsurface investigation; field and laboratory testing; and an engineering analysis and evaluation of the materials. Additionally, a Karst reconnaissance and report was also performed, which is presented under separate cover.

The purpose of this subsurface investigation was to determine the soil profile and the engineering characteristics of the subsurface materials in order to provide criteria for use by the architects and engineers in evaluating the site for construction.

The scope or purpose of this investigation did not specifically or by implication provide an environmental assessment of the site.

DESCRIPTION OF SITE

Site Location

The site is located in the east side of N. Crescent Road, just north of the intersection with W. Vernal Pike in Bloomington, Indiana. The general vicinity of the site is in the *Site Location Map* in the Appendix of this report. An aerial photograph of the site from 2016 obtained from Google Earth is presented in Figure 1, below.

Figure 1- 2016 Aerial Photograph

Site Description

The site currently consists of an undeveloped wooded lot. The site is sloping with an estimated relief of twenty (20) to thirty (30) feet across the site. Drainage is primarily along the ground surface into low lying areas and natural drainage ways. The surrounding area is developed with overhead and underground utilities, paved roads, and residential and commercial structures.

FIELD INVESTIGATION

Scope

Field investigations to determine the engineering characteristics of the foundation materials included a reconnaissance of the project site, drilling seven (7) borings and one (1) rock sounding, performing standard penetration tests, and retaining representative standard split spoon samples for laboratory testing. The approximate boring locations are shown on the *Boring Location Plan* in the Appendix.

Drilling and Sampling Procedures

The soil borings were performed with a track mounted drilling rig equipped with a rotary head. Conventional hollow stem augers were used to advance the holes. Representative samples were obtained employing split spoon sampling procedures in accordance with ASTM Procedure D-1586.

During the sampling procedure, standard penetration tests were performed at regular intervals to obtain the standard penetration value of the soil. The standard penetration value is defined as the number of blows a 140-pound hammer, falling 30 inches, is required to advance the split spoon sampler one (1) foot into the soil. The results of the standard penetration tests indicate the relative density and comparative consistency of the soils, and thereby provide a basis for estimating the relative strength and compressibility of the soil profile components.

Rock coring was conducted in accordance with ASTM D 1883.

Water Level Measurements

Water level observations were taken during and upon completion of the boring operations. The obtained readings are noted on the *Boring Logs* presented in the Appendix. In relatively impervious soils, the accurate determination of the groundwater elevation is often not possible after several days of observation.

It should be noted that the groundwater level measurements recorded on the individual *Boring Logs*, included in the Appendix, are accurate only for the specific dates on which the measurements were obtained. It must be understood that the groundwater levels will fluctuate throughout the year, and that the *Boring Logs* do not reflect these fluctuations.

LABORATORY INVESTIGATIONS

In addition to field investigations, a supplemental laboratory investigation was conducted to ascertain additional pertinent engineering characteristics of the subsurface materials. All phases of the laboratory investigation were conducted in general accordance with applicable ASTM Specifications. The laboratory-testing program also included:

- Classification of soils with ASTM D-2488
- Moisture content tests with ASTM D-2216
- Samples of the cohesive soil were frequently tested in unconfined compression by use of a calibrated spring testing machine.
- A soil Penetrometer was used as an aid in determining the strength of the soil .
- Atterberg Limits in accordance with ASTM D 4318

SUBSURFACE CONDITIONS

General

The types of subsurface materials encountered have been visually classified and are described in detail on the *Boring Logs.* The results of the field penetration tests, strength tests, water level observations and laboratory water content tests are presented on the *Boring Logs* in numerical form. Representative samples of the soils encountered in the field were placed in sample jars and are now stored in our laboratory for further analysis if desired. Unless notified to the contrary, all samples will be disposed of after two (2) months.

General Soil Conditions

The borings indicate three (3) to six (6) inches of topsoil at the boring locations. Due to the wooded nature of the site, the depth of topsoil should be expected to vary greatly.

Beneath the topsoil the borings generally encountered medium stiff to very stiff cohesive soils. Atterberg limits conducted on these clays indicate liquid limits ranging between 30 and 85 percent, with plasticity indices ranging between 12 and 61 percent. These values correlate to moderate to high shrink/swell potential.

Auger refusal on apparent bedrock was encountered in all of the borings at depths ranging between ten (10) and twenty-seven and one-half (27½) feet below the ground surface. Rock coring indicated that the bedrock consisted mostly of limestone. Table 1 presents the auger refusal elevation at each boring location.

Table 1: Auger Refusal Elevation

Boring Location	Auger Refusal Depth (ft)	Corresponding Auger Refusal Elevation (ft)
B-101	10.0	881.0
B-102	26.0	860.0
B-103	20.5	863.5
B-104	22.0	867.0
B-105	27.5	861.5
B-106	20.0	860.0
B-107	20.0	866.0
S-1	26.0	861.0

For a detailed description of the soil conditions at the particular boring locations, please refer to the *Boring Logs* in the Appendix.

According to the *Soil Survey of Monroe County, Indiana* published by the United States Department of Agriculture Soil Conservation Service, the majority of the soils covering this site are classified as Crider-Urban land complex (CtB, CtC). The *Custom Soil Resource Report for Monroe County, Indiana* has been included in the Appendix of this report.

Bedrock/Karst

Geologic maps published by the US Geological Service indicate the bedrock at this site is the Blue River Group, which is characterized by mostly micritic, skeletal and oolitic limestone of the Mississippian age. Bedrock from this formation mostly consists of limestone of Mississippian Age.

A Karst Survey was conducted in conjunction with this investigation and is presented under separate cover. A review sinkhole topography and encountered bedrock surface along the ridge indicates that the zone of greatest dissolution/voids is likely present between elevations 860 and 870 feet.

Groundwater

Water level readings obtained during and upon completion of the boring operations yielded dry boreholes. The exact location of the water table should be anticipated to fluctuate somewhat depending upon normal seasonal variations in precipitation and surface runoff. Due to the permeability difference between the shallow cohesive soils and underlying bedrock, some groundwater should be expected at the soil/rock interface.

The *Soil Survey of Monroe County, Indiana* indicates a seasonal high groundwater level greater than seven (7) feet beneath the natural grade. Again, it should be noted that the groundwater level measurements recorded on the individual *Boring Logs* included in the Appendix of this report, are accurate only for the dates on which the measurements were performed. The exact location of the water table should be anticipated to fluctuate somewhat depending upon normal seasonal variations in precipitation and surface runoff.

Seismic Parameters

Based on the field and laboratory tests performed on the encountered subsurface materials and an assumption of similar soil conditions present at depths below the boring termination depth, this site should be considered a Site Class C in accordance with the 2012/15 International Building Code.

Maximum spectral response acceleration values of Ss=0.225 g and S1=0.107 g are recommended for seismic design.

PROJECT DISCUSSION & RECOMMENDATIONS

Project Description

Plans indicated that multi-family apartment buildings are to be constructed at this site. It is anticipated that the proposed buildings will be constructed as slabs-on-grade. Due to the topography of the site, some walk-out type units are likely to be designed. Paved parking and drives are to be constructed as well. The location of the soil borings in relation to the size and preliminary configuration of the site is shown on the enclosed *Boring Location Plan*. Due to the restricted access across the site at the time of the field operations, it is recommended that once possible, additional borings be conducted in order to finalize the below recommendations.

Grading plans were not available at the time of this report. Due to the topography of the site, it is highly recommended that once grading plans are available that they be submitted to Alt & Witzig for review.

Structural loads were not available at the time of this report, however, it was assumed for analysis purposes that the structures will be lightly loaded, with column and wall loads of 100 kips and 3 klf, respectively. If the final design loads differ from those assumed for this analysis, it is recommended that they be submitted to Alt & Witzig Engineering, Inc. for review. After the completion of this review, it will be determined if changes to these recommendations are needed.

Site Preparation

Given the existing relief, it will be necessary to properly integrate any fills with the natural topography to avoid the creation of a slip surface leading to potential slope instability, by benching the fills into the natural hillside. Benches should be of sufficient width to accommodate the required compaction equipment (minimum 10 feet). Benching of natural slopes and existing embankments slopes steeper than 5H:1V should be performed in accordance with Section 203.21 of the INDOT Standard Specifications. Finished earth slopes shall not exceed 3H:1V.

Prior to the placement of fill, the exposed subgrade should be proof-rolled with equipment approved by a representative of Alt & Witzig Engineering, Inc. This proof-rolling will assist in determining if any pockets of soft unstable materials exist beneath this exposed subgrade. Where unsuitable materials are encountered, they should be undercut and replaced with a well-compacted material.

In portions of the site, a well compacted structural fill will be necessary to raise the building pads to the desired grade. The fill materials should be approved by a representative of Alt & Witzig Engineering, Inc. and may consist of either granular or cohesive soils. On-site soils, with the exception of topsoil and debris/organic laden soil, appear suitable for construction of the structural fill if proper moisture contents of the material and compaction procedures are maintained. The site is heavily wooded and significant root systems should be anticipated.

All fill should be placed to a density of at least 98 percent of the material's maximum dry density as determined by ASTM D-698 (Standard Proctor). However, the red clay soils are extremely plastic and the areas of use of this material as fill should be restricted as outlined later in this report. In order to sufficiently support the floor slab and the exterior footings, it will be necessary to properly compact all fill, including slopes that extend beyond the building.

It is recommended that the fill placement and compaction operations be observed and tested by a representative of Alt & Witzig Engineering, Inc. to assure that proper densities are achieved. The proposed fill material must be approved by a representative of Alt & Witzig Engineering, Inc. prior to its use as compacted fill material.

Foundation Recommendations

Various foundation types may be considered for support of the new apartments at this site. Due to the soil conditions encountered at the boring locations, the anticipated loads of the structures, and the relative economics of the available foundation systems, the foundation types considered included conventional spread and continuous wall footings.

The stiffness of the soils to a depth of three (3) to five (5) feet beneath the surface will be directly influenced by the seasonal variations in the groundwater level. Therefore, softer soil condition should be anticipated if construction takes place during the wetter periods of the year described previously.

Net allowable soil bearing pressures ranging between 2,500 psf and 2,000 psf are anticipated for design of conventional spread footings and continuous wall footings, respectively founded on either natural soils or compacted fill material.

In utilizing the above-mentioned net allowable pressures for dimensioning footings, it is necessary to consider only those loads applied above the finished floor elevation. If the above suggested bearing pressure is used in design of the footings, then all interior footings may be founded at a nominal depth below the finished floor slab if suitable bearing materials are encountered.

Our laboratory test results and the *Soil Survey of Monroe County, Indiana* indicates that the shallow cohesive soils across the site exhibit expansive properties. Hence, in order to alleviate the effects of seasonal variations in moisture content on the behavior of the footings and minimize the effects of frost action, all foundations should be founded a minimum of three (3) feet below the final grade.

It is recommended that all earthmoving operations and foundation excavations be monitored by a representative of Alt & Witzig Engineering, Inc. Where soft or unsuitable materials are encountered, it will be necessary to undercut the footing area to adequate bearing materials.

Floor Slab Recommendations

Due to the potential for fat clays with liquid limits in excess of 50 at the subgrade elevation, developers must consider treating the soils that will be supporting slabs on grade. A lime based chemical should be considered to treat any highly plastic clays (LL>50) if present within the upper two feet of the subgrade. This treatment will reduce the likelihood of expansion due to changes in moisture content and loading conditions (unloading due to cuts).

In the areas where the existing grade is above the final floor elevation, the building area should be undercut and a free draining granular material placed beneath the slab. In those areas where the existing grade is below the final floor elevation, a well-compacted structural fill will be necessary to raise the site to the desired grade. All fill materials may consist of approved borrow materials if proper moisture content and compaction procedures are maintained. Highly plastic clays

(LL>50) should not be used as borrow within two (2) feet of the subgrade elevation. Because of the engineering characteristics of these cohesive soils, difficulty can be anticipated if wet soils are used as fill. After the building area has been raised to the proper elevation, a granular fill should be placed immediately beneath all floor slabs.

Prior to elevating the site, the existing subgrade soils must be proofrolled with approved equipment. It is recommended that a representative of Alt & Witzig Engineering, Inc. be present to determine the exact depth of undercutting and to monitor backfilling operations.

In order to properly support the footings and floor slab, it will be necessary that controlled fill material be placed throughout the site. The horizontal distance that this controlled compaction is necessary will depend on the depth of the fill material. It is recommended that the materials within the subgrade area be compacted to a minimum density of 98% of maximum density in accordance with ASTM D-698.

It is recommended that the soil beneath all slabs-on-grade be modified to a minimum depth of sixteen (16) inches. The modified soil should be compacted to at least 98 percent of the maximum dry density as determined by ASTM D-698. The moisture content for the soil-lime mixture should range between optimum moisture content to plus two (+2) percent.

Pavement Areas

The high plasticity on-site soils may have the potential to undergo significant volume changes upon variations in moisture content. This volume change has the potential to cause premature failures in the pavement section. To minimize the risk of damage caused by volume changes within the soils, the on-site soils present beneath the pavement should be modified with lime.

In order for pavements to perform suitably, it is necessary that the underlying soils be adequately compacted and drained. The strength of the subgrade soils at this site depends upon several variables including compaction and groundwater level. Water can seep through cracks in the pavement and become trapped in the crushed stone layer. Therefore, it is important that water does not become trapped in the crushed stone layer immediately beneath the pavement. This can be done by providing the roadway areas with sufficient drainage ditches and/or placing a positive underdrain

system two (2) to three (3) feet beneath the granular base course layer. The underdrains and/or the drainage course should be installed to gravity drain to storm water collectors. Weep holes should be placed in the side walls of the storm water collectors so that water does not collect in the drainage course around the catch basins.

For these soils to provide adequate support for pavement, the earthmoving contractor must also follow proper site work techniques. It must be noted that during the wetter periods of the year the shallow soil will decrease in strength. Therefore, subgrade difficulties should be anticipated if construction takes place during wet periods.

It is recommended that after stripping has been performed, the exposed subgrade should be compacted to 98 percent of maximum density as determined in accordance with ASTM D-698 and proofrolled with approved equipment. This proofrolling will determine where pockets of soft or loose unsuitable materials exist beneath the exposed subgrade.

CONSTRUCTION CONSIDERATIONS

Site Preparation

Excessively organic topsoil and loosely dumped fill materials will generally undergo high volume changes that are detrimental to the behavior of pavements, floor slabs, structural fills, and foundations placed upon them. Therefore, it is recommended that these materials be stripped from the construction areas and wasted or stockpiled for later use.

It is recommended that after the above-mentioned stripping has been performed, the exposed subgrade should be proofrolled with approved equipment. This proofrolling will determine if any pockets of soft unsuitable materials are encountered. Should soft unsuitable materials be encountered, subgrade stabilization must be conducted. The type of stabilization should be determined at the time of construction. It is recommended that a representative of Alt & Witzig Engineering, Inc. be present for an inspection during the proofrolling phase of this project.

The cohesive soils at this site are particularly sensitive to moisture. During construction it is recommended that moisture contents of the soils be maintained at or slightly above optimum moisture content (0 to plus 3%). If soils are allowed to become desiccated, or are saturated to greater than 3% above optimum, they should be scarified, moisture conditioned, and recompacted.

As previously mentioned, some of the existing soils should not be placed within two (2) feet of the design subgrade elevation unless they are chemically treated.

After the existing subgrade soils are excavated to design grade, proper control of subgrade compaction and fill, and structural fill replacement should be maintained by a representative of the soils engineer as per the *Recommended Specifications for Compacted Fills and Backfills*, presented in the Appendix; thus minimizing volume changes and differential settlements which are detrimental to behavior of shallow foundations, floor slabs and pavements.

Groundwater

Water level readings obtained during and upon completion of the boring operations yielded dry boreholes. The exact location of the water table should be anticipated to fluctuate somewhat depending upon normal seasonal variations in precipitation and surface runoff.

Since these foundation materials tend to loosen/soften when exposed to free water, every effort should be made to keep the excavations dry should groundwater be encountered. A gravity drainage system, sump pumps, or other conventional minor dewatering procedures should be sufficient for this purpose in the shallow cohesive materials.

It is critical that the moisture content of the foundation soils not change before placing concrete. Exposure to water or drying of the soils may cause swelling or deterioration of the soils in the excavation.

SUMMARY

A preliminary subsurface exploration and engineering evaluation of the foundation conditions has been conducted for the apartment complex to be located in Bloomington, Indiana. Foundation design criteria have been suggested and possible design and construction problems have been discussed.

The exploration and analysis of the foundation conditions reported herein is considered in sufficient detail and scope to form a reasonable basis for site evaluation design. The recommendations submitted are based on the available soil information and assumed as well as furnished design details by the developer of this property. Any revision in the plans for the proposed structure from those enumerated in this report should be brought to the attention of Alt & Witzig Engineering, Inc.

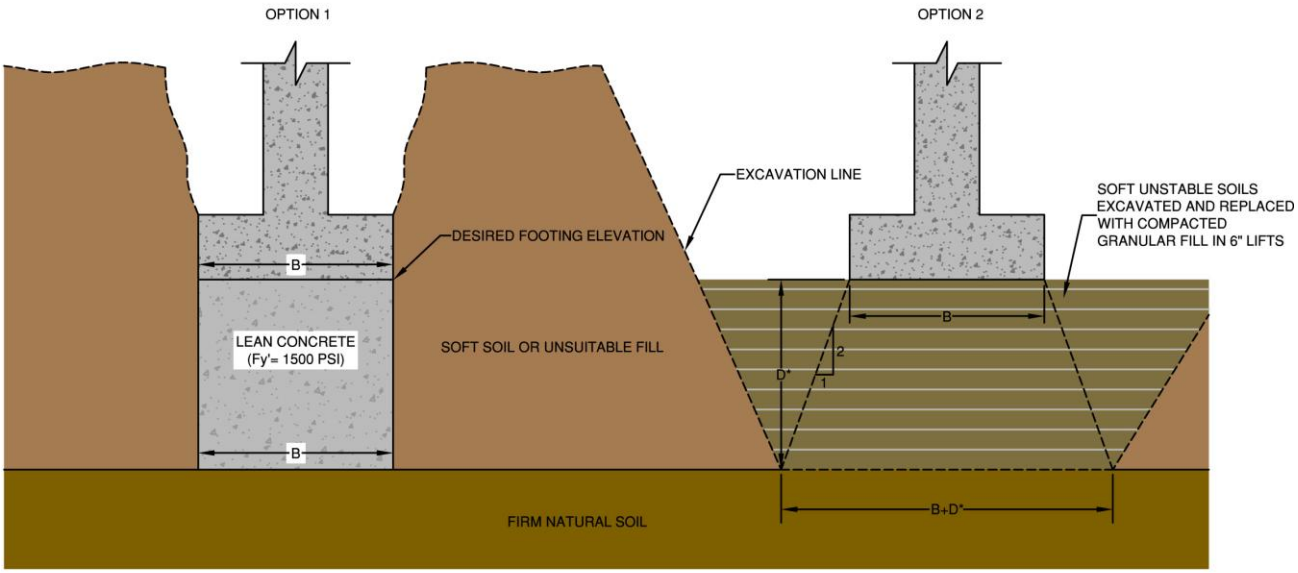
Additional field, laboratory testing, and engineering analysis should be performed as design progresses.

APPENDIX

RECOMMENDED SPECIFICATIONS FOR COMPACTED FILLS AND BACKFILLS

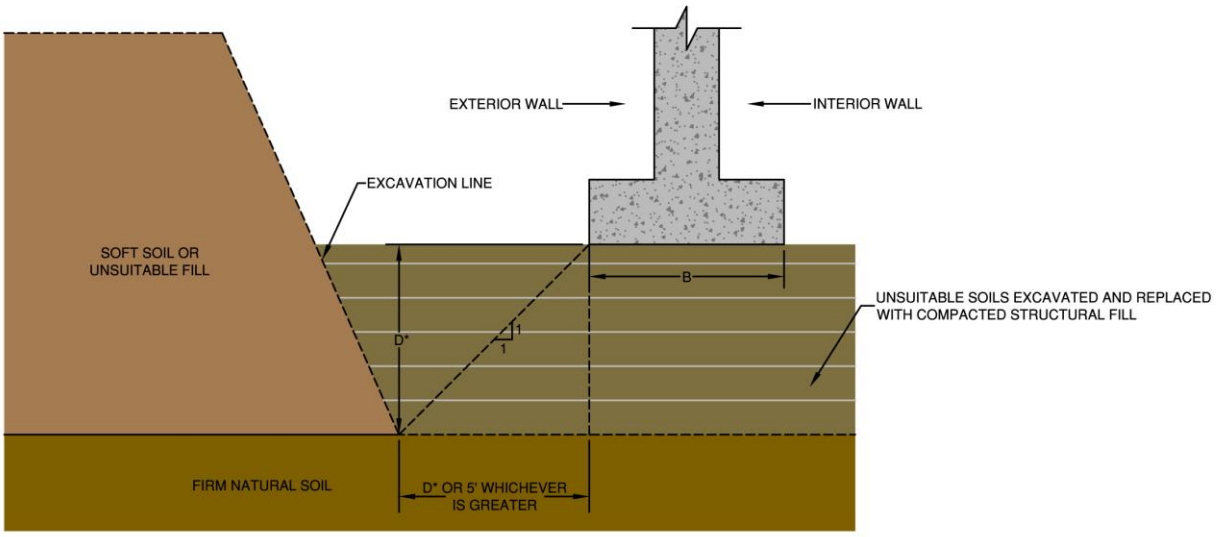
All fill shall be formed from material free of vegetable matter, rubbish, large rock, and other deleterious material. Prior to placement of fill, a sample of the proposed fill material should be submitted to the soils engineer for his approval. The fill material should be placed in layers not to exceed eight (8) inches in loose thickness and should be sprinkled with water as required to secure specified compactions. Each layer should be uniformly compacted by means of suitable equipment of the type required by the materials composing the fill. Under no circumstances should a bulldozer or similar tracked vehicles be used as compacting equipment. Material containing an excess of water so the specified compaction limits cannot be attained should be spread and dried to a moisture content which will permit proper compaction. All fill, including site work fill, should be compacted to the specified percent of the maximum density obtained in accordance with ASTM D-698. Moisture contents ranging between minus two (-2) to plus two (+2) percent of optimum moisture should be used when compacting fill. Should the results of the in place density tests indicate that the specified compaction limits are not obtained, the areas represented by such tests should be reworked and retested as required until the specified limits are reached.

UNDERCUT EXCAVATION FOR ISOLATED FOOTINGS IN UNSTABLE MATERIALS



D* IS DEPTH FOR SUITABLE SOILS

MASS EXCAVATION FOR FOOTINGS IN UNSTABLE MATERIALS



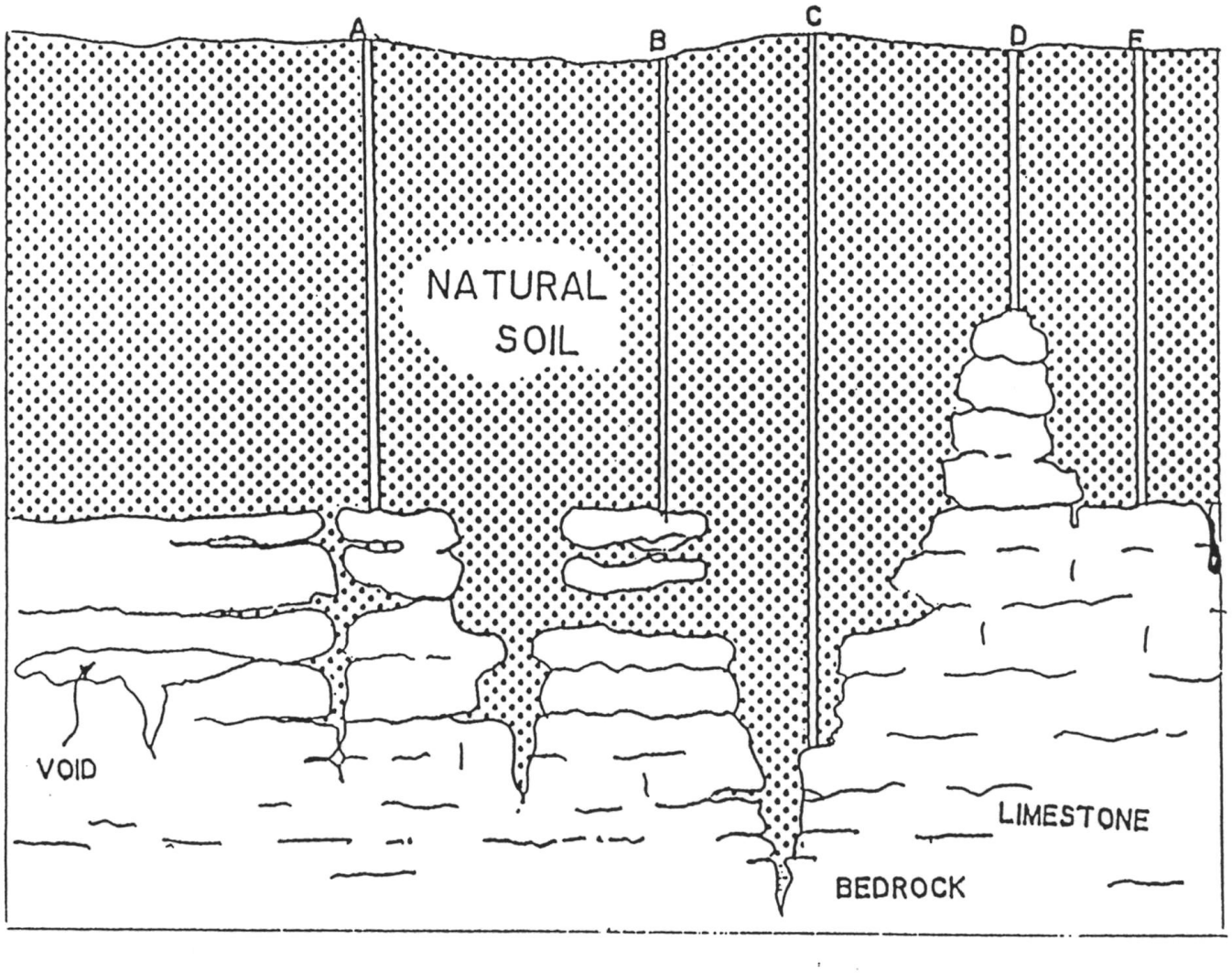
D* IS DEPTH FOR SUITABLE SOILS

Undercut Detail for Footing Excavation in Unstable Material

PROJECT: **Union at Bloomington Apartments**
LOCATION: Bloomington, Indiana
CLIENT: **Mecca Companies, Inc.**
A&W File No.: 17IN0212

Alt & Witzig Engineering Inc.
4105 W. 99th Street ·Carmel, IN 46032
TEL (317)875-7000 · FAX (317) 876-3705
www.altwitzig.com

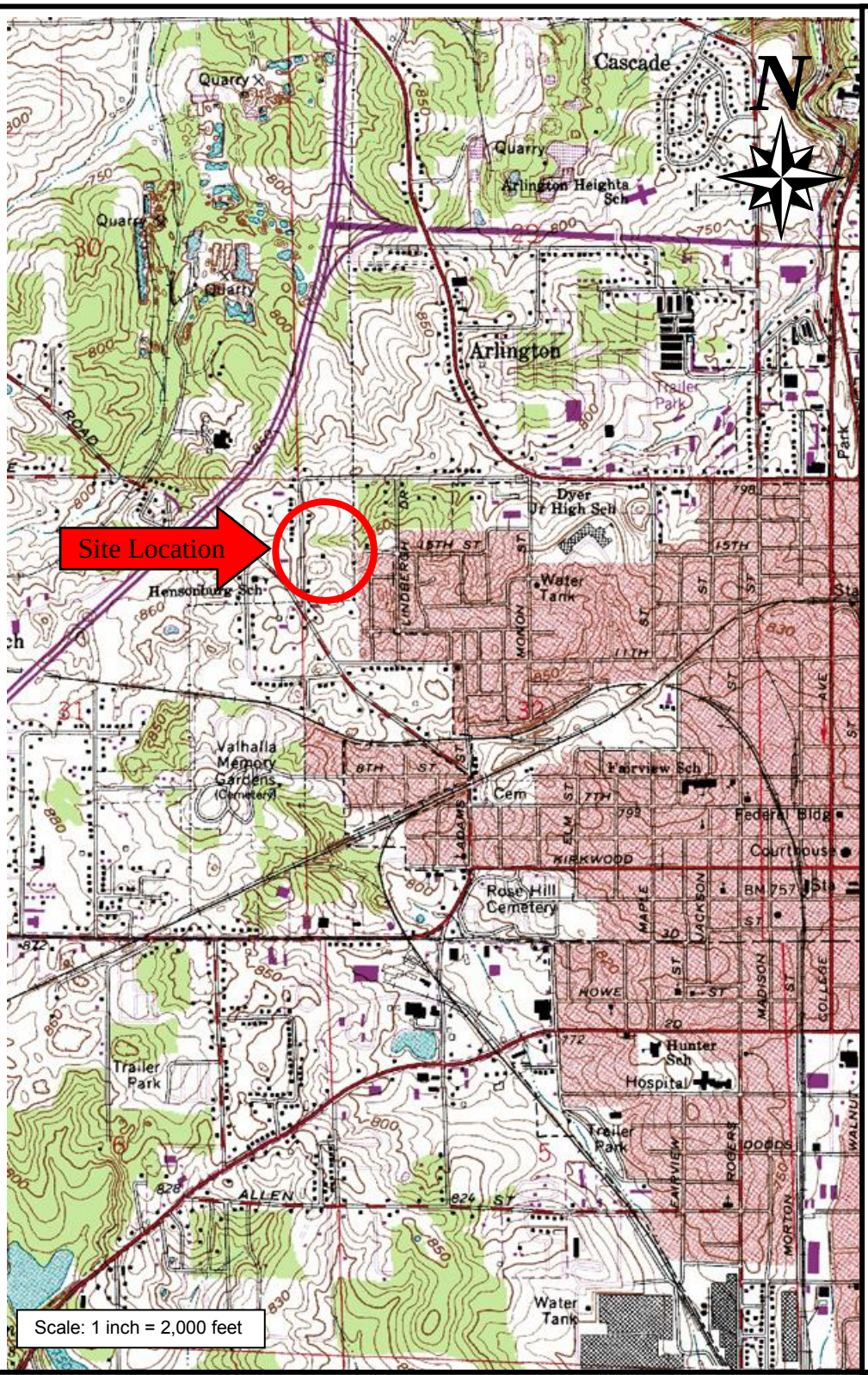
EXAMPLE SUBSURFACE PROFILE – KARST TOPOGRAPHY (79)



Boring A – Refusal on Weathered Limestone
Boring B – Refusal on a Limestone Floater
Boring C – Refusal in a Deep Crevice
Boring D – Refusal on a Pinnacle of Limestone
Boring E – Refusal on Competent Limestone Bedrock

Prepared For: **Mecca Companies, Inc.**		**Prepared By:** **Alt & Witzig Engineering, Inc.**	
Project Name: **Union at Bloomington Apartments**		**Project No:** **17IN0212**	**Date:** **5-2017**

SITE LOCATION MAP



USGS Topographic Map:
Bloomington Quadrangle

Township: T 9 N.
Range: R 1 W.
Section: 32

PROJECT: **Union at Bloomington Apartments**
LOCATION: Bloomington, Indiana
CLIENT: **Mecca Companies, Inc.**
A&W File No.: 17IN0212

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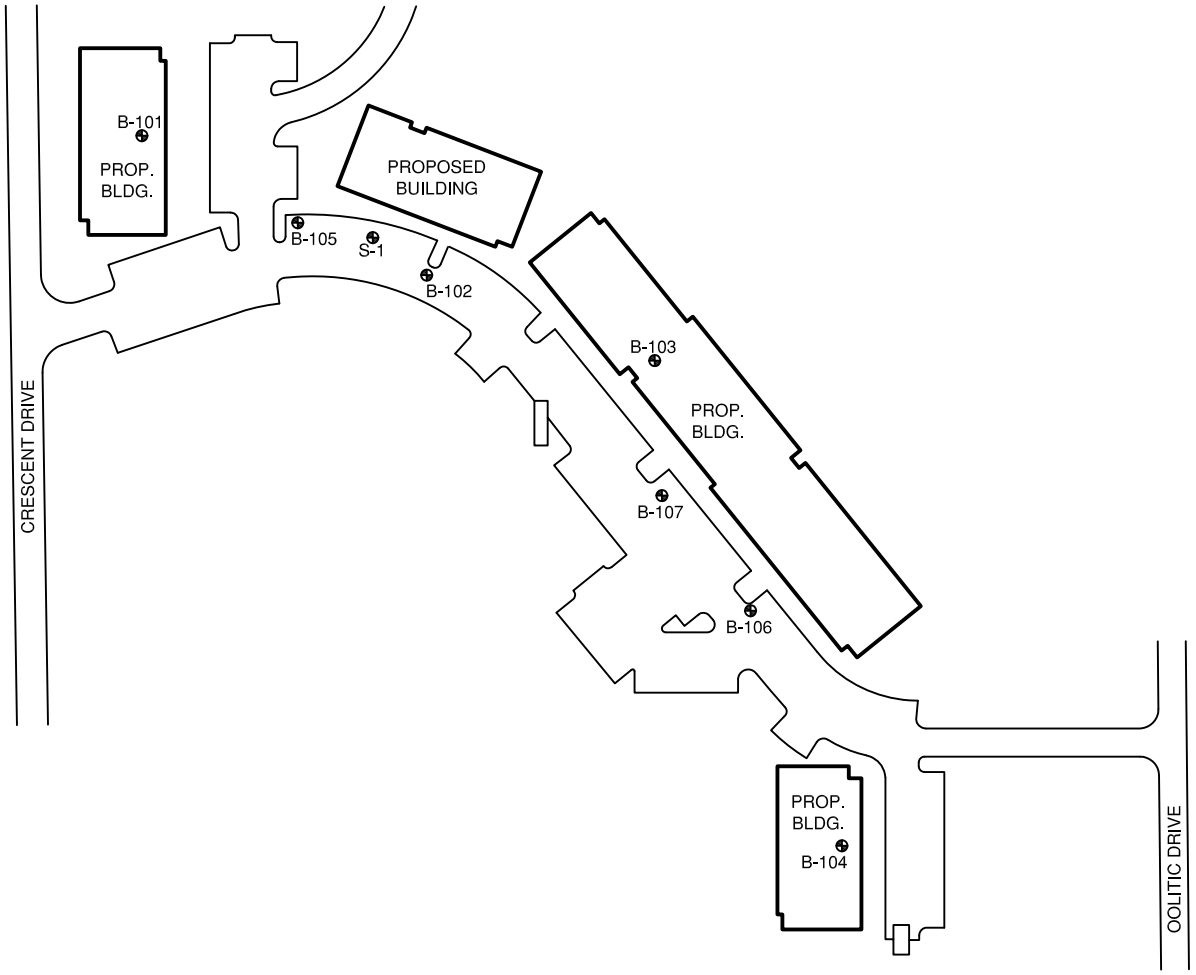


BORING LOCATION PLAN

PROJECT NAME: Union at Bloomington Apartments
LOCATION: Bloomington, Indiana
PREPARED FOR: Mecca Companies, Inc.
PROJECT NO: 17IN0212

Project Manager: BW
Checked By: DH
Drawn By: JT
Date: 05/17

Alt & Witzig Engineering, Inc.
4105 West 99th Street • Carmel, IN 46032
Telephone: (317) 875-7000 • Fax (317) 876-3705

BORING LOG

(82)

Alt & Witzig Engineering, Inc.

CLIENT **Mecca Companies, Inc.**

BORING # **B-101**

PROJECT NAME **Union at Bloomington Apartments**

ALT & WITZIG FILE # **17IN0212**

PROJECT LOCATION **Bloomington, Indiana**

DRILLING and SAMPLING INFORMATION

Date Started **5/10/17**

Hammer Wt. **140** lbs.

Date Completed **5/10/17**

Hammer Drop **30** in.

Boring Method **HSA**

Spoon Sampler OD **2** in.

Driller **M. Loveday**

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION SURFACE ELEVATION 891.0	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
890.7	TOPSOIL	0.3										
				1	SS			9		1.5	21.0	
	Brown Silty CLAY		5	2	SS			19		3.0	17.6	
				3	SS			18		3.0	23.8	
882.5		8.5										
881.0	Reddish Brown Silty CLAY with Rock Fragments	10.0	10	4	SS			50/1"		2.0	32.7	
881.0	Auger Refusal at 10.0 feet. Began Core.	10.0		1	RC							Rock Core REC = 100% RQD = 62%
	Light Gray LIMESTONE Packstone, Moderately Weathered, Medium grained, Thinnly bedded, Highly fractured, Fossiliferous, Carbonaceous											
876.0		15.0	15									
	End of Boring at 15 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

(83)

Alt & Witzig Engineering, Inc.

CLIENT **Mecca Companies, Inc.**

PROJECT NAME **Union at Bloomington Apartments**

PROJECT LOCATION **Bloomington, Indiana**

BORING # **B-102**

ALT & WITZIG FILE # **17IN0212**

DRILLING and SAMPLING INFORMATION

Date Started **5/12/17**

Date Completed **5/12/17**

Boring Method **HSA**

Driller **M. Loveday**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
	SURFACE ELEVATION 886.0											
885.7	TOPSOIL	0.3										
				1	SS			8		3.0	24.0	
	Brown Silty CLAY		5	2	SS			19		1.5	22.7	
878.0		8.0		3	SS			37		3.5	28.2	
			10	4	SS			35		2.5	32.2	
	Reddish Brown with Rock Fragments		15	5	SS			26		3.5	27.2	
			20	6	SS			8		3.0	32.8	
862.5		23.5										
	Gray SHALE		25	7	SS			50/3"				
860.0		26.0										
860.0	Auger Refusal at 26.0 feet. Began Core.	26.0		1	RC							Rock Core REC = 73% RQD = 34%
	Brown to Light Brown SHALE Laminated Siltstone, Slightly Weathered, Very fine grained, Thinnly bedded, Highly fractured, Poorly Indurated		30									
855.0		31.0										
	End of Boring at 31 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

(84)

Alt & Witzig Engineering, Inc.

CLIENT **Mecca Companies, Inc.**

BORING # **B-103**

PROJECT NAME **Union at Bloomington Apartments**

ALT & WITZIG FILE # **17IN0212**

PROJECT LOCATION **Bloomington, Indiana**

DRILLING and SAMPLING INFORMATION

Date Started **5/17/17**

Hammer Wt. **140** lbs.

Date Completed **5/17/17**

Hammer Drop **30** in.

Boring Method **HSA**

Spoon Sampler OD **2** in.

Driller **M. Loveday**

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION SURFACE ELEVATION 884.0	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
883.7	TOPSOIL	0.3										
				1	SS			9		1.5	21.1	
			5	2	SS			18		4.5	21.2	
				3	SS			15		3.5	26.6	
	Brown Silty CLAY		10	4	SS			22		3.5	28.0	
			15	5	SS			13	5.4	3.0	28.4	
865.0		19.0										
863.5	Gray Weathered Limestone	20.5	20	6	SS			50/1"				
863.5	Auger Refusal at 20.5 feet. Began Core.	20.5		1	RC							Rock Core REC = 78% RQD = 41%
858.5	Light Brown LIMESTONE Wackestone, Slightly Weathered, Very fine grained, Thinnly bedded, Fossilisferous, Carbonaceous, Micritic	25.5	25									
	End of Boring at 25.5 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

(85)

Alt & Witzig Engineering, Inc.

CLIENT **Mecca Companies, Inc.**

PROJECT NAME **Union at Bloomington Apartments**

PROJECT LOCATION **Bloomington, Indiana**

BORING # **B-104**

ALT & WITZIG FILE # **17IN0212**

DRILLING and SAMPLING INFORMATION

Date Started **5/15/17**

Date Completed **5/15/17**

Boring Method **HSA**

Driller **M. Loveday**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % Dry Unit Weight (pcf)	Remarks
	SURFACE ELEVATION 889.0											
888.8	TOPSOIL	0.2										
				1	SS			10		2.0	19.2	
			5	2	SS			22		4.5	19.3	
				3	SS			14		2.0	34.3	
	Brown Silty CLAY		10	4	SS			17		2.5	31.7	
			15	5	SS			13		4.5	22.5	
			20	6	SS			14		4.5	30.1	
867.0		22.0										
867.0	Auger Refusal at 22.0 feet. Began Core.	22.0		1	RC							Rock Core REC = 94% RQD = 69%
	Brown SANDSTONE Feldspathic Wacke, Moderately Weathered, Very fine grained, Medium bedded, Slightly fractured, Poorly Indurated		25									
862.0		27.0										
	End of Boring at 27 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

(86)

Alt & Witzig Engineering, Inc.

CLIENT **Mecca Companies, Inc.**

BORING # **B-105**

PROJECT NAME **Union at Bloomington Apartments**

ALT & WITZIG FILE # **17IN0212**

PROJECT LOCATION **Bloomington, Indiana**

DRILLING and SAMPLING INFORMATION

Date Started **5/11/17** Hammer Wt. **140** lbs.

Date Completed **5/11/17** Hammer Drop **30** in.

Boring Method **HSA** Spoon Sampler OD **2** in.

Driller **M. Loveday** Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION / SURFACE ELEVATION 889.0	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
888.5	TOPSOIL	0.5										
				1	SS			9		1.5	22.2	
			5	2	SS			20		3.0	16.4	
				3	SS			21		4.5	28.1	
			10	4	SS			22		4.5	21.3	
	Brown Silty CLAY											
			15	5	SS			18		4.5	26.1	
			20	6	SS			28		2.0	29.4	
864.5		24.5										
			25	7	SS			50/2"				
	Weathered LIMESTONE											
861.5		27.5										
	Auger Refusal at 27.5 feet. End of Boring at 27.5 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

(87)

Alt & Witzig Engineering, Inc.

CLIENT **Mecca Companies, Inc.**

PROJECT NAME **Union at Bloomington Apartments**

PROJECT LOCATION **Bloomington, Indiana**

BORING # **B-106**

ALT & WITZIG FILE # **17IN0212**

DRILLING and SAMPLING INFORMATION

Date Started **5/16/17**

Date Completed **5/16/17**

Boring Method **HSA**

Driller **M. Loveday**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION SURFACE ELEVATION 880.0	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics / Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % / *Dry Unit Weight (pcf)*	Remarks
879.7	TOPSOIL	0.3										
				1	SS			9		1.5	31.2	
			5	2	SS			16		4.5	24.6	
	Brown Silty CLAY			3	SS			22	5.4	3.5	23.3	
			10	4	SS			20	5.4	4.5	24.5	
864.5		15.5	15	5	SS			50/0"				
	Gray Weathered LIMESTONE											
860.0		20.0										
860.0	Auger Refusal at 20.0 feet. Began Core.	20.0	20	6	SS			50/3"				
				1	RC							Rock Core REC = 95% RQD = 60%
	Light Brown to Light Gray LIMESTONE Crystalline Carbonate, Slightly Weathered, Medium grained, Thinnly bedded, Moderately fractured, Pyritic, Poorly Indurated											
855.0		25.0	25									
	End of Boring at 25 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

(88)

Alt & Witzig Engineering, Inc.

CLIENT **Mecca Companies, Inc.**

BORING # **B-107**

PROJECT NAME **Union at Bloomington Apartments**

ALT & WITZIG FILE # **17IN0212**

PROJECT LOCATION **Bloomington, Indiana**

DRILLING and SAMPLING INFORMATION

Date Started **5/16/17** Hammer Wt. **140** lbs.

Date Completed **5/16/17** Hammer Drop **30** in.

Boring Method **HSA** Spoon Sampler OD **2** in.

Driller **M. Loveday** Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION SURFACE ELEVATION 886.0	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
885.7	TOPSOIL	0.3		1	SS			9		1.5	18.8	
	Brown Silty CLAY		5	2	SS			16		4.5	23.3	
878.0		8.0		3	SS			26		2.0	22.7	
	Brown Silty CLAY with Rock Fragments		10	4	SS			35		4.5		
			15	5	SS			20		4.5	24.4	
866.0		20.0	20	6	SS			50/0"				
866.0	Auger Refusal at 20.0 feet. Began Core.	20.0		1	RC							Rock Core REC = 99% RQD = 71%
	Light Brown LIMESTONE Packstone, Moderately Weathered, Thinnly bedded, Highly fractured, Fossiliferous, Carbonaceous, Micritic, Poorly Indurated											
861.0		25.0	25									
	End of Boring at 25 feet											

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

BORING LOG

(89)

Alt & Witzig Engineering, Inc.

CLIENT **Mecca Companies, Inc.**

PROJECT NAME **Union at Bloomington Apartments**

PROJECT LOCATION **Bloomington, Indiana**

BORING # **S-1**

ALT & WITZIG FILE # **17IN0212**

DRILLING and SAMPLING INFORMATION

Date Started **5/12/17**

Date Completed **5/12/17**

Boring Method **HSA**

Driller **M. Loveday**

Hammer Wt. **140** lbs.

Hammer Drop **30** in.

Spoon Sampler OD **2** in.

Rig Type **D-50 Track ATV**

TEST DATA

STRATA ELEV.	SOIL CLASSIFICATION SURFACE ELEVATION 887.0	Strata Depth	Depth Scale	Sample No.	Sample Type	Sampler Graphics Recovery Graphics	Ground Water	Standard Penetration Test, N - blows/foot	Qu-tsf Unconfined Compressive Strength	PP-tsf Pocket Penetrometer	Moisture Content % *Dry Unit Weight (pcf)*	Remarks
	Rock Sounding		5 10 15 20 25									
861.0	Auger Refusal at 26.0 feet. End of Boring at 26 feet	26.0										

Sample Type

SS - Driven Split Spoon
ST - Pressed Shelby Tube
CA - Continuous Flight Auger
RC - Rock Core
CU - Cuttings
CT - Continuous Tube

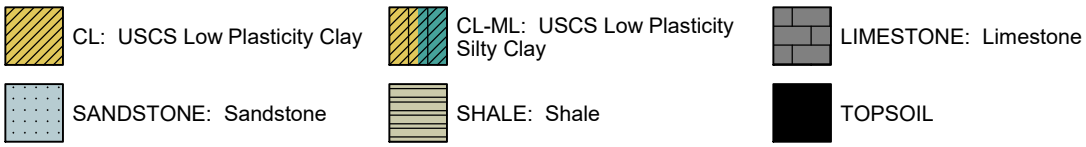
Groundwater

○ During Drilling *Dry ft.*
▽ At Completion *ft.*

Boring Method

HSA - Hollow Stem Augers
CFA - Continuous Flight Augers
DC - Driving Casing
MD - Mud Drilling

MATERIAL GRAPHICS LEGEND



SOIL PROPERTY SYMBOLS

N: *Standard "N" penetration value. Blows per foot of a 140-lb hammer falling 30" on a 2" O.D. split-spoon.*

Qu: *Unconfined Compressive Strength, tsf* PP: *Pocket Penetrometer, tsf*

LL: *Liquid Limit, %* PL: *Plastic Limit, %* PI: *Plasticity Index, %*

DRILLING AND SAMPLING SYMBOLS

GROUNDWATER SYMBOLS

- ○ *Apparent water level noted while drilling.*
- ▽ *Apparent water level noted upon completion.*
- ▼ *Apparent water level noted upon delayed time.*

SAMPLER SYMBOLS

RC

SS: Split Spoon

RELATIVE DENSITY & CONSISTANCY CLASSIFICATION (NON-COHESIVE SOILS)

TERM	*BLOWS PER FOOT*
Very Loose	0 - 5
Loose	6 - 10
Medium Dense	11 - 30
Dense	31 - 50
Very Dense	>51

RELATIVE DENSITY & CONSISTANCY CLASSIFICATION (COHESIVE SOILS)

TERM	*BLOWS PER FOOT*
Very Soft	0 - 3
Soft	4 - 5
Medium Stiff	6 - 10
Stiff	11 - 15
Very Stiff	16 - 30
Hard	>31

Alt & Witzig Engineering, Inc.
4105 West 99th St.
Carmel, IN 46032
Telephone: 317-875-7000
Fax:

GENERAL NOTES

Project: Union at Bloomington Apartments

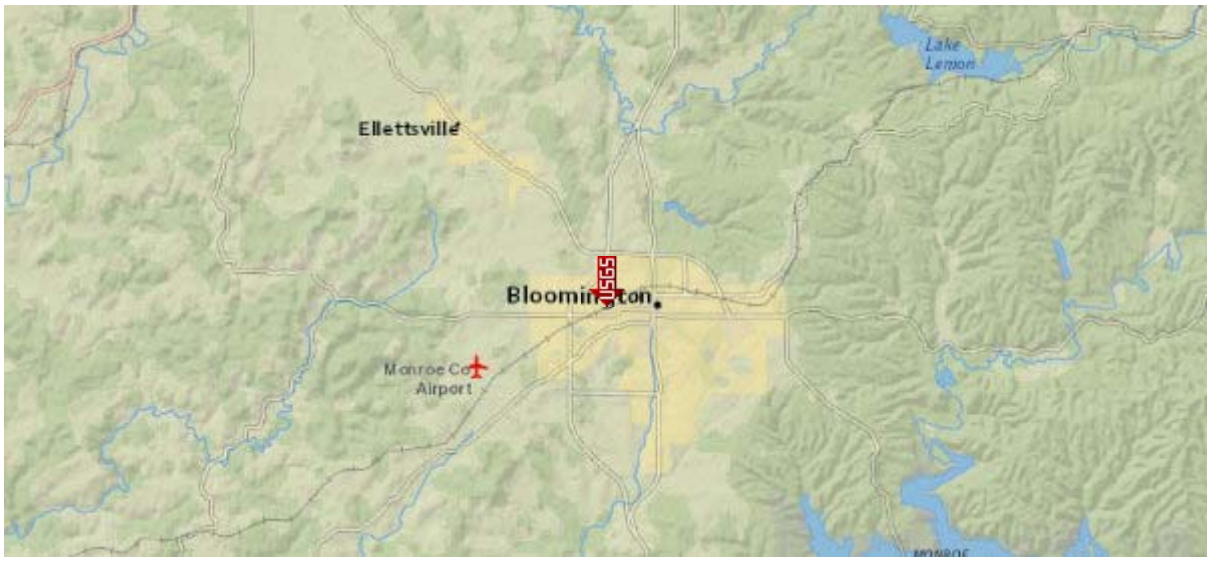
Location: Bloomington, Indiana

Number: 17IN0212

USGS Design Maps Summary Report

User–Specified Input

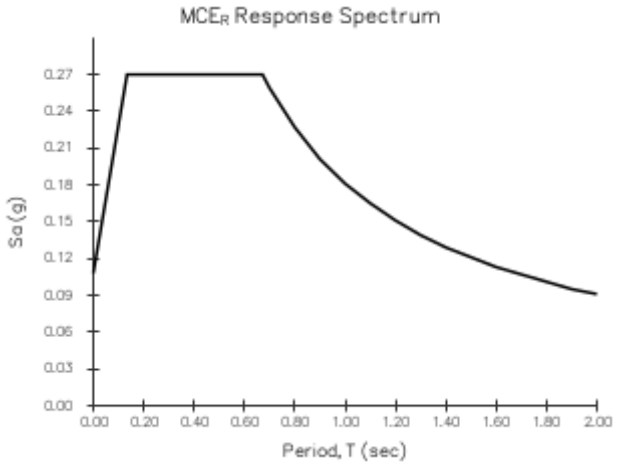
Report Title	17IN0212 Mon May 22, 2017 13:15:08 UTC
Building Code Reference Document	2012/2015 International Building Code (which utilizes USGS hazard data available in 2008)
Site Coordinates	39.177°N, 86.55623°W
Site Soil Classification	Site Class C – "Very Dense Soil and Soft Rock"
Risk Category	I/II/III

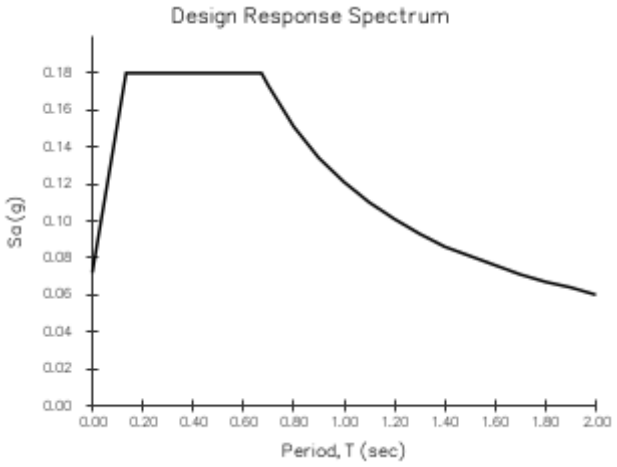


USGS–Provided Output

S_S =	0.225 g	S_{MS} =	0.270 g	S_{DS} =	0.180 g
S_1 =	0.107 g	S_{M1} =	0.181 g	S_{D1} =	0.121 g

For information on how the SS and S1 values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please return to the application and select the "2009 NEHRP" building code reference document.





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United States Department of Agriculture

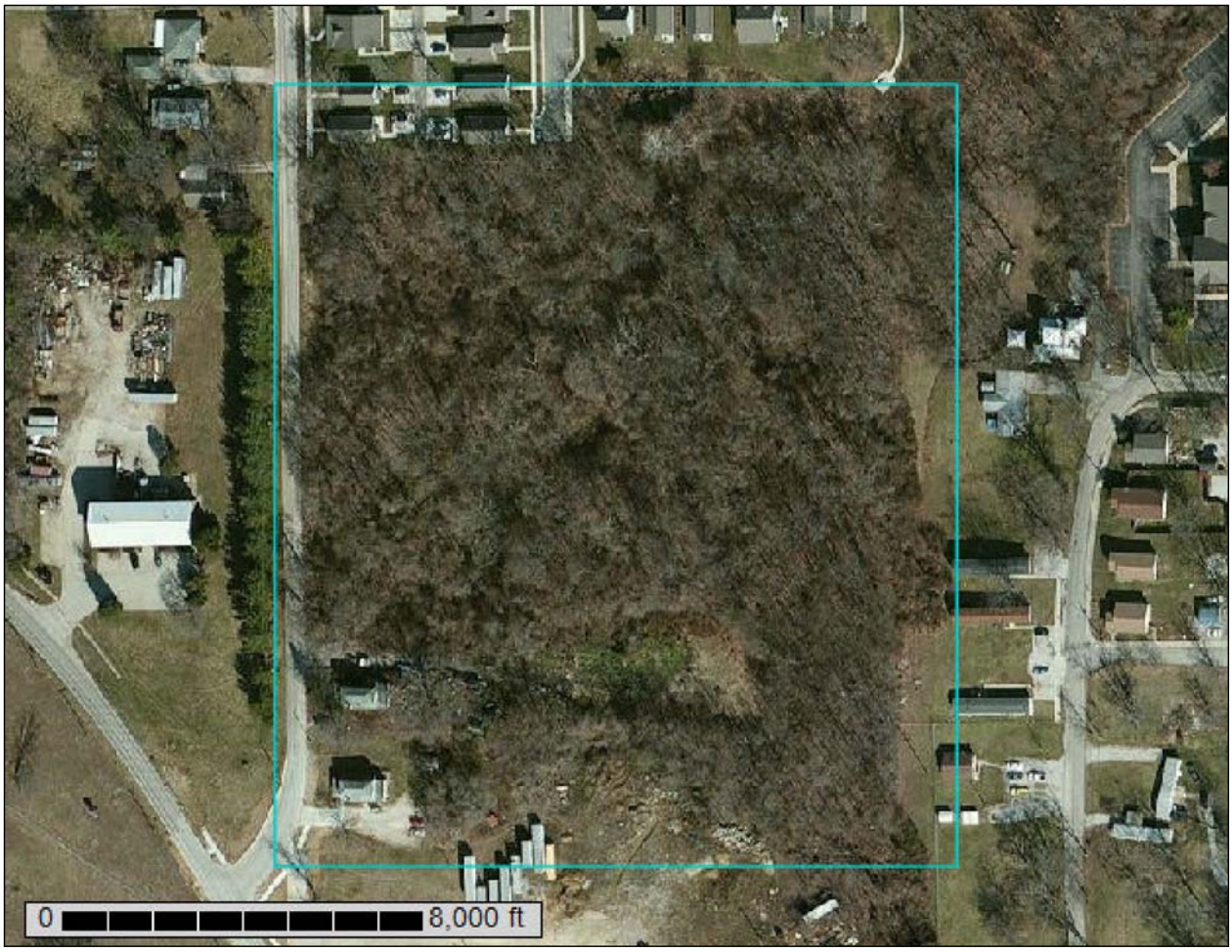
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Monroe County, Indiana

17IN0212



April 4, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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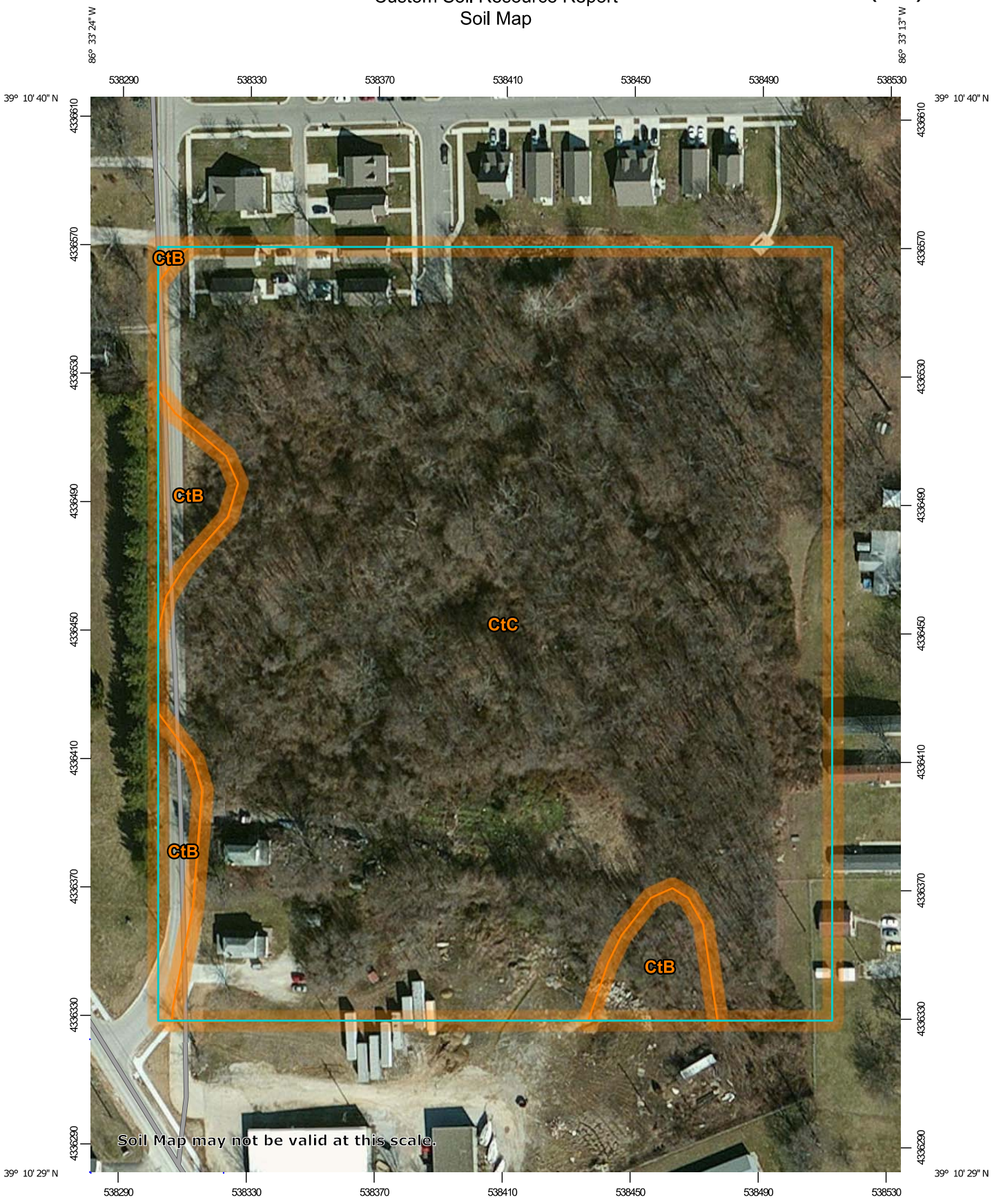
Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:1,630 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 20 40 80 120

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Monroe County, Indiana
Survey Area Data: Version 23, Sep 15, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 26, 2012—Mar 28, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Monroe County, Indiana (IN105)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
CtB	Crider-Urban land complex, 2 to 6 percent slopes	0.7	5.9%
CtC	Crider-Urban land complex, 6 to 12 percent slopes	11.8	94.1%
Totals for Area of Interest		**12.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Monroe County, Indiana

CtB—Crider-Urban land complex, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: kz84
Elevation: 370 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Crider and similar soils: 60 percent
Urban land: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crider

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over clayey residuum

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 36 inches: silty clay loam
2Bt2 - 36 to 80 inches: clay

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Description of Urban Land

Setting

Landform: Hills

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

CtC—Crider-Urban land complex, 6 to 12 percent slopes

Map Unit Setting

National map unit symbol: kz85
Elevation: 370 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Crider and similar soils: 60 percent
Urban land: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crider

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loess over clayey residuum

Typical profile

Ap - 0 to 7 inches: silt loam
Bt1 - 7 to 36 inches: silty clay loam
2Bt2 - 36 to 80 inches: clay

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

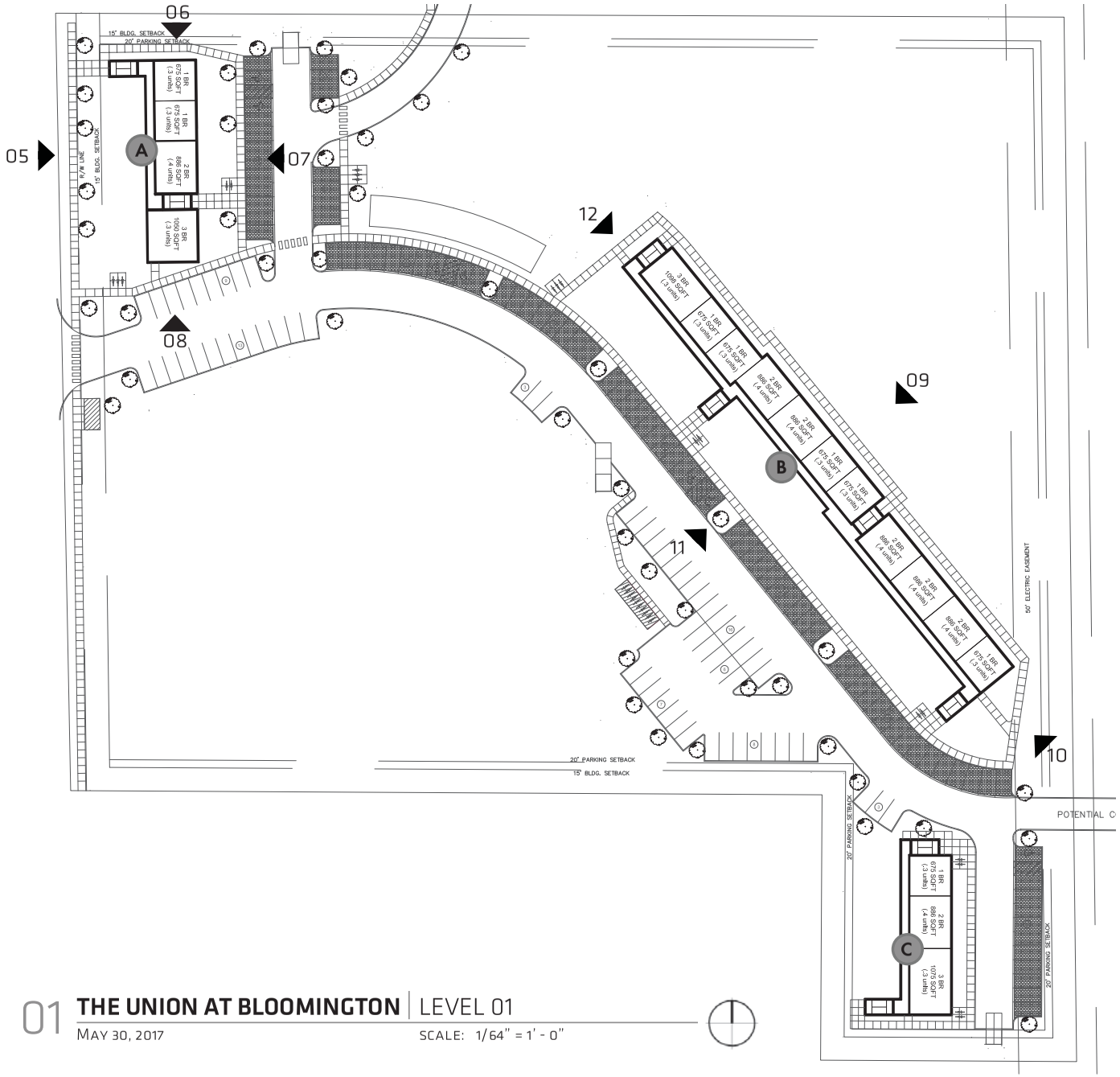
Description of Urban Land

Setting

Landform: Hills

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No



LEVEL 01

149 PARKING SPACES

46% (1BR) 67 COUNT
40% (2BR) 59 COUNT
14% (3BR) 20 COUNT

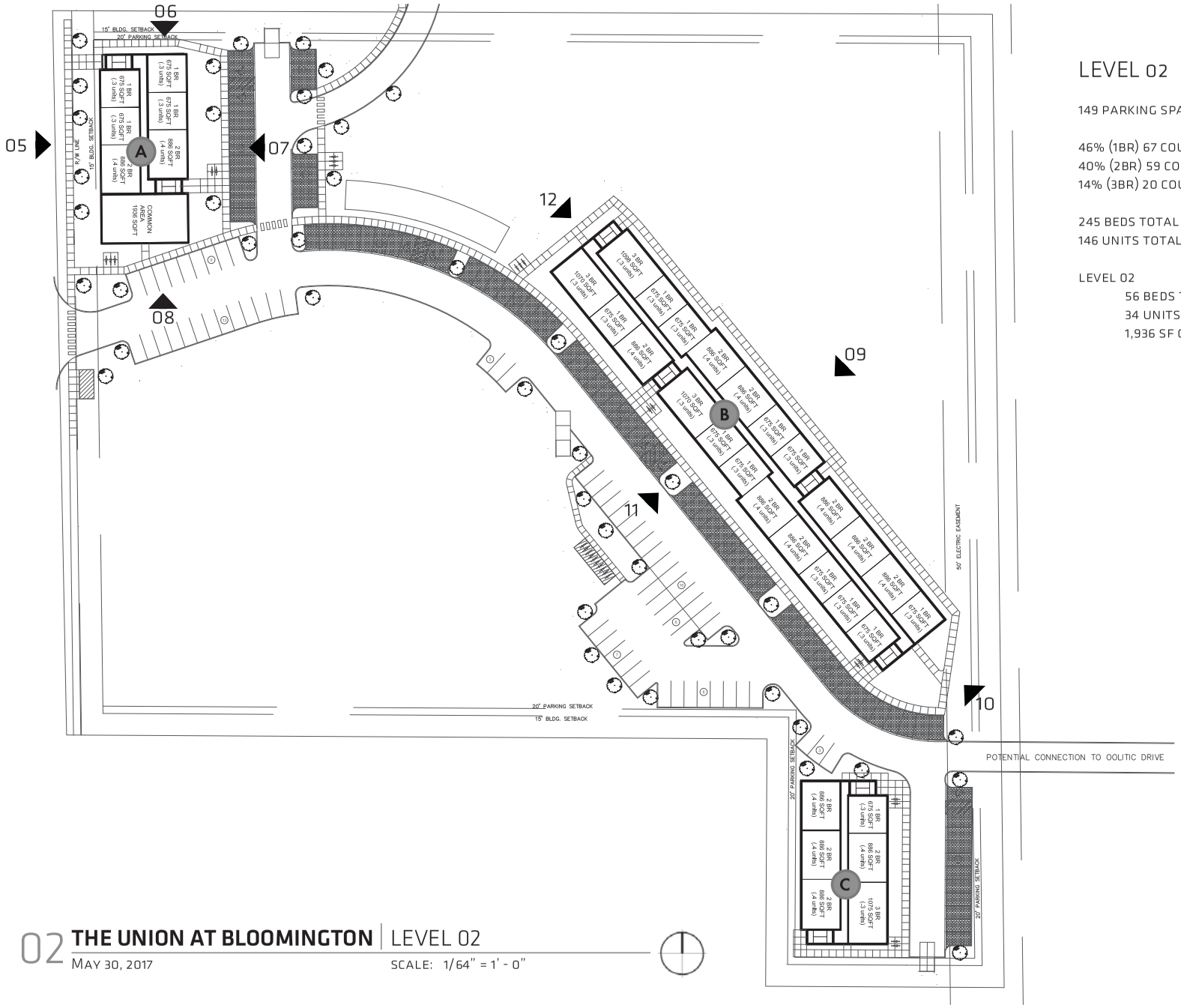
245 BEDS TOTAL
146 UNITS TOTAL

LEVEL 01
31 BEDS TOTAL PER LEVEL
18 UNITS TOTAL PER LEVEL

BUILDING A		
	2	1 BEDROOM
	1	2 BEDROOM
	1	3 BEDROOM
BUILDING B		
	5	1 BEDROOM
	5	2 BEDROOM
	1	3 BEDROOM
BUILDING C		
	1	1 BEDROOM
	1	2 BEDROOM
	1	3 BEDROOM

01 **THE UNION AT BLOOMINGTON** | LEVEL 01

MAY 30, 2017 SCALE: 1/64" = 1' - 0"



LEVEL 02

149 PARKING SPACES

46% (1BR) 67 COUNT
40% (2BR) 59 COUNT
14% (3BR) 20 COUNT

245 BEDS TOTAL
146 UNITS TOTAL

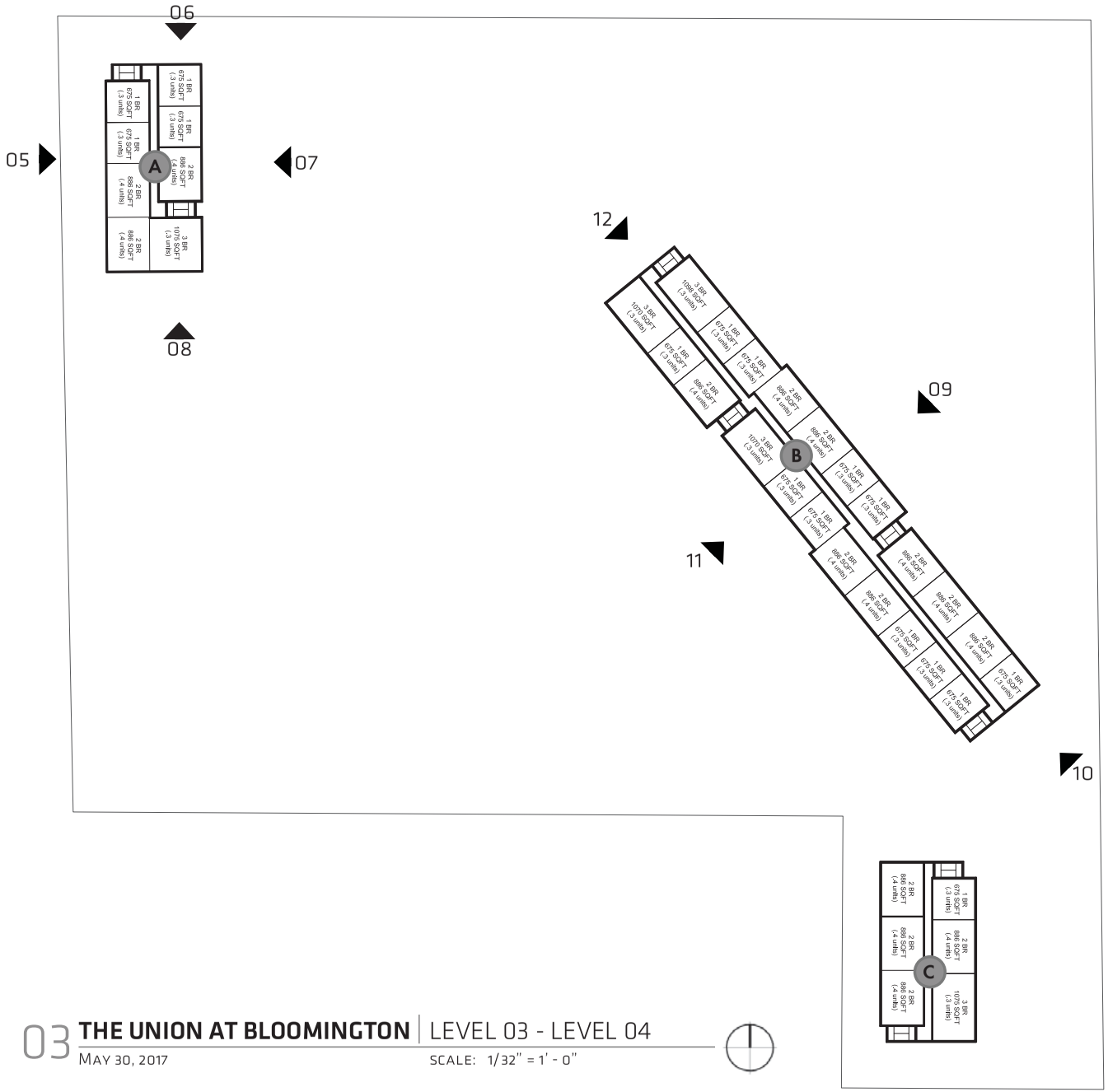
LEVEL 02
- 56 BEDS TOTAL PER LEVEL
- 34 UNITS TOTAL PER LEVEL
- 1,936 SF COMMON AREA

BUILDING A		
	4	1 BEDROOM
	2	2 BEDROOM
	0	3 BEDROOM
BUILDING B		
	11	1 BEDROOM
	8	2 BEDROOM
	3	3 BEDROOM
BUILDING C		
	1	1 BEDROOM
	4	2 BEDROOM
	1	3 BEDROOM

02 **THE UNION AT BLOOMINGTON** | LEVEL 02

MAY 30, 2017

SCALE: 1/64" = 1' - 0"



LEVEL 03 - 04

149 PARKING SPACES

46% (1BR) 67 COUNT
40% (2BR) 59 COUNT
14% (3BR) 20 COUNT

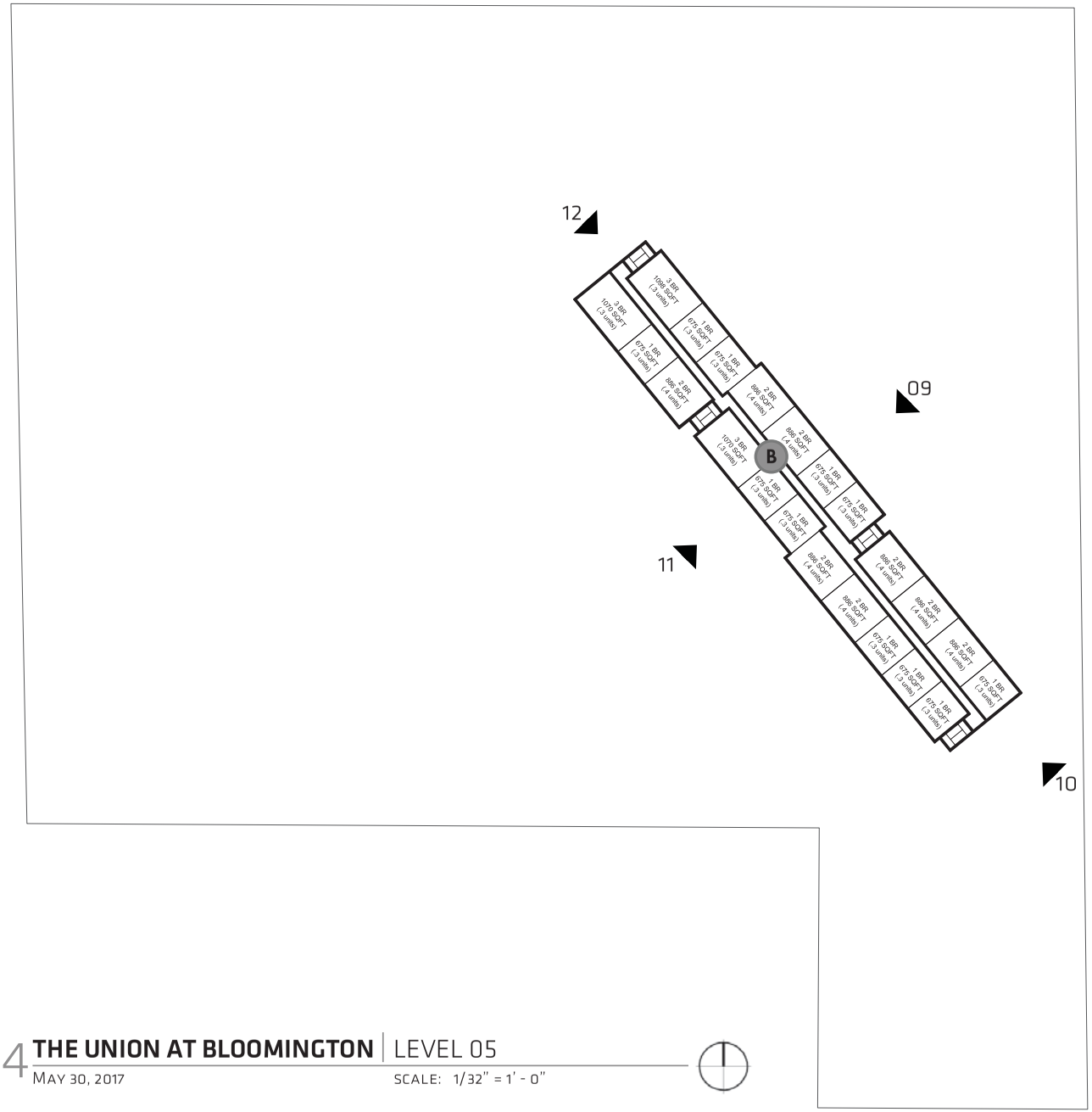
245 BEDS TOTAL
146 UNITS TOTAL

LEVEL 03 - LEVEL 04
61 BEDS TOTAL PER LEVEL
36 UNITS TOTAL PER LEVEL

BUILDING A		
	4	1 BEDROOM
	3	2 BEDROOM
	1	3 BEDROOM
BUILDING B		
	11	1 BEDROOM
	8	2 BEDROOM
	3	3 BEDROOM
BUILDING C		
	1	1 BEDROOM
	4	2 BEDROOM
	1	3 BEDROOM

03 **THE UNION AT BLOOMINGTON** | LEVEL 03 - LEVEL 04

MAY 30, 2017 SCALE: 1/32" = 1' - 0"



LEVEL 05

149 PARKING SPACES

46% (1BR) 67 COUNT
40% (2BR) 59 COUNT
14% (3BR) 20 COUNT

245 BEDS TOTAL
146 UNITS TOTAL

LEVEL 05
36 BEDS TOTAL PER LEVEL
22 UNITS TOTAL PER LEVEL

BUILDING B

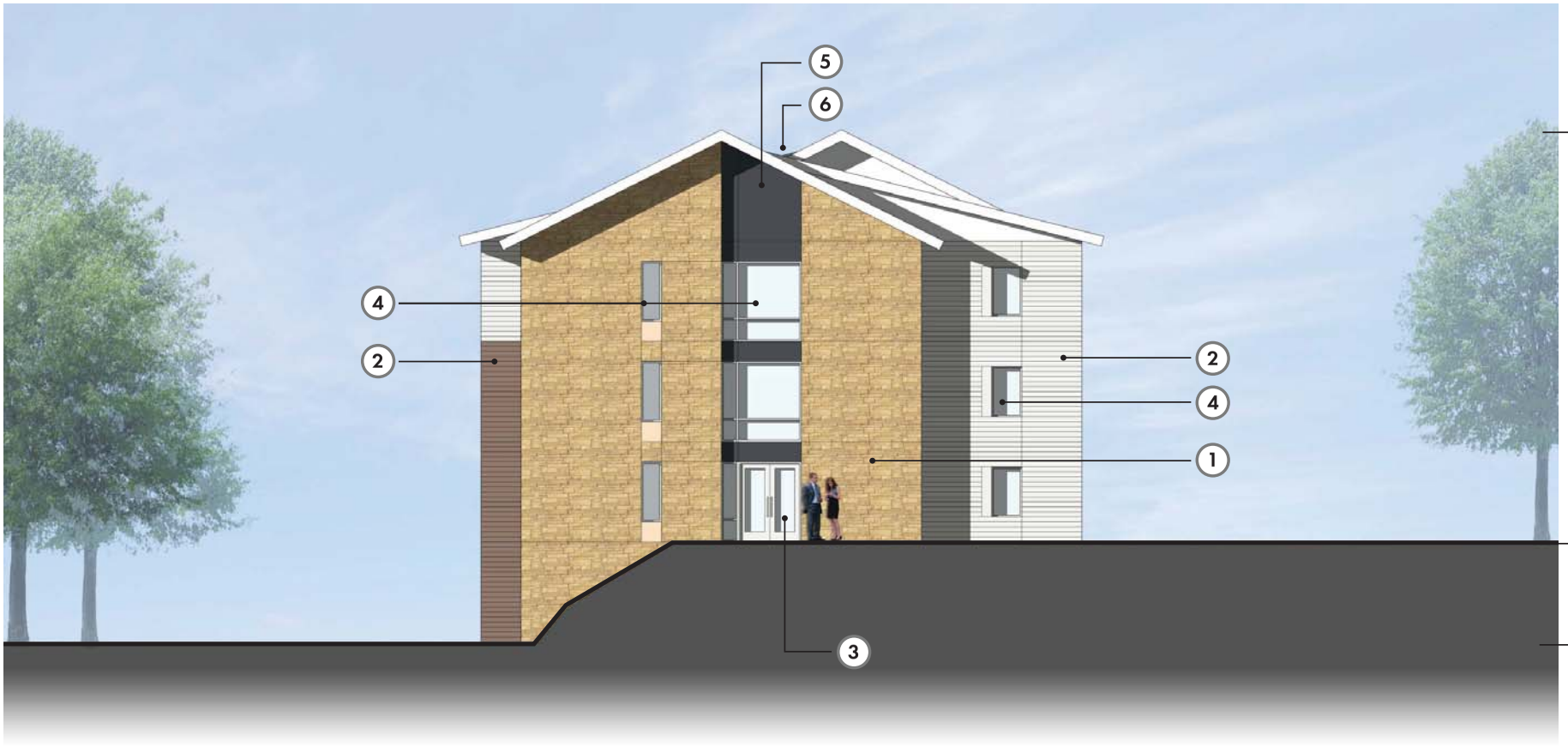
11	1 BEDROOM
8	2 BEDROOM
3	3 BEDROOM

1 STONE VEENER
2 LAP SIDING
3 ENTRY
4 WINDOW SYSTEM
5 FIBER CEMENT BOARD
6 ASPHALT SHINGLES

05 **THE UNION AT BLOOMINGTON** | A - WEST ELEVATION (BUILDING TYPE 'C' SIMILAR)

MAY 30, 2017

SCALE: 3/32" = 1' - 0"



1 STONE VEENER
2 LAP SIDING
3 ENTRY
4 WINDOW SYSTEM
5 FIBER CEMENT BOARD
6 ASPHALT SHINGLES

06 **THE UNION AT BLOOMINGTON** | A - NORTH ELEVATION (BUILDING TYPE 'C' SIMILAR)

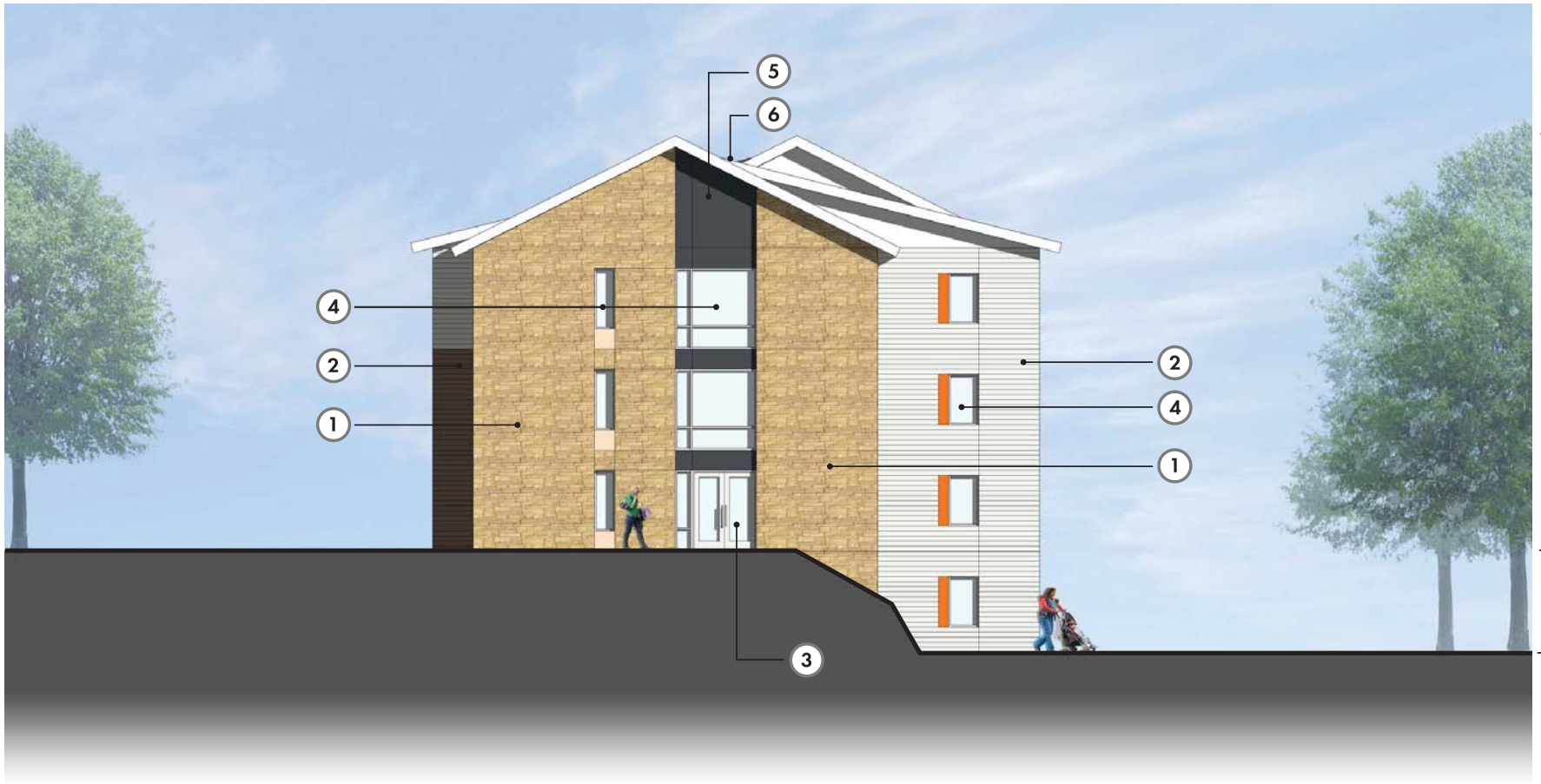
MAY 30, 2017

SCALE: 3/32" = 1' - 0"

1 STONE VEENER
2 LAP SIDING
3 ENTRY
4 WINDOW SYSTEM
5 FIBER CEMENT BOARD
6 ASPHALT SHINGLES

07 **THE UNION AT BLOOMINGTON** | A - EAST ELEVATION (BUILDING TYPE 'C' SIMILAR)

MAY 30, 2017 SCALE: 3/32" = 1' - 0"

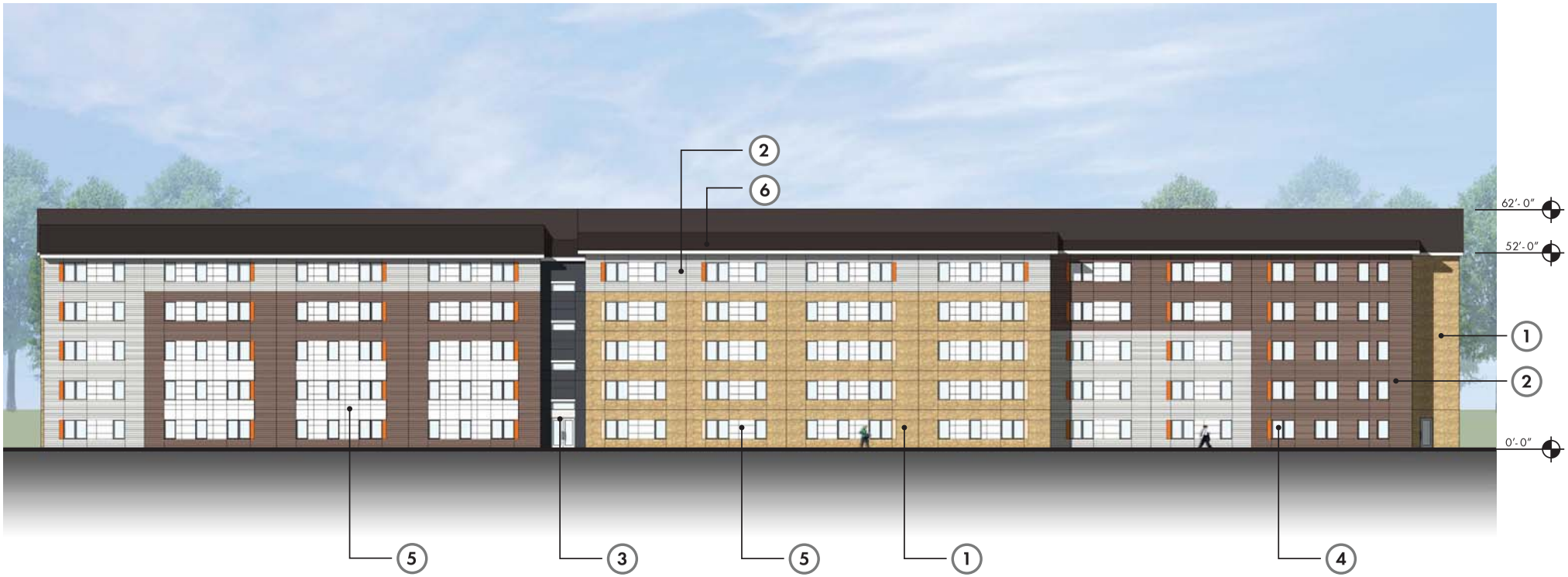


1 STONE VEENER
2 LAP SIDING
3 ENTRY
4 WINDOW SYSTEM
5 FIBER CEMENT BOARD
6 ASPHALT SHINGLES

08 **THE UNION AT BLOOMINGTON** | A - SOUTH ELEVATION (BUILDING TYPE 'C' SIMILAR)

MAY 30, 2017

SCALE: 3/32" = 1' - 0"



1 STONE VEENER
2 LAP SIDING
3 ENTRY
4 WINDOW SYSTEM
5 FIBER CEMENT BOARD
6 ASPHALT SHINGLES

09 **THE UNION AT BLOOMINGTON** | B - NORTH-EAST ELEVATION

MAY 30, 2017 SCALE: NTS

1 STONE VEENER
2 LAP SIDING
3 ENTRY
4 WINDOW SYSTEM
5 FIBER CEMENT BOARD
6 ASPHALT SHINGLES

THE UNION AT BLOOMINGTON | B - SOUTH-EAST ELEVATION

MAY 30, 2017

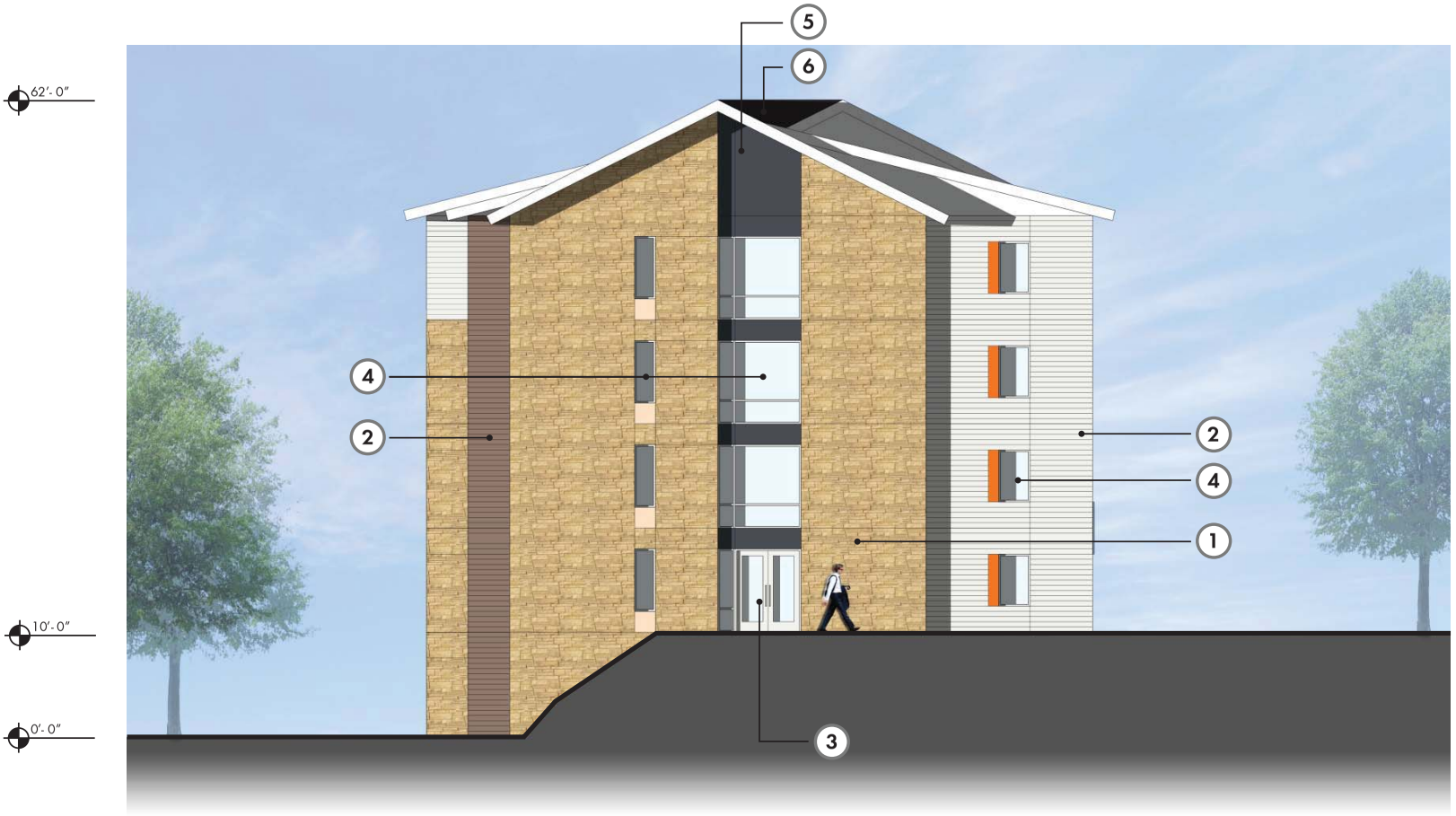
SCALE: 3/32" = 1' - 0"

1 STONE VEENER
2 LAP SIDING
3 ENTRY
4 WINDOW SYSTEM
5 FIBER CEMENT BOARD
6 ASPHALT SHINGLES

THE UNION AT BLOOMINGTON | B - SOUTH-WEST ELEVATION

MAY 30, 2017

SCALE: NTS

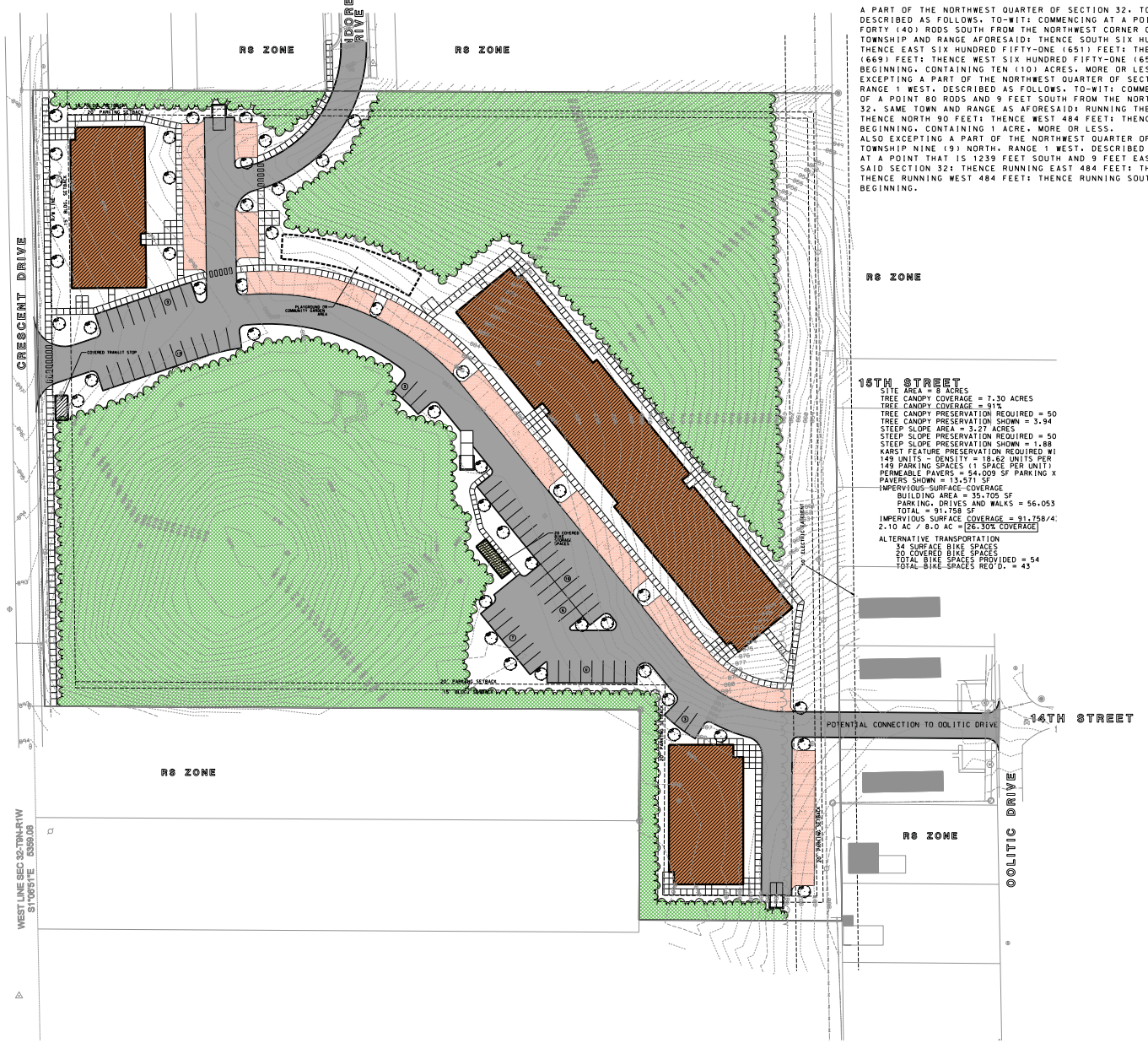


1 STONE VEENER
2 LAP SIDING
3 ENTRY
4 WINDOW SYSTEM
5 FIBER CEMENT BOARD
6 ASPHALT SHINGLES

THE UNION AT BLOOMINGTON | B - NORTH-WEST ELEVATION

MAY 30, 2017

SCALE: 3/32" = 1' - 0"



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0 15 30 60
SCALE: 1"=30'

SITE LEGEND

DRAINAGE EASEMENT	10'DE
UTILITY EASEMENT	10'UE
DR. & UT. EASEMENT	10'D&UE
2" ROLL CURB	
2" CURB AND GUTTER	
6" STANDING CURB	
CONCRETE SIDEWALK	
HANDICAPPED RAMP	
HANDICAPPED RAILING	
RET. WALL (CONCRETE)	
RET. WALL (MASONRY)	
RET. WALL (STONE)	
RET. WALL (WOOD)	
FENCE (BARB WIRE)	
FENCE (CHAIN LINK)	
FENCE (SMOOTH WIRE)	
FENCE (POST & RAIL)	
FENCE (WOOD SLAT)	
GUARD RAIL	
PROPOSED STREET TREE	
BOLLARD	
DUMPSTER (WOOD)	
DUMPSTER (MASONRY)	

15TH STREET

SITE AREA = 8 ACRES
TREE CANOPY COVERAGE = 7.30 ACRES
TREE CANOPY COVERAGE = 91%
TREE CANOPY PRESERVATION REQUIRED = 50
TREE CANOPY PRESERVATION SHOWN = 3.94
STEEP SLOPE AREA = 3.27 ACRES
STEEP SLOPE PRESERVATION REQUIRED = 50
STEEP SLOPE PRESERVATION SHOWN = 1.88
KARST FEATURE PRESERVATION REQUIRED WI
149 UNITS - DENSITY = 18.62 UNITS PER
149 PARKING SPACES (1 SPACE PER UNIT)
PERMEABLE PAVERS = 54,009 SF PARKING X
PAVERS SHOWN = 13,571 SF
IMPERVIOUS SURFACE COVERAGE
BUILDING AREA = 35,705 SF
PARKING, DRIVES AND WALKS = 56,053
TOTAL = 91,758 SF
IMPERVIOUS SURFACE COVERAGE = 91,758/4
2.10 AC / 8.0 AC = 26.30% COVERAGE

ALTERNATIVE TRANSPORTATION
34 SURFACE BIKE SPACES
20 COVERED BIKE SPACES
TOTAL BIKE SPACES PROVIDED = 54
TOTAL BIKE SPACES REQ'D. = 43

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405 S. Clarke Boulevard
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Web: http://smithbrobob.com

CERTIFICATION DATE
/ /

JOB TITLE
UNION ON CRESCENT DRIVE
RS TO PUD REZONE
CONCEPT PLAN

REVISIONS	BY	DATE

DRAWING SAB
DRAFTED SAB
CHECKED
DATE

JOB NUMBER 5462
SHEET 2 OF 2
DATE 05/25/17
CONCEPT SITE PLAN D

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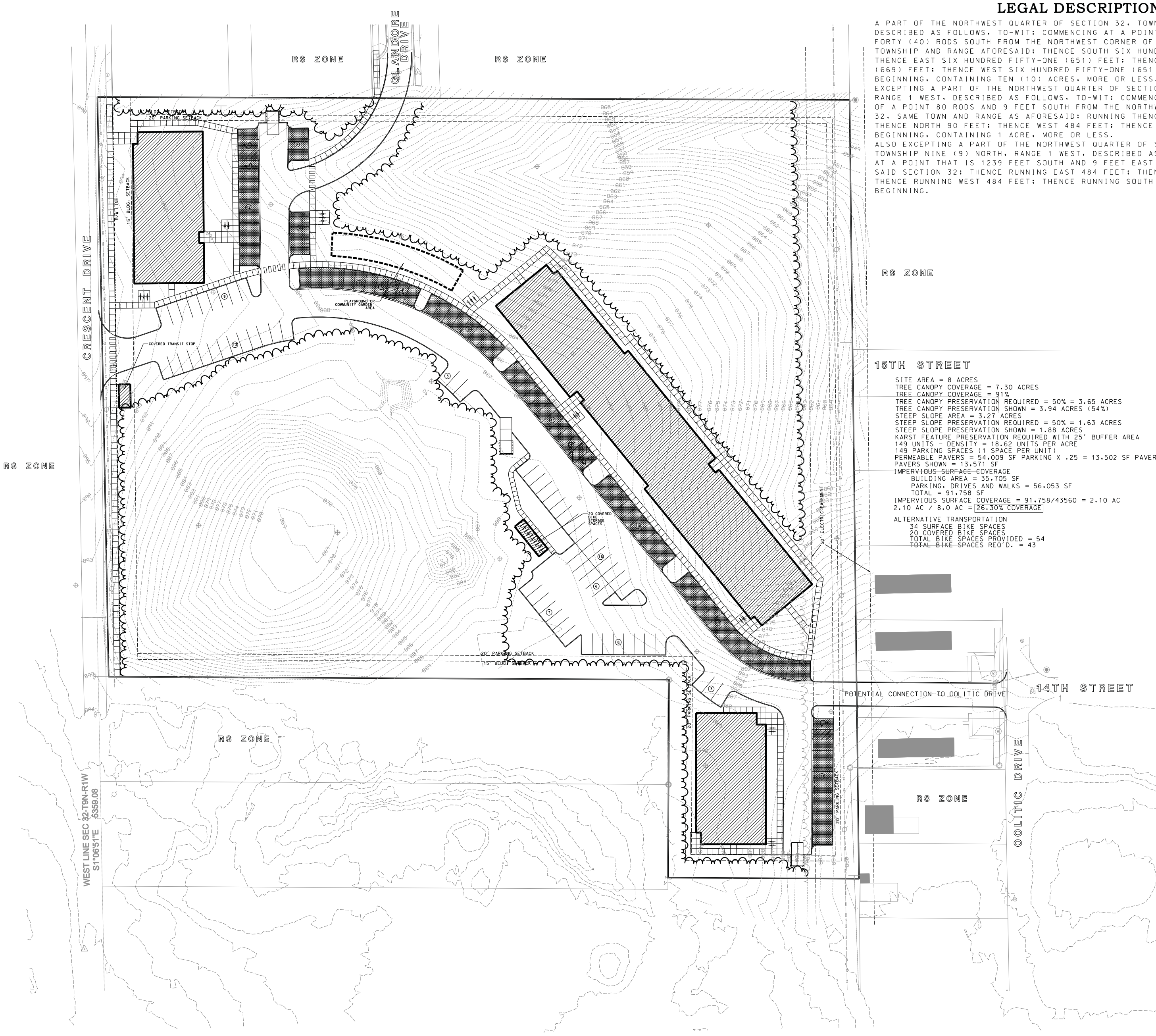

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TREE CANOPY COVERAGE = 7.30 ACRES
TREE CANOPY COVERAGE = 91%
TREE CANOPY PRESERVATION REQUIRED = 50% = 3.65 ACRES
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STEEP SLOPE AREA = 3.27 ACRES
STEEP SLOPE PRESERVATION REQUIRED = 50% = 1.63 ACRES
STEEP SLOPE PRESERVATION SHOWN = 1.88 ACRES
KARST FEATURE PRESERVATION REQUIRED WITH 25' BUFFER AREA
149 UNITS - DENSITY = 18.62 UNITS PER ACRE
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PERMEABLE PAVERS = 54,009 SF PARKING X .25 = 13,502 SF PAVERS
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ALTERNATIVE TRANSPORTATION
34 SURFACE BIKE SPACES
20 COVERED BIKE SPACES
TOTAL BIKE SPACES PROVIDED = 54
TOTAL BIKE SPACES REQ'D. = 43

0 15 30 60
SCALE: 1"=30'

SITE LEGEND

DRAINAGE EASEMENT	10'DE
UTILITY EASEMENT	10'UE
DR. & UT. EASEMENT	10'D&UE
2' ROLL CURB	2'RC
2' CURB AND GUTTER	2'CG
6" STANDING CURB	6"SC
CONCRETE SIDEWALK	CSW
HANDICAPPED RAMP	
HANDICAPPED RAILING	
RET. WALL (CONCRETE)	
RET. WALL (MASONRY)	
RET. WALL (STONE)	
RET. WALL (WOOD)	
FENCE (BARB WIRE)	
FENCE (CHAIN LINK)	
FENCE (SMOOTH WIRE)	
FENCE (POST & RAIL)	
FENCE (WOOD SLAT)	
GUARD RAIL	
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BOLLARD	
DUMPSTER (WOOD)	
DUMPSTER (MASONRY)	

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CERTIFICATION DATE
/ /

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REVISIONS	BY	DATE

DESIGNED SAB
DRAFTED SAB
CHECKED
DATE

JOB NUMBER 5462
SHEET 2 OF 2
DATE 05/25/17
CONCEPT SITE PLAN D

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Schematic Site Plan Option D.dwg 5/30/2017 8:00:27 AM

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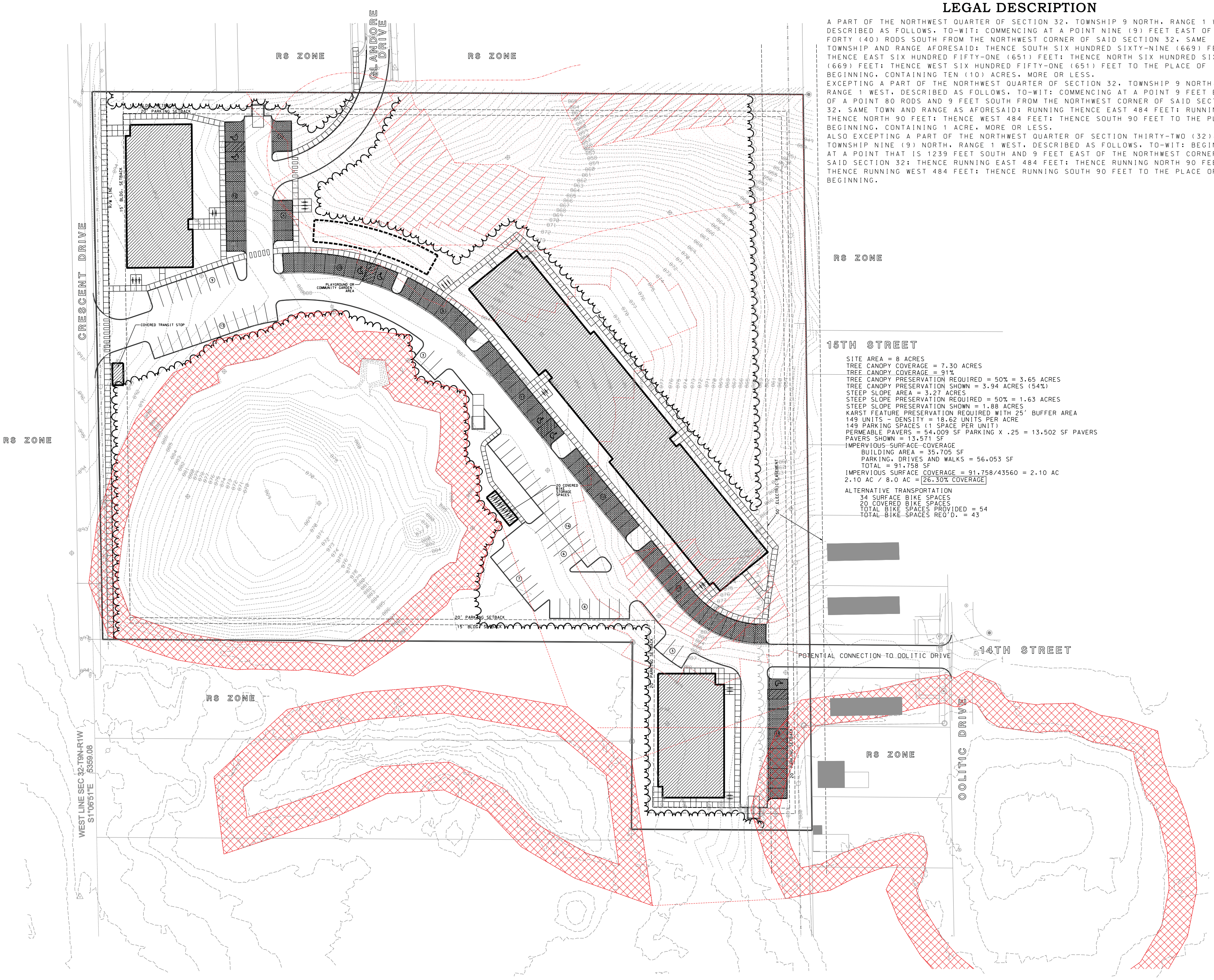

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IMPERVIOUS SURFACE COVERAGE
BUILDING AREA = 35,705 SF
PARKING, DRIVES AND WALKS = 56,053 SF
TOTAL = 91,758 SF
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ALTERNATIVE TRANSPORTATION
34 SURFACE BIKE SPACES
20 COVERED BIKE SPACES
TOTAL BIKE SPACES PROVIDED = 54
TOTAL BIKE SPACES REQ'D. = 43

SITE LEGEND

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UTILITY EASEMENT — 10'UE
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2' ROLL CURB
2' CURB AND GUTTER
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(118)

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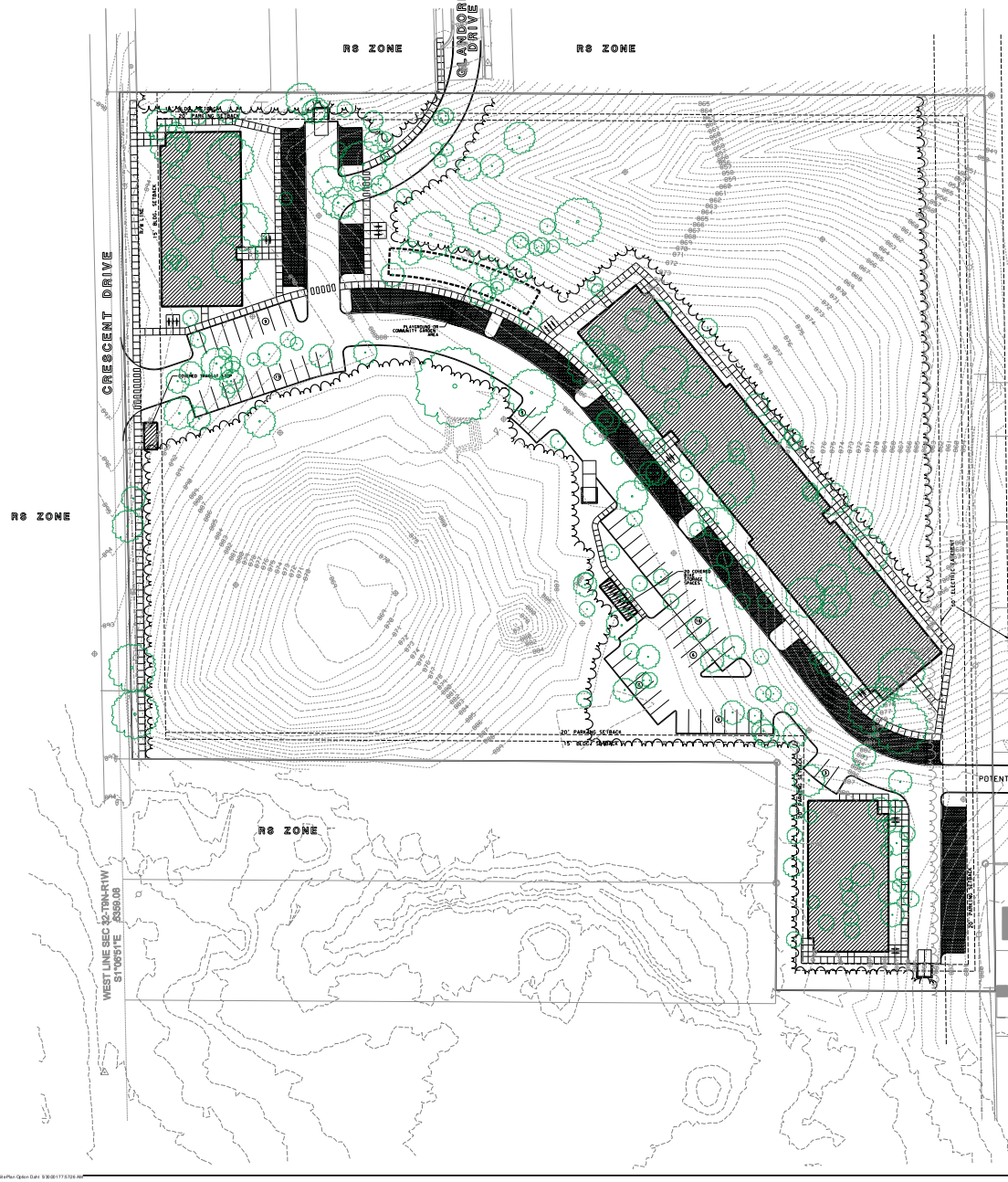

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FENCE (WOOD SLAT)	
GUARD RAIL	
PROPOSED STREET TREE	
BOLLARD	
DUMPSTER (WOOD)	
DUMPSTER (MASONRY)	

15TH STREET

SITE AREA = 8 ACRES
TREE CANOPY COVERAGE = 7.30 ACRES
TREE CANOPY COVERAGE = 91%
TREE CANOPY PRESERVATION REQUIRED = 50% = 3.65 ACRES
TREE CANOPY PRESERVATION SHOWN = 3.94 ACRES (54%)
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DATE

JOB NUMBER 5462
SHEET 2 OF 2
DATE 05/25/17
CONCEPT SITE PLAN D

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ZO-09-17 MEMO:

To: City of Bloomington Plan Commission
From: James C. Roach, AICP, Development Services Manager
Date: June 12, 2017
Re: Amendments to the City's Unified Development Ordinance to permit limited numbers of Accessory Dwelling Units (ADUs) within single-family zoning districts.

Accessory Dwelling Units can be called by many names: Granny Flats, mother-in-law suites, tiny houses, “fonzie flats”, dawdy house, laneway house, or ADUs. ADUs are independent housing units created within single family homes or on the same lot. The Planning and Transportation Department believes that ADUs can be a great benefit to Bloomington, its citizens and its neighborhoods. ADUs can allow for aging homeowners to age in place by creating a unit for a nurse or caretaker. They can also allow families to create independent living spaces for aging parents or disabled children. ADUs can also provide an affordable housing option within already established neighborhoods. Not only are ADUs less expensive to build than traditional apartments, they can also allow the homeowner to keep their home affordable through a rental income.

The Planning and Transportation department is proposing to amend the UDO to permit ADUs in all single family zoning districts. This amendment attempts to limit the size and scale of ADUs to ensure compatibility with established neighborhoods.

- Maximum size of the ADU
- Minimum spacing between ADUs
- Maximum number of bedrooms with the ADU
- ADUs are only permitted on lots that meet the minimum lot size of the zoning district

In addition to the limitation on size and design, this amendment includes a cap of no more than 30 ADUs within the City. This cap will allow for some ADUs to be built while giving the City an opportunity to review the effectiveness of the standards of this ordinance. When the number of approved ADUs begins to approach 30, the Planning and Transportation Department will analyze the approved ADUs and determine if the ordinance should be amended in any way to address unforeseen issues. There is no timeframe for that reevaluation. It will depend on the pace of requests for ADUs. Based on that analysis, the ordinance may be changed, the cap may be raised, or the cap may be lifted altogether.

The proposed amendment allows for homeowners in the RE, RS and RC zoning districts to be approved for a single ADU on their lots, but only if that ADU meets the requirements of this section. ADUs are only permitted on lots where the main dwelling unit or the ADU is owner occupied. This will be verifies through use of the Indiana Homestead property tax deduction. Only lots that have a valid homestead deduction on file with the Monroe County Auditor are permitted to construct or operate an ADU.

Applicants must also sign and record a zoning commitment that will become part of the deed record acknowledging the rules and limitations on the ADU and agreeing that the ADU must be completely removed if the property no longer meets the requirements of the UDO.

Questions have been raised about how the Planning and Transportation Department will track compliance with ADU regulations. With the limited number of potential ADUs, a maximum of 30, the Department intends to track each one individually. A yearly follow up will be conducted to ensure that the property is still owner occupied and will inform HAND is the ADU is being rented. The draft ordinance requires recording of a zoning commitment so that all future property owners are aware of the ADU regulations, especially those for owner occupancy, and that the City may require the ADU to be removed if the terms of the ordinance are no longer met.

At the April Plan Commission meeting, PC members raised several questions and concerns about the ADU ordinance that this amended draft attempts to resolve. There was concern that there may need to be a definition for "Tiny House." There is no minimum size for a home in Bloomington and Tiny House is not a defined term in building codes. References to Tiny Houses have been removed from the ordinance. There was also question about separation requirements. Staff met with HAND and Monroe County Building Department staff to discuss this issue. The building codes are complicated and may depend on how the ADU is used. An ADU used by a family member where there is interior interaction between the units may have minimum separation requirements. An ADU that is rented may need to be separated with a fire wall and separate HV/AC systems and separate electric service.

There was questions about how loft space would be handled in terms of the maximum gross floor area. In discussions with the Monroe County Building Department, staff learned that most loft spaces in "tiny houses" would not meet building code requirements for minimum ceiling height and egress requirements. References to foundations have also been removed. This is already covered in other parts of the UDO and does not need to be repeated.

Some PC members questioned that if affordability was a goal of the ordinance, why is there not an affordability requirement in the ordinance? While affordability is one of many goals of the ordinance, recent changes to Indiana State law prohibit us from mandating affordability as part of a zoning requirement.

Go here for more discussion on ADUs and affordability:
https://accessorydwellings.org/2014/08/07/do-adus-provide-affordable-housing/

Staff from HAND, Planning and Transportation and the Mayor's office also met with CONA representatives since the last Plan Commission meeting. Those in attendance had several concerns about the draft ordinance and several suggestions on how to change it. Some concerns included:

- Full time students that are included on the deed of the property could be eligible for the homestead deduction and could then be permitted to build an ADU.
    - Staff confirmed with the Monroe County Auditor that as long as the person requesting the Homestead Deduction lives on the property, is an owner of the property, and has not applied for the deduction on any other properties, then they

would be eligible for the deduction. This could include owners that are full time students.

- Recently developed neighborhoods contain covenants and restrictions against second dwelling units on properties, thus ensuring that all ADUs built would be within older neighborhoods.
    - While it is true that many newer neighborhoods do contain covenants restricting the number of units on a lot, this is not enforced by the City. The City enforces the current zoning requirements. Induvial property owners are responsible for following or enforcing these private covenants.
- While ADUs may be less expensive to build than other housing types, future purchasers on homes and lots with ADUs may not be eligible for conventional mortgages because of the lack of comparable housing in Bloomington or the presence of an income generator on the lot.
    - Staff research has found that this is likely correct, however ADUs are still less expensive to build than other housing types and serve other community goals, such as allowing for intergenerational familes and ageing in place.
- Existing rental and occupancy rules are not adequately enforced today. This will just be worse with additional units and regulations to monitor.
    - This ordinance does not attempt to fix all concerns with Title 16 and occupancy enforcement. While the text of the ordinance does not lay out tracking and monitoring, the Planning and Transportation Department intends to follow up on legal ADUs on an annual basis to ensure compliance.
- The City may not able to require that one of units be owner occupied.
    - This issue has been researched and vetted by the Legal Department. The ordinance does not mandate owner occupancy of units. It provides for an added benefit to only owner occupied single family dwellings. This regulation is identical to other Indiana ADU ordinances in communities such as Indianapolis and Monroe County.
- “Hidden” addresses will be difficult for first responders to locate.
    - Staff met with the City Fire Department and the City’s addressing coordinator. The USPS has suffixes that can be attached to accessory apartments to provide for clear locations for first responders, such as “rear” and “basement.”

Some suggestions for changes to the ordinance that CONA presented at the meeting included

- Using a sunset provision instead of the 30 unit cap. *Staff has concerns that a sunset provision would make all lots where an ADU has been built a legal non-conforming (grandfathered) use and may make home sales, additions, and refinancing more difficult.*
- Mandating three unrelated adults across the entire property, not in each unit. *Staff has proposed further limiting the definition of “family” for ADUs to be no more than two (2) unrelated adults.*
- Mandating affordability. *Staff doubts that this is legal given recent changes to staff laws*
- Mandating bigger setbacks for freestanding ADUs (10') than for garages/sheds (5'). *A larger setback would prohibit the conversion of an existing garage on a property. In*

addition, the setback for a garage or ADU (5 feet) is not much different than the setback for a house in the RC district (6 feet).

- Prohibiting new structures from being built for ADUs. *This would restrict ADUs to homes with existing accessory structures or mandate that the ADU be an attached ADU.*
- Ensure that lots with ADUs still meet impervious surface coverage requirements. *No part of the ordinance permits a reduction in the maximum impervious surface coverage requirements*.
- Fines must be clearly identified. *The ordinance includes requirements for recording of a zoning commitment and requirements to unit removal and fines if the terms of the ordinance are not met.*

Their primary suggestion was to amend the ordinance to permit ADUs as conditional uses instead of "by right" uses. This issue also was discussed at the April Plan Commission meeting. The argument is that a conditional use process would allow ADUs but would also permit neighbors to voice their concerns about a proposed ADU in a public forum. The Department believes that the standards in place with this ordinance (maximum size, minimum separation, occupancy limitations, and owner occupancy requirements) ensure that ADUs are appropriate in all situations and that a conditional use process would inject a measure of unpredictability into the process. A Plan Commission member asked how a conditional use process would impact staff time and resources. For every proposed ADU, a report would have to be written and presented to the Board of Zoning Appeals. It is impossible to determine if this would be an excessive burden because we have no knowledge as to what pace homeowners will want to build ADUs.

Bloomington's 2002 Growth Policies Plan makes one specific statement about ADUs. The Conserve Community Chapter Policy to Protect and Enhance Neighborhoods, **"**Bloomington's Neighborhood character can evolve in a gradual and compatible way to allow additional density through subdividing lots, and the creation of granny flats and duplexes (page 17)." The GPP has many other policies about protecting neighborhoods and allowing for gradually increasing densities and creating compact urban form, but in a compatible way.

For more information, we recommend "Accessory Dwelling Units: Model State Act and Local Ordinances" by Rodney Cobb and Scott Dvorack. http://www.aarp.org/content/dam/aarp/livable-communities/documents-2015/ADU-report-AARP-APA.pdf

Also

https://accessorydwellings.org/

RECOMMENDATION: The Planning and Transportation Department recommends that the Plan Commission forward a positive recommendation for ZO-09-17 to the City Council.

Proposed Amendment:

20.11.020 – Defined Words

Accessory Dwelling Unit (ADU). See "Dwelling, Accessory Unit."

Dwelling, Accessory Unit. "Accessory ~~unit~~ dwelling unit" means a residential dwelling unit~~, including a "tiny home"~~ but not a mobile home, camper, or recreational vehicle, located on the same lot as a single-family dwelling unit, either within the same building as the single-family dwelling unit or in a detached building. Accessory dwelling units shall only be established in accordance with the standards set forth in the Unified Development Ordinance ~~and only in those zoning district where the use is listed as a special review use~~.

Dwelling, Multifamily. "Multifamily dwelling" means any building, group of buildings or portion thereof containing two or more individual dwelling units where each unit is provided with an individual entrance to the outdoors or to a common hallway and in which the number of families in residence does not exceed the number of dwelling units provided. Multifamily dwelling units shall not include "Dwelling, Single-family Attached" or "Dwelling, Accessory Unit" as separately defined in this chapter.

Dwelling, Single-family Attached. "Single-family attached dwelling" means a dwelling type consisting of two dwelling units attached side by side under one roof, that are located on separate lots, and that share a common wall, with each unit designed for and occupied by a single family, as defined in this chapter. A Single-family attached dwelling may also include a "Dwelling, Accessory Unit".

Family. "Family" means ~~a family consisting of~~ an individual or a group of people all of whom are related to each other by blood, marriage, or legal adoption, and any other dependent children of the household. In the RE, RS, and RC zoning districts, and in single-family residential portions of planned unit developments, "family" also includes a group of no more than three adults, and their dependent children, living together as a single housekeeping unit in a dwelling unit. Except within dwelling units approved as Accessory Dwelling Units, where "family" shall include a group of no more than two adults, and their dependent children, living together as a single housekeeping unit. In all other districts, "family" also includes a group of no more than five adults and their dependent children, living together as a single housekeeping unit in a dwelling unit.

Dwelling, Single-family Detached. "Single-family detached dwelling means a single building per lot containing a single residential dwelling unit, including a "Dwelling, Manufactured Home," designed for and occupied by one family which is completely separate from any other building. The term "single-family detached dwelling" does not include a "Dwelling, Mobile Home." A single-family detached dwelling may also include an "Accessory Dwelling ~~Accessory~~ Unit".

Proposed New Section:

20.05.110 AU-01 [Accessory Dwelling Unit (ADU) Standards, Single-family]

Purpose: It is the policy of the City of Bloomington to promote and encourage a variety of housing options for all its residents. This Accessory Dwelling Unit ("ADU") section is adopted to permit the creation of legal ADUs that are compatible with residential neighborhoods while

also supporting the housing needs of the City's workforce, seniors, families with changing needs, and others for whom ADUs present an affordable housing option.

This section applies to the following zoning districts:

RE RC RS

(a) Applicability: This section applies to the construction, remodeling and continuing use of an ADU as part of a single family dwelling use.
(b) Maximum Number: Not more than one (1) ADU may be located on one (1) property and no more than thirty (30) ADUs shall be approved pursuant to this section within the City Limits.
(c) Planned Unit Development: ADUs shall be considered a permitted accessory use, subject to the requirements of this section, in any Planned Unit Development that permits detached single family dwellings.
(d) Minimum Lot Size: ADUs shall not be established on a lot that is less than the minimum lot size of the zoning district.
(e) Separation: No ADU shall be approved on any lot that is closer than three hundred (300) feet from another ADU approved under this chapter. Distance shall be measured lot line to lot line.
(f) Site Plan: A single family dwelling unit that includes an ADU shall be treated as a single-family dwelling unit for purposes of site plan review.
~~(g) Foundation: All detached ADUs must be securely attached to a permanent foundation.~~
~~(h)~~(g) Utilities: All ADUs must be connected to the public water main and sanitary sewer, when adjacent to property, per City of Bloomington Utilities' Rules & Regulations or Construction Specifications. Where water or sanitary sewer mains are not adjacent to property and the primary dwelling on the lot utilizes a ~~sceptic~~ septic system, the ADU may utilize the septic system per Monroe County Health Department Standards.
~~(i)~~(h) Design Standards:
  (1) Detached ADU: Detached ADUs shall meet the ~~design~~ architectural and foundation requirements for a single family dwelling within the applicable zoning district as found in 20.05.016.
  (2) Maximum square footage of habitable space:
    (A) Attached ADU: Six hundred (600) square feet or no more than 35% of structure, whichever is less;
    (B) Detached ADU: Four hundred forty (440) square feet.
  (3) Maximum bedrooms: In no case shall an ADU include more than 2 rooms that may be used as bedrooms.
  (4) Minimum Setbacks:
    (A) Attached ADUs: Per requirements for the primary structures of Chapter 20.02: Zoning Districts.
    (B) Detached ADUs: Per requirements for the accessory structures of Chapter 20.02: Zoning Districts except that the front setback can be as close to the street as the primary dwelling unit.
  (5) Maximum Height:
    (A) Attached ADUs: Per requirements for the primary structures of Chapter 20.02: Zoning Districts.

(B) Detached ADUs: Twenty-five (25) feet

(i) Occupancy: ADUs shall only be permitted on a property where either the primary dwelling unit or the ADU is owner occupied. For the purposes of this section, the owner is defined as the individual, family, or group who holds the property tax homestead ~~exemption~~ deduction for the property in accordance with Indiana state law. Any primary dwelling or ADU used as a rental unit shall register with the Department of Housing & Neighborhood Development (HAND) and receive appropriate certification prior to occupancy.

(j) Enforcement: Violations of the terms of this section shall result in revocation of the Certificate of Zoning Compliance for the ADU as well as fines per Section 20.10.040.

(k) Commitments: Before obtaining a Certificate of Zoning Compliance for an ADU an applicant shall record a commitment, consistent with the standards of Section 20.10.070, stating the following:

(1) The ADU shall not be sold separately from the primary unit.

(2) The Certificate of Zoning Compliance shall be in effect only so long as the primary dwelling unit, or the ADU, is occupied by the owner(s) of record as their primary residence.

~~(3)~~ If at any time the Certificate of Zoning Compliance is revoked or is no longer in effect, the ADU must be removed from the property. This can include, but is not limited to removal of any second kitchen on the lot, including all kitchen appliances and cabinets~~, must be removed from the accessory dwelling unit.~~

Council of Neighborhood Associations
Accessory Dwelling Units Review

CONA members recognize the merits of Accessory Dwelling Units (ADUs). Nonetheless, great fear remains regarding the ability to implement and craft an ordinance that will be enforceable and legal while will not thwarting the quality of life in single family neighborhoods.

Major Concerns

- Neighborhoods located close to the university and in the core neighborhoods surrounding downtown are already at higher densities than other areas of the city. ADUs will unduly burden these already dense core areas. Many areas outside the core neighborhoods are protected by neighborhood covenants and will not be subject to this new ordinance.
- ADUs create the temptation to build illegal dual rentals per single-family lot which will create unmanageable challenges for limited on-street parking along with the other hazards of over-occupied student housing.
- Core neighborhoods should not become more of a magnet for landlords as a consequence of the ADU ordinance. Residents in the poorer core neighborhoods are less likely to be able to afford to build new ADUs. Therefore, these neighborhoods will be targeted by landlords increasing the price of historically affordable housing stock and pricing residents out of their own neighborhoods.
- Existing HAND regulations are currently not adequately enforced. The city has acknowledged that there are currently ADUs that exist in Bloomington illegally. Without adequate enforcement, ADUs will become illegal dual rentals. ADUs should not become another opportunity to violate for profit. What will prevent an owner from living in a house for a few months while they work on an ADU and then move out after being granted a permit?

Unanswered Questions

- Is it legal to require the owner to live in one of the structures? Does Indiana state law allow local zoning regulation of property ownership? The mandatory owner-occupied concept needs to be verified by solid and supportable research by the Legal Department.
- Subdivisions that have a covenant against more than one residential structure per lot will have a private means to prevent ADUs. This ordnance will create conflict between city regulations and subdivision covenants. Potentially, this places an onerous burden on neighbors to enforce subdivision covenants. Many newer subdivisions with exclusionary covenants are the areas where additional density is desirable.
- How will the deed restriction be tracked and enforced? Perhaps a sunset date in the ordinance might be better.

- How will the optional Homestead Exemption stop illegal ADUs from being built?
- Is it legal to only allow 30 test ADUs or will other property owners demand equal rights? Do you have to treat all property owners equally? How does this not establish a precedent
- How many unrelated people will be allowed to live on the single-family lot?
- How many unrelated people will be allowed to live in an ADU? As was proposed in the previous ADU ordinance, the whole property should be limited to not more than 3 unrelated adults. For clarity this should be in the ADU section. This would allow two adult owners to have one tenant or a single owner to have two.
- If the goal is to provide affordable housing, how will this be guaranteed? Should an affordable agreement contract be mandated?
- Will "hidden" addresses located off-street be hazardous for the health and safety of occupants and neighborhoods? How will police, fire and ambulances find these "hidden" addresses?

Controls:

- Ordinance should be "Conditional Use" only—not by-right.
- ADUs should have rear buffering from neighboring houses. Rear Building Setback should be greater than accessory shed allowance of 5'. Rear setback for residential dwelling assures privacy and buffers noise, smells and mitigates the general impact of day to day living in neighborhoods.
- Maximum impervious surface coverage/greenspace should be maintained for each zoning district.
- Architectural standards should be mandatory. Design of ADUs should be contextual to the primary single family dwelling.
- Certificate of Appropriateness (COA) should be required in historic districts. ADUs should conform in all respects with historic district guidelines.
- No new structures should be built for the 30 unit test. New ADUs should be allowed only in existing garages and attached UDOs in existing homeowner's house. Existing illegal ADUs should not be rewarded by granting them an occupancy permit to bring them into compliance.
- Fines should be required for illegal ADUs. In addition to removal of kitchen, space should be used only as part of the original dwelling unit or as a permitted accessory, such as art studio, playhouse, storage.
- The review of homestead property tax credits affords a means to find violations; the ADU ordinance should mandate who checks, how often, and require enforcement. The regulation and ADU building will be with us long after its proponents are gone from Bloomington government and we do not want to see low priority, complaint driven enforcement. The 5 year rental inspection cycle is too long for this purpose.

ZO-11-17 MEMO:

To: City of Bloomington Plan Commission
From: James C. Roach, AICP, Development Services Manager
Date: June 12, 2017
Re: Amendments to the City's Unified Development Ordinance to permit Pocket Neighborhoods as conditional uses within the Residential Core (RC) and Single-family Residential (RS) zoning districts.

Pocket Neighborhoods can be called by many names including bungalow courts, co-housing, cottage courts or tiny house villages. They are a clustered group of houses gathered around a shared open space. The Planning and Transportation Department believes that Pocket Neighborhoods can be a great benefit to Bloomington, its citizens and its neighborhoods. Pocket Neighborhoods allow a gradual increase in density while creating neighborhoods with a reduced infrastructure burden through shared access instead of public streets and heightened community amenities. The Plan Commission has reviewed two PUDs in recent years that could be considered Pocket Neighborhoods, the Bloomington Co-Housing development and the Eco-Village/Dandelion Village development. Unfortunately, neither of these projects have yet been constructed.

The Planning and Transportation Department is proposing to amend the UDO to include Pocket Neighborhoods as conditional uses in the Residential Core and Residential Single-family zoning districts. Pocket Neighborhoods would need to be reviewed by the Board of Zoning Appeals or the Hearing Officer for compliance with the general standards for Conditional Uses and the specific new standards outlined below. This amendment attempts to limit the size and scale of Pocket Neighborhoods to ensure compatibility with the following regulations:

- Maximum dwelling size of 1000 square feet
- Minimum 1 acre
- Maximum 5 acres (larger developments would be reviewed as PUDs)
- Density limitations
    - 6 houses per acre in RC
    - 5 houses per acre in RS
    - Densities are roughly equivalent to the number of lots that could be constructed with a traditional subdivision

Other standards within the amendment allow the BZA flexibility to ensure compatibility with the neighborhood, limit external impacts, and require common areas and greenspace.

At the April Plan Commission meeting, the PC had several questions and concerns about the proposal. The Department believes this new draft addresses those concerns. We added specific language to ensure that parking lots could not be used to meet open space requirements. We also added requirements for petitioners to submit illustrative architectural renderings of anticipated homes and created a maximum width to depth ratio to limit traditional manufactured home style

of dwellings. We did not however add any requirements for owner occupancy or affordability. No other development or subdivision type in Bloomington requires owner occupancy. With recent changes in Indiana state law, affordability requirements are likely not feasible.

Bloomington's 2002 Growth Policies Plan does not make specific statements about Pocket Neighborhoods, but within the "Conserve Community Chapter" Policy 1 entitled "Protect and Enhance Neighborhoods" it does state that **"**Bloomington's Neighborhood character can evolve in a gradual and compatible way to allow additional density through subdividing lots, and the creation of granny flats and duplexes (page 17)." The GPP has many other policies about protecting neighborhoods and allowing for gradually evolving neighborhoods, increasing densities, and creating compact urban form in a compatible way.

For more information, we recommend www.pocket-neighborhoods.net

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RECOMMENDATION: The Planning and Transportation Department recommends that the Plan Commission forward a positive recommendation for ZO-11-17 to the City Council.

Proposed Amendment:

20.02.070 Residential Single-family (RS); Conditional Uses

Add "Pocket Neighborhoods*"

20.02.110 Residential Core (RC); Conditional Uses

Add "Pocket Neighborhoods*"

20.11.020 – Defined Words

Pocket Neighborhood: "A cluster of at least ~~two~~ five attached or detached single family dwellings located within a common development~~on the same lot~~ that utilize shared access, parking and common spaces. Pocket neighborhoods can include homes on individual lots, homes owned as condominiums, or leased homes. The term Pocket Neighborhood shall not include a Manufactured or Mobile Home Park."

Proposed New Section:

20.05.0332 CU-13 (Conditional Use - Pocket Neighborhood)

Purpose: This Pocket Neighborhoods section is adopted to increase housing options within the City of Bloomington in a manner that will be sustainable, affordable and compatible with surrounding neighborhoods.

This conditional use standards section applies to the following zoning districts:

RS RC

(a) Bulk and Density standards
  (1) Minimum lot size: 1 acre
  (2) Maximum lot size: 5 acres
  (3) Maximum number of dwelling units
    (A) RC: Maximum of six (6) ~~detached single family~~ dwellings per acre
    (B) RS: Maximum of five (5) ~~detached single family~~ dwellings~~-~~ per acre
  (4) Maximum house size: One thousand (1000) square feet gross floor area
  (5) Setbacks
    (A) Parking lot: A minimum setback of thirty (30) feet from right-of-way.
    ~~(A)~~(B) A minimum setback of ten (10) feet between dwelling units within the Pocket Neighborhood.
    ~~(B)~~(C) All other setbacks: per applicable zoning district
    ~~(C)~~(D) Pocket Neighborhood within the RC zoning district shall include a minimum of one (1) dwelling unit that is built at the build-to-line.

(b) Architecture and landscaping
  (1) All structures must meet the architectural requirements of the applicable zoning district.
  (2) ~~Common~~ Central Open Space. All pocket neighborhoods shall include at least one centrally located open ~~common~~ space area of at least four hundred (400) square feet per dwelling unit. Parking areas can not be counted toward open space requirements. Community buildings or clubhouses can be substituted for part of ~~counted towards~~ the open~~common~~ space requirement~~calculation~~.
  (3) Dwelling units must have a maximum 1:3 width to depth ratio for the first floor.
  ~~(2)~~(4) Petitioner shall submit a minimum of three (3) example of representative architecture for dwelling units.
  ~~(3)~~(5) Bufferyard: All pocket neighborhoods shall install a Bufferyard Type 1 along rear and side lot lines~~yards~~ per 20.05.052 (f).
  ~~(4)~~ Landscaping: Parking lot landscaping shall be provided per the requirements of 20.05.053.
  ~~(5)~~(6) ~~All dwelling units must be securely attached to a permanent foundation.~~

(c) Parking and access
  (1) Parking shall be provided at a minimum of one (1) parking space per dwelling unit and a maximum of two (2) parking space per dwelling unit.
  (2) Parking shall be designed in a way to limit curb cuts and most efficiently park vehicles~~cars~~. Parking may take place on a shared, paved parking lot or in shared driveways. Shared driveways may access individual garages.
  (3) Sidewalks are required on adjacent streets and to connect dwelling units to the public sidewalk.
  ~~(3)~~(4) A minimum of one (1) class-2 bicycle parking space is required per dwelling unit. Secure garages may count toward this requirement, but a minimum of four (4) class-2 bicycle parking spaces must be provided.

(d) Compatibility
  (1) Site plan and architecture shall be designed in a way to foster community and neighborhood interaction through use of such elements as common spaces, porches, and shared design elements.

(2) Petitioners are encouraged to create lots for sale utilizing the Common Area Developments provisions of 20.07.100 (c).

BLOOMINGTON PLAN COMMISSION **CASE #: SP-16-17**
STAFF REPORT **DATE: June 12, 2017**
Location: 200 S. Washington Street
114 E. 4th Street
121 E. 3rd Street

PETITIONER: Lewis Development Company
601 N. College Suite 1A, Bloomington

CONSULTANTS: Studio 3 Design Inc.
8604 Allisonville Road, Indianapolis

Smith Brehob and Associates, Inc.
453 S. Clarizz Boulevard, Bloomington

REQUEST: The petitioner is requesting site plan approval for two four-story mixed use buildings.

BACKGROUND:

Area:	0.8 acres
Current Zoning:	CD – Downtown Core Overlay
GPP Designation:	Downtown
Existing Land Use:	Bank/Credit Union / Surface Parking
Proposed Land Use:	Bank/Credit Union / Commercial / Dwelling, Multi-Family
Surrounding Uses:	North – Parking Lot
	West – Commercial / Office / Parking Lot
	East – Parking Lot
	South – Commercial /Dwelling, Multi-Family

REPORT: The property is located on the west side of Washington Street between 3rd and 4th Streets and is zoned Commercial Downtown (CD), in the Downtown Core Overlay. The property is bisected by an alley that runs east/west in the middle of the petition site. Surrounding land uses include an office building with parking lot and Firestone Tire to the west, parking lots to the north and east, and a mixed-use building across 3rd Street to the south. The Downtown Transit Center and First United Methodist Church are also in the immediate area. The property currently contains a Fifth/Third Bank branch with a drive-through on the northern lots and a parking lot on the southern lots. The adjacent property to the west, which faces Walnut Street, contains a contributing surveyed historic structure.

The petitioner proposes to develop this property by building a new building on the southern lots, and maintaining the existing bank building and adding to it on the northern lots. Building One, which is located on the southern lots and is at the corner of Washington and 3rd Streets, contains roughly 4,800 square feet on the first floor for commercial space. The first floor also contains 19 parking spaces that are accessed from the alley that bisects the project. Lobby space for the commercial and residential uses, an ATM, a trash and recycling room, and a bike room are also located on the first floor. The second through fourth floors contain 36 studio units, 4 one-bedroom units, 5 four-bedroom units, and 2 five-bedroom units for a total of 47 units and 70 beds. The second floor also contains an interior courtyard that is open above. The basement level contains 26 parking

spaces that are accessed from Washington Street.

Building Two, which is located on the northern lots, is at the southwest corner of 4th and Washington Streets. It will maintain the existing bank building and an addition will be added to the top of the building and to the west of the building. The proposal contains 11 parking spaces and the bank drive-through, along with the Fifth/Third branch, an exercise room, and two entryways on the first floor. The parking and drive-through area is accessed from an entrance on 4th Street and exits to the alley that bisects this project. The second through fourth floors contain 2 studio units, 1 two-bedroom unit, 4 three-bedroom units, 3 four-bedroom units, 1 two-bedroom townhome and 5 four-bedroom townhomes for a total of 16 units and 50 beds. The second floor also contains an interior courtyard that is open above.

The alley between the buildings will remain open and will be a minimum of 16 feet wide, opening to 20 feet on the west end.

The Unified Development Ordinance does not allow the use 'drive-through' in the CD district. At its April 2017 hearing, the Plan Commission made a positive recommendation to the Board of Zoning Appeals based on the Growth Policies Plan for the use, as part of a previous site plan request. That site plan was very similar to the current proposal, but did not meet the step back requirement and was denied at the April 2017 Plan Commission hearing. The current site plan proposal meets all development standards including the step back requirement and incorporates unique design and a green roof.

Plan Commission Site Plan Review: One aspect of this project requires that the petition be reviewed by the Plan Commission, per BMC 20.03.090. This aspect is as follows:

The Plan Commission shall review:

- Any development that includes any of the following uses:
  - Residential Dwelling, Multifamily: Above 100 bedrooms.

SITE PLAN ISSUES:

Residential Density: The maximum residential density in the Downtown Core Overlay is 60 units per acre. The petition site is .8 acres. The petitioner is proposing a density of 37.42 units per acre, meeting the density requirements.

Building One: Dwelling Unit Equivalent Breakdown

Type of Unit	Number of Units	Number of Beds	DUEs
Studio	36	36	7.20
1-bedroom	4	4	1.00
4-bedroom	5	20	7.50
5-bedroom	2	10	4.00
	47 Units	70 Beds	19.70 DUEs

Building Two: Dwelling Unit Equivalent Breakdown

Type of Unit	Number of Units	Number of Beds	DUEs
Studio	2	2	0.40
2-bedroom	1	2	0.66
2-bedroom townhouse	1	2	0.66
3-bedroom	4	12	4.00
4-bedroom	3	12	4.50
4-bedroom townhouse	5	20	7.50
	16 Units	50 Bedrooms	17.72 DUEs

Non-Residential Uses on the First Floor: The petitioner has allotted at least 50% to non-residential uses in both buildings. Building One contains 7,276 square feet that contains retail space, art display space, and space to serve both the commercial and residential units above including a bike room and a trash and recycle room. Building Two contains 10,319 square feet dedicated to the bank, drive-through for the bank, a work-out facility, and a shared lobby. The proposal meets the requirement.

Height: The maximum height in the DCO is 50 feet. The maximum height of Building One is 50 feet and the maximum height of Building Two is 49 feet 8 inches. The proposal meets the height requirement.

Parking and Surrounding Roads: The DCO does not require parking spaces for residential developments south of 4th Street, and does not require parking for non-residential uses. The petitioner is proposing a total of 56 on-site parking spaces: 11 spaces in the northern building adjacent to the bank; 19 spaces on the first floor of the southern building; and 26 spaces in the basement of the southern building. In addition, there will be 10 street parking spaces adjacent to the development. The parking spaces on Washington Street will be rebuilt but will remain parallel spaces. The proposal meets parking requirements.

Access: There are two vehicular accesses to the parking spaces in Building One because the basement and first floor parking are not internally connected. Access to the first floor parking is located on the east/west alley that bisects the project, and access to the basement parking is located on Washington Street.

Vehicular access to Building Two is located on 4th Street with an exit onto the east/west alley that bisects this project. Those using the bank drive-through, which would now be located inside of Building Two, would use this route, as well. Pedestrian access to the buildings is provided on all three street frontages.

Bicycle Parking: 24 bicycle parking spaces are required. The petitioner has included the required short-term parking on the streets and long-term parking in each building, and is providing a total of 32 bicycle parking spaces. The proposal meets bicycle parking requirements.

Architecture/Materials: The two buildings are designed to visually read as three separate buildings. Building One's primary material is brick veneer. The building contains blue metal-paneled bays that project slightly out from the building to add contrast and interest. There are areas of fiber cement panel planned at the southeast corner, on the western façade, and in the recessed balcony areas. The building also utilizes cast stone banding to accent the material separations, and metal cornices. The fourth floor is setback back from the property line and utilizes brick veneer and lap-siding.

Building Two will reuse the existing bank building and add a third floor, as well as a four-story addition to the west. The existing building will utilize light-colored brick veneer on the third floor addition and a metal clad cornice. The western part of this building will appear as a separate building. This new addition and the bank portion of the building will be connected by a two-story addition. The entirely new western part of Building Two uses brick as a primary material with a cast stone masonry base on the first floor and cast stone cornice. Metal paneling and rough cast stone banding are shown as accents. The fourth floor is setback from the property line and uses the same materials.

The proposal meets the material and window requirements.

Streetscape: Street trees and pedestrian-scaled lighting are required along 3rd, 4th, and Washington Streets. The petition meets these requirements.

Impervious Surface Coverage: The Downtown Core Overlay allows for 100% impervious surface coverage.

Pedestrian Facilities/Alternative Transportation: Sidewalk exists along 3rd, 4th, and Washington Streets. The petition will meet UDO requirements to maintain or enhance those facilities with street trees and lighting. The sidewalks along 4th Street will be about 12 feet wide. The sidewalks on Washington Street will vary from about 8 feet wide to near 20 feet wide. The sidewalk along 3rd Street will be about 9 feet wide. More sidewalk space is included at the corners on Washington Street. There is one driveway cut on 4th Street and one driveway cut on Washington Street. 3rd Street has no driveway cut.

No additional Bloomington Transit facilities are required with the development, and the Downtown Transit Center is almost immediately adjacent to the development site.

Building Façade Modulation: BMC 20.03.130(c)(1)(A) requires a maximum façade width for each module of 65 feet for those sides of the buildings with street frontage. This regulation only applies to new buildings and additions. The petition meets this requirement.

Building Height Step Down: BMC 20.03.130(c)(2) requires that buildings located to the side of a surveyed historic structure not be more than one story taller, or 14 feet taller, than the surveyed structure. The high-roofed two-story building to the west of Building Two is listed as contributing in the City of Bloomington Survey of Historic Sites and Structures. That building faces Walnut Street. The UDO and the Downtown Vision and Infill Strategy Plan are concerned with the view from the right-of-way of new structures adjacent to historic structures, which is not the case here. However, Building Two does meet the step down requirement.

Building Height Step Back: BMC 20.03.130(c)(3) requires that building facades over 45 feet in height shall step back the horizontal façade/wall plane a minimum of 15 feet from the horizontal façade/wall plane below 45 feet in height above 45 feet in height. Both buildings meet this requirement.

Void-to-Solid Percentage: The DCO sets a minimum first floor void-to-solid requirement of 60%, consisting of transparent glass or façade openings, for facades facing a street. Again, this standard only applies to the new building and addition to Building Two. Upper stories are required to have a minimum of 20% void area. The proposal meets these requirements.

CRITERIA AND FINDINGS FOR SITE PLANS

20.09.120 (e)(9) The staff or plan commission, whichever is reviewing the site plan, shall make written findings concerning each decision to approve or disapprove a site plan.

(A) **Findings of Fact.** A site plan shall be approved by the plan commission only upon making written findings that the site plan:

(i) Is consistent with the growth policies plan;

Findings:

- The site is in the Downtown area of the Growth Policies Plan (GPP).
- A mix of office, commercial, civic, high-density residential and cultural uses are recommended for the downtown. (GPP, 28)
- New surface parking areas and drive-through uses should be limited, if not forbidden, within the Downtown area. (GPP, 28) The petitioner proposes to leave an existing drive-through on site.
- According to the Downtown Vision and Infill Strategy Plan (DVISP): “Diverse housing options in downtown should be available in a range of product types ...” (p. 5-7)
- Multiple housing product types should be promoted in the downtown area, including high amenity and mid range market rate units, affordable units, artist “loft” housing, and senior housing. (DVISP, 5-7)
- Projects that combine housing product types are recommended. (DVISP, 5-7)
- In particular, there is a need for housing development that is not directly oriented toward the student market. (DVISP 5-9)

(ii) Satisfies the requirements of Chapter 20.02, Zoning Districts;

The UDO includes an intent for the CD district and guidance for the Plan Commission in 20.02.370. The following items address those intent and guidance statements.

Findings:

- The project does serve to protect and enhance the central business district by reusing an existing structure and respecting an adjacent historic structure.
- The project does provide high density development of mixed uses with storefront retail, professional office, and residential dwelling uses.
- It is unclear whether or not the project promotes a diversity of residential housing for all income groups and ages because future renters are unknown.
- The project does incorporate some pedestrian-oriented design through first-floor window design, art space, and massing and does accommodate alternative means of transportation by providing ample bicycle parking.
- The project does intensify the use of vacant and under-utilized properties, by developing the vacant southern lots and reusing the existing bank building on the northern lots.
- The project does provide commercial on the ground floor of both buildings with residential uses above.
- The project does not meet the use requirements because of the request for a drive-through. The petitioner has requested a use variance from the Board of Zoning Appeals. The Plan Commission has recommended approval of the needed variance.

(iii) Satisfies the requirements of Chapter 20.05, Development Standards;

Findings:

- The project meets all applicable development requirements of Chapter 5.

(iv) Satisfies the requirements of Chapter 20.07, Design Standards; and

Findings:

- No subdivision is involved, so this is not applicable.

(v) Satisfies any other applicable provisions of the Unified Development Ordinance.

The UDO includes an intent for the DCO district and guidance for the Plan Commission in 20.03.100. The following items address those intent and guidance statements

Findings:

- The project is compatible in mass and scale with historic structures in the Downtown Core Character Area because it is under the maximum height allowance, is less than ten feet taller than the adjacent historic building, and utilizes the step back to enhance the pedestrian scale of the buildings.
- The project does draw upon the design traditions of historic commercial buildings by providing individual, detailed storefront modules that are visually interesting to pedestrians through the use of large windows, art space, pedestrian entrances, and building modulation.

- The project is infill and redevelopment using densities and heights that are higher in comparison to other Character Areas within the Downtown**.**

Per 20.03.100, the Plan Commission shall approve a site plan that meets all of the standards of 20.03.120, 20.03.130, and 20.09.120.

- The petition meets all of the standards of 20.03.120, 20.03.130, and 20.09.120.

CONCLUSION: This petition meets all DCO Development Standards. It also includes various positive aspects related to larger City goals including preserving an existing structure; compact urban form; the addition of housing stock of various sizes; additional commercial space in the downtown; sustainable development design through a green roof installation; and innovative design.

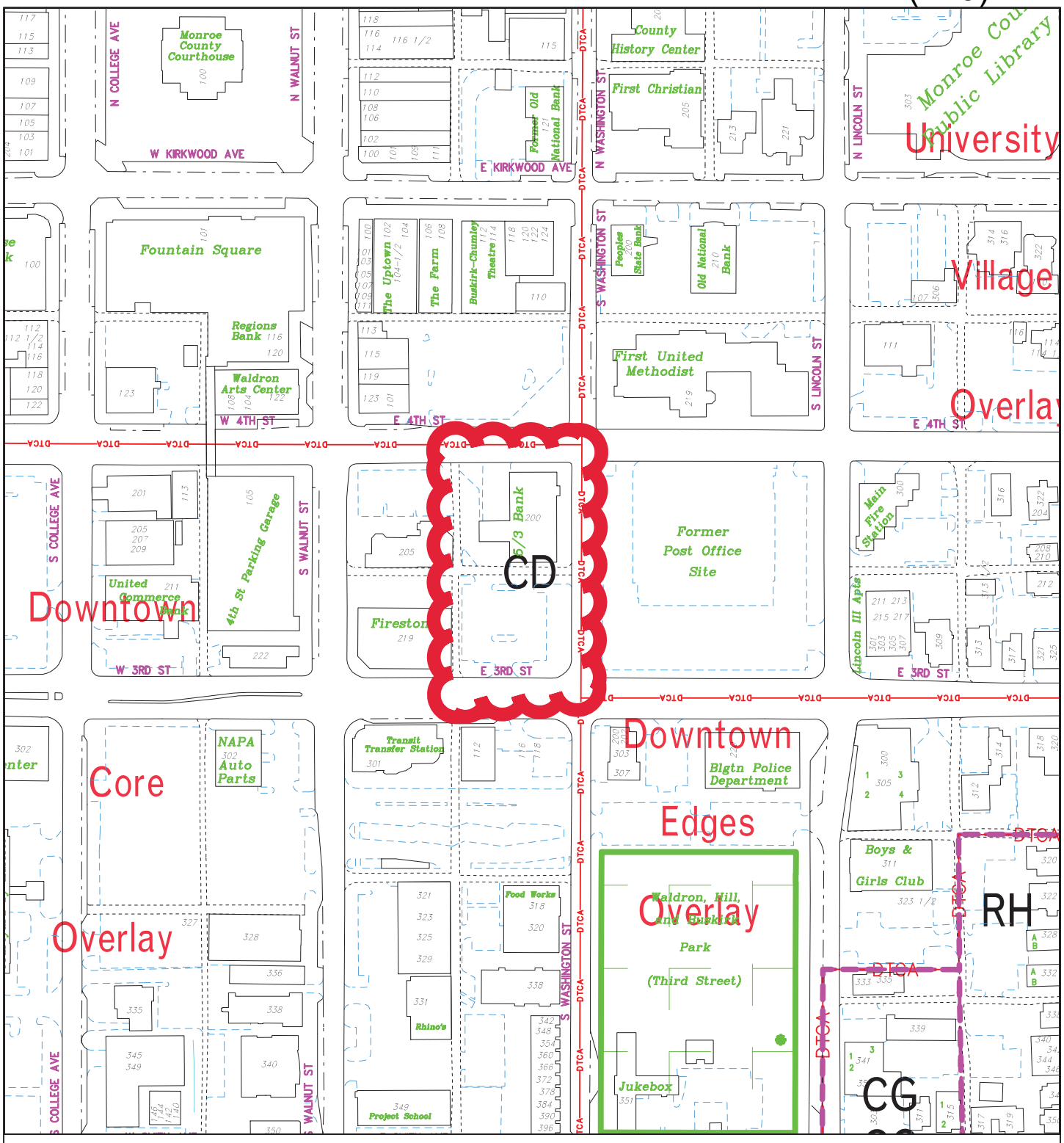
RECOMMENDATION: The Planning and Transportation Department recommends that the Plan Commission approve the site plan based on the written findings and with the following conditions:

1. Petitioner must receive right-of-way encroachment approval for the required street lights, bay windows, and bike racks. Street lights and bike racks must be installed before final occupancy will be issued.

2. The new street parking spaces shown in the site plan are subject to Title 15 and City Council approval.

3. Site plan is approved contingent upon approval of the use variance for the ‘drive-through’ use by the Board of Zoning Appeals.

4. The petitioner commits to working with staff to provide a functional green roof system similar in scope and size to that shown in the submitted site plan.



City of Bloomington
Planning & Transportation

By: roachja
26 Jan 17

200 0 200 400 600

N

Scale: 1" = 200'

For reference only; map information NOT warranted.

City of Bloomington
Planning & Transportation

By: roachja
26 Jan 17

60 0 60 120 180

N

Scale: 1" = 60'

For reference only; map information NOT warranted.

STUDIO THREE DESIGN

SP-16-17 Petitioner Statement

May 30th, 2017

City of Bloomington Planning Department
P.O. Box 100
Bloomington, IN 47402

Attn: Mrs. Jackie Scanlan

RE: Cityside

PETITIONERS STATEMENT

Dear Mrs. Scanlan,

Studio 3 Design is pleased to submit the attached apartment development, "Cityside", for Plan Commission consideration. The following document outlines the project scope and addresses comments received to date regarding the project. Please take time to review and contact us with any questions that you may have.

Project Location

The project is located along Washington St. between 3rd St. and 4th St. in the Downtown Core Overlay. The site currently houses the existing Fifth Third retail bank branch on the north half and a surface parking lot on the south half. A majority of the existing bank building will be preserved and added on to on the north property. The surrounding land use includes a commercial office building and auto care business to the West, the Bloomington Transit Center and apartment/office buildings to the South, a surface parking lot to the East, and surface parking and retail to the North.

Project scope:

The project consist of 3 buildings. Two on the north Lot and 1 on the south lot.
Building designation for the purpose of this filing will be noted as follows:

Building 1 – South Building
Located on the South lot with frontage on both 3rd street and Washington Street.
Basement level will be a parking garage for public and residents
Street Level will be a Retail box with retail parking entered off the alley
Levels 2, 3 and 4 will be apartments.

Building 2 – North Building (NE)
Existing bank building. Located at NE corner of the north lot,
Building 2 fronts Washington street and 4th street.
Level 1 will remain 5th third bank with zone on the south end for a work out facility.

Level 2 will be converted to apartments
A new level 3 will be constructed over the existing building.

Building 3 **North Building (NW)**
Located on the NW corner of the north lot.
Building 3 fronts 4th street and will connect to the existing building at level 2.
Street level will be a garage containing parking for bank customers and a drive thru with a teller line and an ATM line.
Levels 2, 3 and 4 will be a row of 5 three story townhomes, 1 2 story townhome and 2 studio units all accessed from level 2.

Non-Residential space

Non-residential space is required in the Downtown Core Overlay district for 50% of the ground floor footprint. At the North parcel, Building 2 (existing bank building) will re-use the first floor of the building for 5th third bank and a work-out facility. Building 3 (connected to building 2) contains the Bank parking and bank drive thru. Building 1 will contain a commercial space at the corner and parking for the commercial tenant.

North parcel: **Buildings 2 and 3** – Total footprint: 15,800 gsf**.** Dedicated **Non-residential 10,319 gsf, (65%)** includes area dedicated to bank drive thru function.

South Parcel: Building 1 Total footprint: 13,996 gsf. Dedicated **Non-residential 7,276 gsf (52%)**.

Apartment Types (Total Project)	Count	Beds
Studio	38 Units	38 Beds
1 Bedroom Flat	4 Units	4 Beds
2 Bedroom Flat	1 Unit	2 Beds
2 Bedroom townhome	1 Unit	2 Beds
3 Bedroom Flat	4 Units	12 Beds
4 Bedroom Flat	8 Units	32 Beds
4 Bedroom Townhouse	5 Units	20 Beds
5 Bedroom Flat	2 Units	10 Beds
	63 Units	**120 Beds**

Property density:

North Property
Site: 132' x 132' = **.4 acres**
60 apartments/ acre = **24 DUE's allowed**

Studio units	.20 DUE x 2=	.40 DUE's
2 Bedroom Flat	.66 DUE x 1 =	.66 DUE's
3 Bedroom Flat	1.0 DUE x 4 =	4.00 DUE's
4 Bedroom Flat	1.5 DUE x 3 =	4.50 DUE's
2 bedroom townhome	.66 DUE x 1 =	.66 DUE's
4 Bedroom townhome	1.5 DUE x 5 =	7.50 DUE's

17.72 DUEs provided (24 DUE's allowed)

South Property
Site: 132' x 132' = **.4 acres**
60 apartments/ acre = **24 DUE's allowed**

Studio	.20 DUE x 36 =	7.20 DUEs
1 Bedroom Flat	.25 DUE x 4 =	1.00 DUEs
3 Bedroom Flat	1.0 DUE x 0 =	0.00 DUEs
4 Bedroom Flat	1.5 DUE x 5 =	7.50 DUEs
5 Bedroom Flat	2.0 DUE x 2 =	4.00 DUEs

19.70 DUEs provided (24 DUE's allowed)

Parking Counts

The Downtown Core Overlay does **not require any parking** for non-residential space or for residential developments south of 4th street. Parking will be provided in both buildings. In addition, street parking is being proposed on both 4th Street and Washington Street.

North Building	
Required parking for Retail/Residential	0 spaces
Level 1 Garage	11 spaces
South Building	
Required parking for Retail/Residential	0 spaces
Sub-grade Garage	26 spaces
Level 1 Garage	19 spaces
Total Enclosed Spaces	**56 spaces provided, zero spaces required**
Street parking	
4th Street	3 spaces (parallel parking)
Washington Street	7 spaces (parallel parking)
Total Street parking	**10 spaces**
Total Available parking	**66 spaces**

Build to Line

Per the requirements in the Downtown Core Overlay, the buildings are all built to the "build-to" line on all required street frontages.

Building Height

The Site has approximately 11' of fall from high to low between 4th street and 3rd street. The City UDO measures buildings from the lowest point on grade to highest point on building. As a result, the allowable building height of 50' is adversely impacted by the change in grade on the site. Additionally, the owner's choice to reuse the existing bank building is impacted by the existing high floor to floor volume of the bank building. As such we have elected to remove the 4th floor addition to the existing bank building in order to maintain a building height **Under 45'-0"**

Building 1 measures 50'-0" above the lowest point of grade on site, which meets the UDO height requirement. **We have removed the first 15 feet of the 4th floor along 3rd street and Washington streets to meet the max. 45' height for step back.**

Building 2 Due to re-use of the existing building on the north property the tallest portion of Building 2 measures 45'-0" above the lowest grade level on site. **The 4th floor addition was removed to bring this building down to under 45' in height along 4th street and Washington Street to meet step back requirements.**

Building 3 measures 49'-8" at its greatest low to high height. We lowered floor to floor as well as modified our structural system to bring this building in under 50'-0 max height **and removed the fourth floor along 4th street under 45' in height along 4th street to meet step back requirements.**

Building 2 and 3 – if viewed as a single structure for purposes of height measures 49'-8" from the lowest point on site to the highest point on building. Maintaining the overall building at under the 50' requirement. This was achieved by no longer revising all the grades to create back in angled parking. We have elected to maintain the existing set up of parallel parking and a bike lane on the street. The 4th floor of building 3 was removed at the unit facing 4th street to address the required step back height at 45'

Parking Garage

An underground parking garage is located beneath Building 1 on the south lot only, accessed via ramp off of Washington Street. Level 1 parking garage spaces in the south building are accessed off of the alley. Level 1 parking garage spaces in the North building are accessed via 4th Street as well as the alley between the buildings.

The South Level 1 parking garage has been modified to remove the entrance off of 3rd street. This zone is now a continuation of retail storefront as well as display case area. The sidewalk is now continuous with no interruptions for pedestrians until they reach the alley. The previous median work to restrict the garage to right-in and right-out has been removed- thus there are no potential conflicts or changes to traffic flow for neighboring sites and their use of third street.

Building Entrances

Building entrances are provided on all primary streets- 3rd street, 4th street and Washington Street.

Building 1 provides 3 entrance points to the building. The primary resident entrance is located near the northeast corner of the building on Washington Street, and provides access to the elevator lobby. The main commercial space entrance is located mid-site on the east façade off of Washington Street. A secondary entrance that can serve both the retail and the residential space is provided on the south façade (3rd street) at the stair tower location. Additional pedestrian access to the parking garage is also located off of Third Street.

Building 2, Existing building, provides a primary entrance for the bank and the residential off of Washington Street and a secondary entrance for both uses at the south end of the building off of the alley.

Building 3, connected to building 2, provides a primary pedestrian entrance off of 4th street into the public bike room and parking garage,

Vehicular entrances are provided to public parking off of 4th street into building 3, and off of the alley into building 1 street level parking. Residential and commercial tenant parking is provided in the sub-grade parking garage under building 1 and accessed off of Washington Street. Parking for building 3 as well as the bank drive through exit via the east – West alley.

Streetscape

Street trees and pedestrian scale street lighting are provided in a regular rhythm along 3rd Street, Washington Street and 4th Street. All trees and lighting meet the requirements of the UDO, with trees being planted in 5' x 5' ornamental tree grates. The wide right of way on 3rd, 4th and Washington streets allow for sidewalks, lighting, trees and in many areas additional green space along the street front.

Void to Solid Percentages

The UDO asks for a building in this overlay district to have a 60% void to solid ratio on the ground floor and 20% void to solid ratio on the upper floors. The existing building is exempt from this requirement, but the new portions of the building are as follows:

Building 1:
South façade – Level 1 66%
South façade - Upper floors 33.3%

East façade – Level 1 63.8%
East façade – Upper floors 31.7%

Building 2: (existing)
East façade – Level 1 NA (exempt)
East façade – upper levels 51.2%

North façade – Level 1 NA (exempt)
North façade – upper levels 42.4%

Building 3:
North façade – Level 1 65.8%
North façade - upper levels 41.4%

Window detailing

Upper story windows have been ganged together where possible to obtain the best natural lighting possible for the interior of apartment living spaces. The issue of providing the UDO requested proportions of the windows has been addressed through the incorporation of a vertical 6" mullion between each window unit allowing for the rectangular units to be grouped together to create the best possible natural interior lighting. Windows at the corner of 4th and Washington Streets are storefront units running from floor to ceiling. The windows – while large to create the exterior expression as well as great views and natural lighting for the corner apartments, still meet the intended proportions as described in the Downtown Core Overlay. Where possible, windows incorporate visually distinct sills and lintels in complementary materials.

Building Materials

The three structures have been detailed to provide the look and feel of three separate buildings along the street. Building 1 is fully separated from buildings 2 and 3. Buildings two and three, while connected, are detailed differently and are divided by a two story building element that is unique as well in color and architectural expression.

Building 1 has changed substantially in Architectural character from the previous petition. The 3rd street and Washington Street facades have been lowered by a floor and now read as a 3 story structure along the street front. Blue metal panel zones that tilt out from the building provide a new dynamic to the elevations in material, color and form. The corner of 3rd and Washington has been raised to provide a corner tower element to anchor the building. The building's parapets along 3rd and Washington Streets have also been modified from a continuous flat parapet to one of varied heights and projections. All of these elements work together to set this building apart from the two north buildings and add interest to the primary roads of 3rd and Washington. Cast stone, two colors of brick and a metal panel system form the majority of the palette for Building 1 (South building). A strong stone base will be provided around the perimeter of Level 1. Additionally, glass storefront windows wrap a majority of the ground floor level and carry to upper stories at the southeast corner. A strong roof element will cap off the corner and be trimmed out in metal fascia. Inset balcony areas will be primarily clad in fiber cement reveal panel with a steel guardrail system at the front. Fiber cement products and other secondary materials will be kept to a minimum of 20% on primary facades. The stepped back portion of level 4 will be a mix of thin brick, siding and cementious panel systems. As a new feature to the 4th floor, an expansive green roof system and outdoor terrace will be incorporated along 3rd and Washington streets – See section under outdoor space below:

Building 2 (existing) will maintain existing materials such as limestone and glass, and build off of that with complementary materials on the new level 3. The building addition above the existing building will use a complementary color brick to continue the rhythm of vertical pilasters on the facade of the building with brick infill panels. A strong horizontal band will replace the old building cornice and provide a base for the transition to the new portions of the structure.

Building 3 will be a mix of cast stone and brick on primary facades and have a mix of brick and hardy siding on interior courtyard elevations. The 4 story elements of building 2 and 3 will be divided by a 2 story structure, slightly recessed and detailed in a different brick with metal panel canopies and copings to accent the façade. The courtyard elevations will be primarily cementious siding.

Building Façade modules

North building (building 2 & 3) provide the façade modulation along 4th street. A break in the façade between Building 2 and 3 is also provided, and breaks the 4th street elevation both in height and setback. Along Washington Street a façade module has been incorporated into the east façade of the building's 3rd floor addition to meet the requirements of the UDO.

The south building (building 1) provides the required step back at the residential entrance at the northeast corner of the site as well as at the main commercial space entrance on Washington Street and mid-block on the south façade. At each location the step back is carried up the full height of the building.

SP-16-17 Petitioner Statement

Building Step Back

The Downtown Core Overlay requires that any building over 45' step back at the 45' mark a minimum of 15' from the build-to line. The intent of this requirement was for structures exceeding 4 stories in height so that additional floors would be set back leaving the perceived street elevation at no more than 4 stories.
The project has been modified to set the 4th level of building 1 along 3rd street and Washington Street as well as the 4th level of building 3 along 4th street to meet the UDO requirement.

Building Height Step Down

The property at 205 S. Walnut Street is identified on the City of Bloomington Survey of Historic Sites and Structures. Although this structure does not share any adjacent street frontage with Building 3, the properties back up to each other across the north south alley. As such, consideration has been taken with regard to overall building height. Building 3 on the North property is within 14'-0" in height of the existing building, meeting the requirement in the UDO. The existing buildings highest roof is +40 feet above grade
Building 3 is at 799.64 to parapet height. The historic building is at 790.25 to top of roof. Putting our building approximately **9' taller** than the historic structure and within the allowable 14' height variation.

Bike Storage/ Parking

A total of **24** bike parking spaces are **required** for the development as a whole. This includes (4) spaces provided for the non-residential space and **20** spaces provided for the **120** total bedrooms on site. ¼ of the required spaces will be provided as long term, class 1 spaces and ½ of the spaces will be provided as covered, short term class 2 spaces.

A total of **32** spaces have been **provided**. (**6)** in a secured bike room in building 1 and **(8)** in a secured bike room in building 3. An additional **(2)** covered, short term Class II spaces are provided at the elevator lobby entrance to Building 1. Additional short term bike spaces are provided, with **(6)** located on Washington Street near the entrance to building 2, **(6)** located along Washington street near the retail entrance to Building 1, and **(4)** located along 3rd street
All of which exceed the required amounts by **8** bike spaces or **33% increase.**

Environmental Considerations

The developer is interested in providing a building that is sensitive to the concerns of today's built environment. As such, we are incorporating the following into the project:

- Recycling provided on site for all three buildings.
- Salvage and adaptive reuse of existing building.
- **Green Roof – planting system provided on building 1 roof terrace.**
- "Green friendly" building materials – This includes both materials with recycled content as well as building materials that have been harvested and manufactured within a 500 mile radius. Primary building materials include cementitious siding/panels, brick, CMU blocks, cast concrete and wood.
  Interior building materials include carpeting, low VOC paints
- LED lighting package
- Energy efficient "Energy Star" appliances.

- High efficiency furnaces – 14.5 SEER
- Energy efficient windows with low-E glazing
- White reflective roofing membrane for energy conservation and reduced heat island effect.
- Use of larger window openings for natural day lighting of interior spaces to cut down on the use of artificial lighting.
- Covered and secured bike parking beyond requirements (33% over requirement)
- Creation of walkable sidewalks- plantings, trees and lighting

Benefits to the Community

- Use of local labor for construction
- **Creation of first substantial Green Roof on a private development.**
- Job creation and retention with new retail and maintaining 5th 3rd bank on site.
- Tax dollars for the city
- Salvage and adaptive reuse of existing building
- Converting open parking lots into active street frontage.
- Adding population that will support downtown business.
- Burying utilities in North-South alley from 3rd Street to 4th Street– this will make the alleys more traversable.
- Repaving alleys surrounding property as part of utility relocate.
- Widening East- West alley between our properties to allow for two cars to pass.
- Adding streetscape along 3rd, 4th and Washington streets – lighting and landscaping.
- Reducing the drive-thru lane pull in off of 3rd street making sidewalk more pedestrian friendly.
- Concealing drive-thru under building- creating a nicer streetscape.

Outdoor space:

- This project will contain the City's first substantial "Green Roof" planting system provided by a private developer in the downtown. The system will be a tray system designed for sedum species. The green roof tray system will cover approx. 1000 sf of roof area on the South and east elevations. The system will be a tray system set approximately 2' off the parapet wall and building walls for maintenance access with an additional path carved thru the system for maintenance as well as access to egress stairs. Frost proof hose bibs will be placed along the wall of level 4 to allow for watering the system during long dry spells in the summer months. The system is a 4" deep self-sustaining product that will most likely be pre-grown for installation in approximately 12" x 24" sections that are brought to the site and installed over the building roof system. A large outdoor terrace will also occupy the east elevation with views toward the Campus, outdoor seating and an outdoor kitchen zone. This will serve as the active outdoor gathering zone.
- The lowered 4th floor also opens the SE corner of the roofline to bring in additional natural light to the level 2 plaza in the center of the building. This area will primary serve as outdoor seating for small informal gatherings with raised planters providing a visual separation with the apartment units around the perimeter and pockets for seating around the center of the courtyard.
- The level 2 plaza at the north building will also serve as a quieter gathering zone for small groups. Similar to the South plaza this space will contain raised planters to serve as a buffer with the residential unit to the east and to define smaller outdoor seating zones.

Encroachments:

The project will require the following encroachments with the city:

- Street trees and street lights along all 3 primary facades along 3rd Street, Washington Street and 4th Street.
- Building 1 sloped metal panel wall elements project approx. 1 to 2 feet over the sidewalk at their highest point on both 3rd street and Washington street
- Grease interceptor at the southeast corner of the property – Due to the presence of a full underground parking garage, this is being proposed in the Washington Street right-of-way.
- Building entrance canopies along the proposed level 1 commercial space as well as all building entry points.

Trash Removal

A central trash room will be provided in building 1 on the north end, across from building 2 & 3 entrance. The trash room is sized to include multiple recycle bins and 2 dumpsters. Trash will be concealed behind a rolling garage door in a secured room made available to trash and recycle collection companies.

Water Service & Meter Pit

The project will connect to the water main along 3rd Street and 4th Street. A master meter will be installed in the City right-of-way at the northwest corner of the site and will house the necessary meter. A city standard riser room will be located adjacent to the service entrance on both buildings.

Sewer Service

Both buildings will connect to the city sewer mains along Washington Street. A new section of sanitary sewer will be provided from the alley dividing the properties south to the intersection of 3rd Street. All connections will be lateral connections with standard patching of the street as required.

Private Utilities

Duke Energy and a cable/phone/internet provider to be determined will provide for the service needs of the development. We anticipate 2 electrical transformers for the project, both located on the west side of the property near the alley that divides the building.

Anticipated Waivers

No Waivers are needed for this project.

Variances:

We have identified one variance that will need to be approved by the BZA,

This Variance received a recommendation for approval from the Plan Commission as well as staff support at the previous hearing.

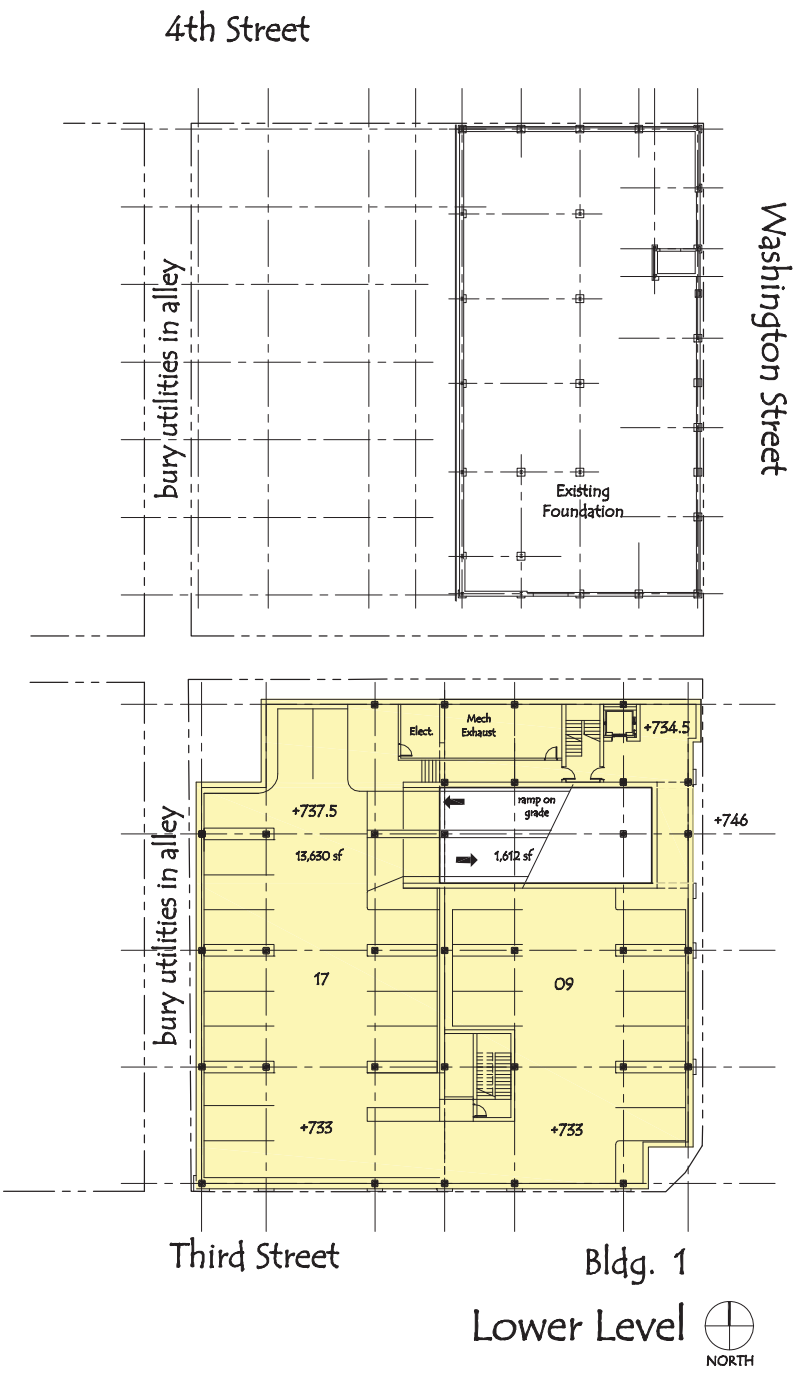
1. A use variance is required to provide a drive-thru in the downtown area. We are replacing an existing drive-thru on site that is currently out in the open with one that will be fully enclosed under roof and screened from public view. We feel that this is an improvement on the current situation on site and allows a long term commercial tenant to remain on site as well as allowing the adaptive reuse of the current structure as part of maintaining the bank at this location.

Respectfully submitted,

STUDIO 3 DESIGN, INC

Timothy W. Cover

SP-16-17 Petitioner Statement



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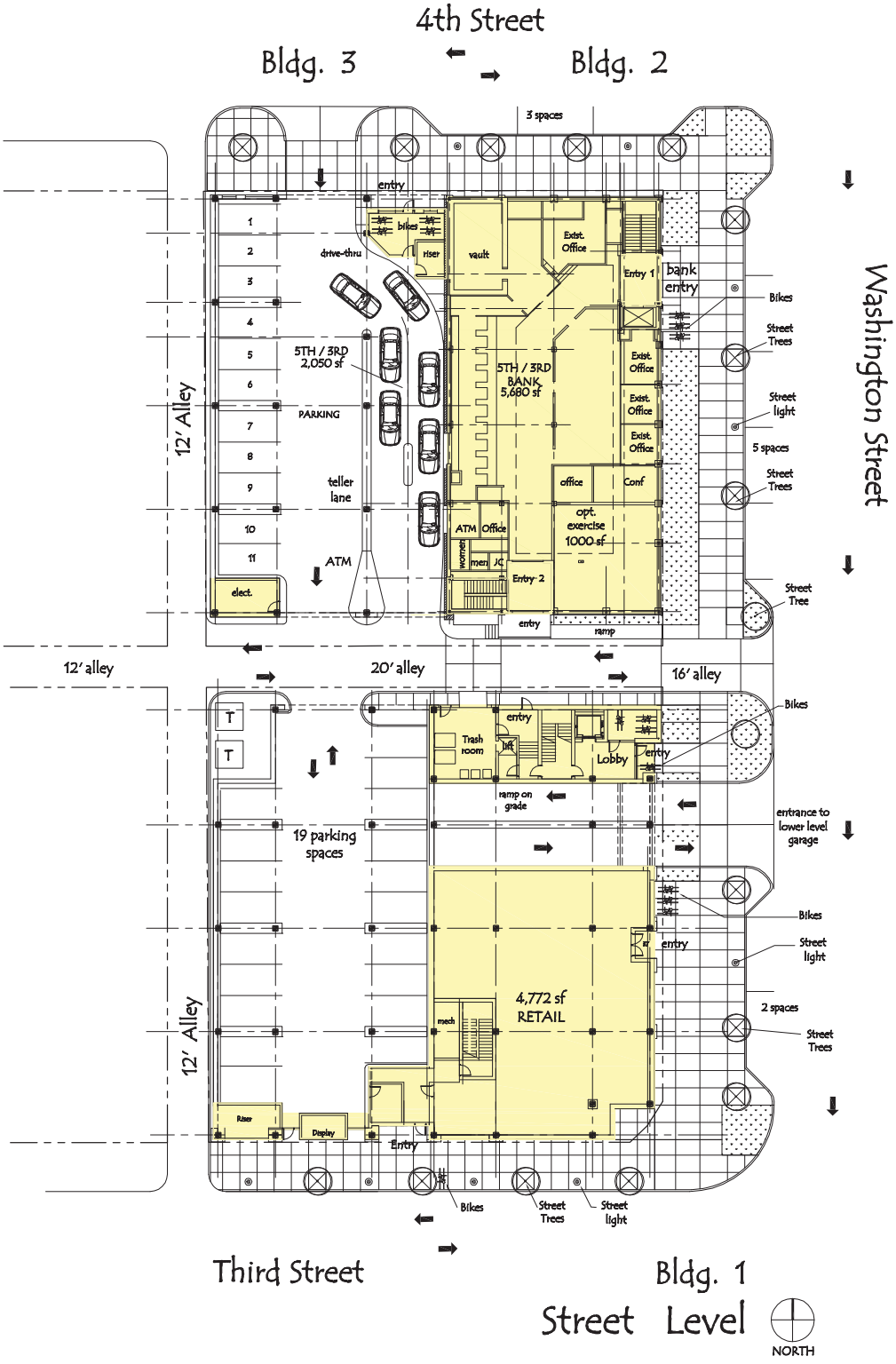
Cityside 123, LLC.

CITYSIDE

Bloomington, Indiana

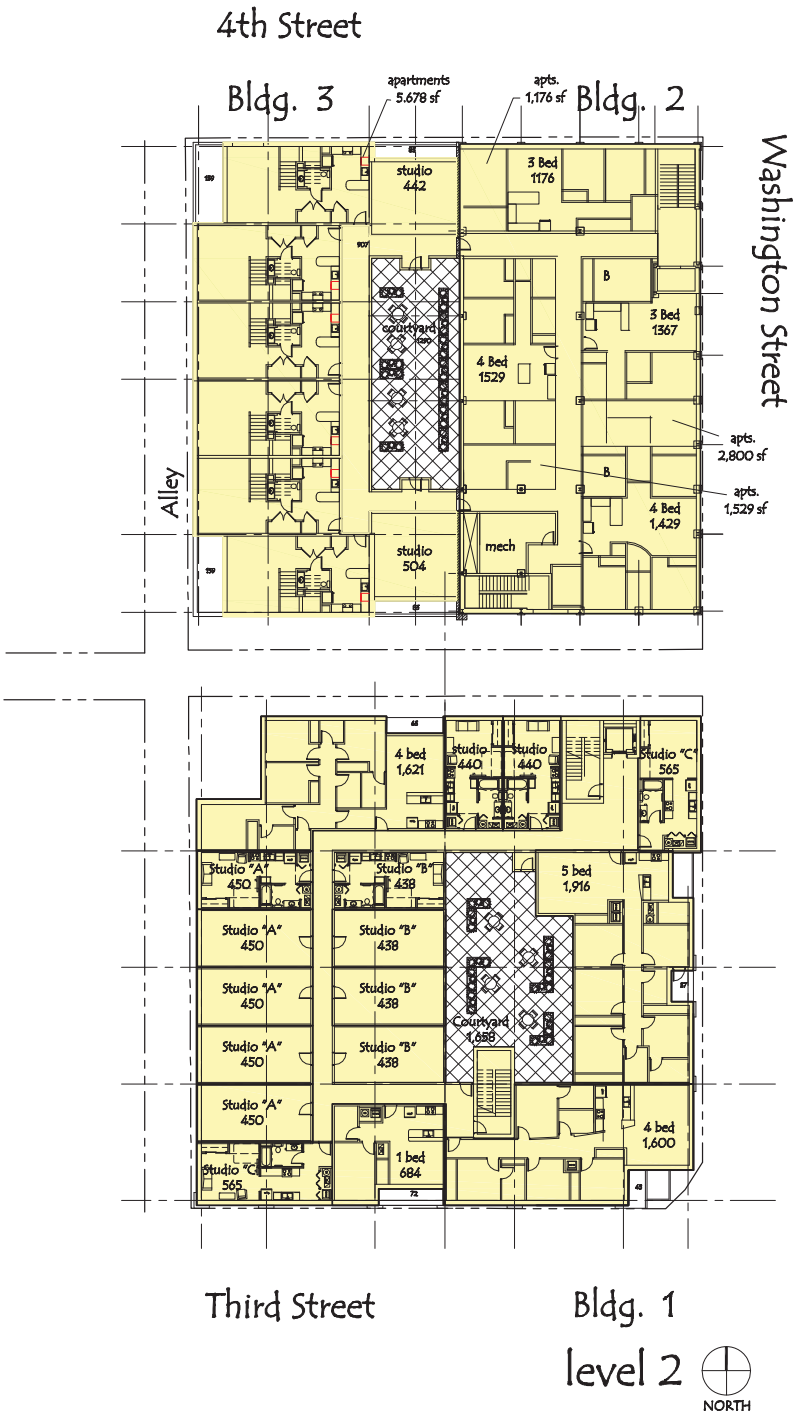
PROJECT NO.	SHEET DESCRIPTION	SHEET NUMBER
17009.01	LOWER LEVEL FLOOR PLAN	A0
DATE 5-30-2017		

SP-16-17 Petitioner Site Plan



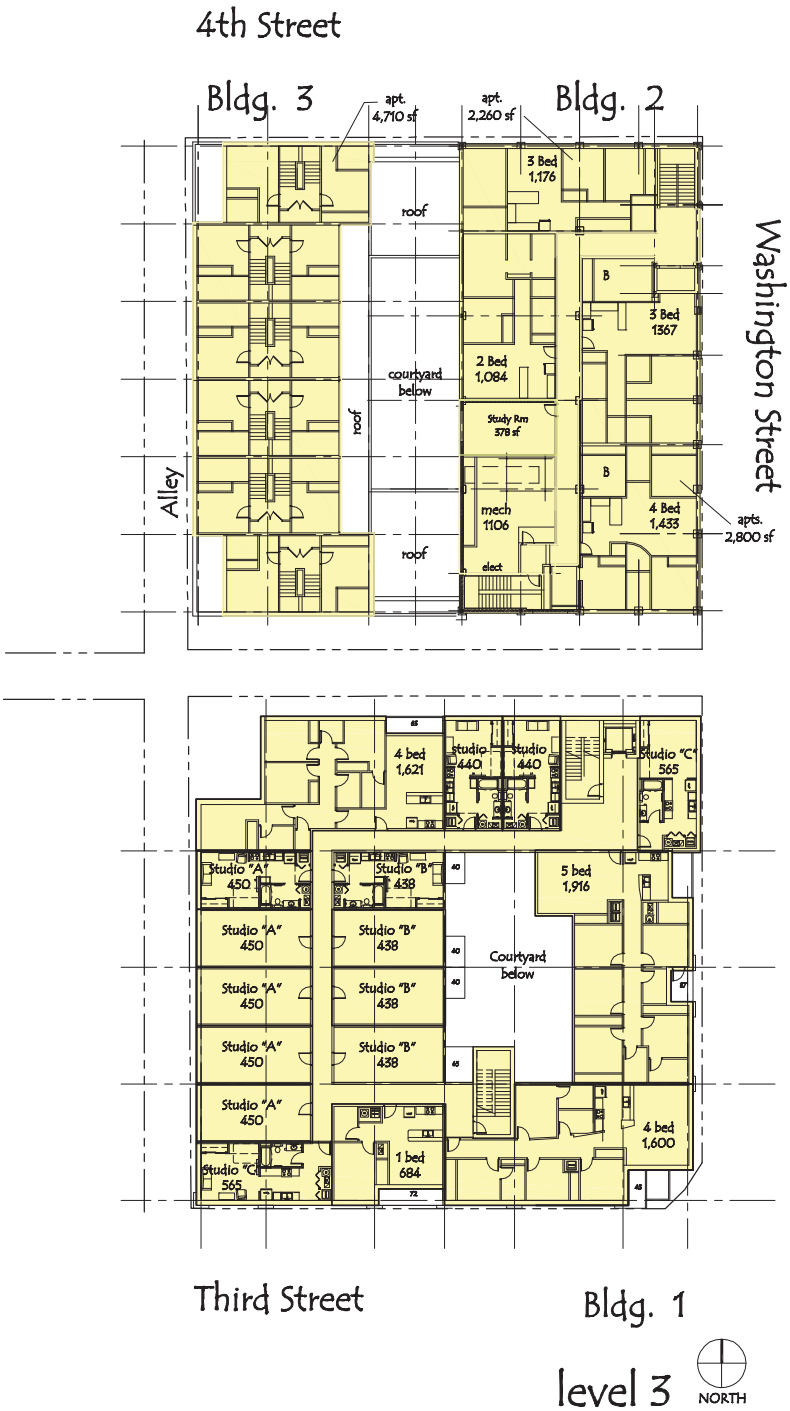
STUDIO THREE DESIGN architecture ▫▫ interior design www.studio3design.net 317 595.1000 main 317 572.1236 fax 8604 Allisonville Road, Suite 330 Indianapolis, IN 46250	Cityside 123, LLC. CITYSIDE Bloomington, Indiana	PROJECT NO. 17009.01 DATE 5-30-2017	SHEET DESCRIPTION LEVEL 1 FLOOR PLAN	SHEET NUMBER A1

SP-16-17 Petitioner Site Plan



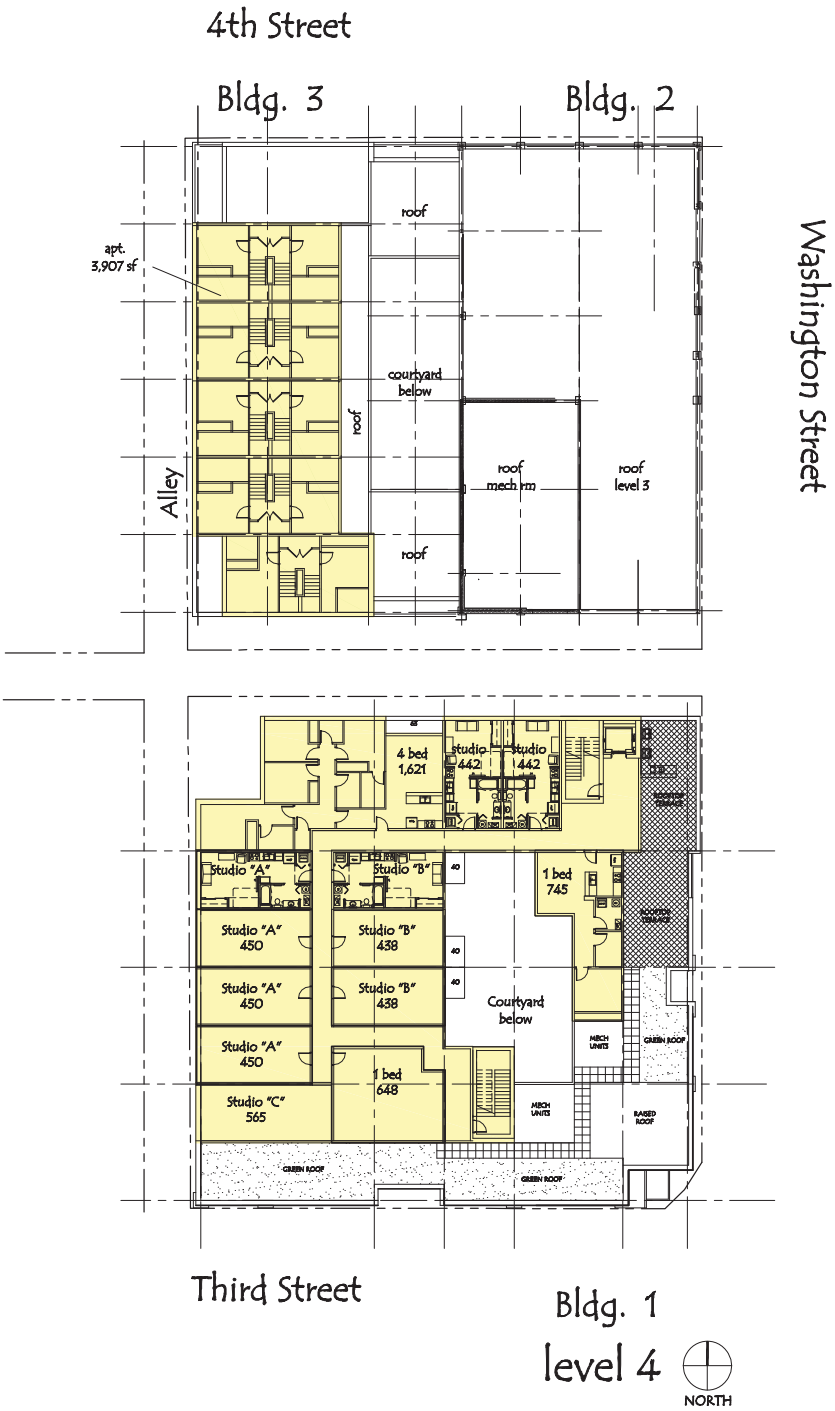
STUDIO THREE DESIGN architecture ⇔ interior design www.studio3design.net 317 595.1000 main 317 572.1236 fax 8604 Allisonville Road, Suite 330 Indianapolis, IN 46250	Cityside 123, LLC. CITYSIDE Bloomington, Indiana	PROJECT NO. 17009.01 DATE 5-30-2017	SHEET DESCRIPTION LEVEL 2 FLOOR PLAN	SHEET NUMBER A2

SP-16-17 Petitioner Site Plan



STUDIO THREE DESIGN architecture ∞ interior design www.studiothreedesign.net 317 595.1000 main 317 572.1236 fax 8604 Allisonville Road, Suite 330 Indianapolis, IN 46250	Cityside 123, LLC. CITYSIDE Bloomington, Indiana	PROJECT NO. 17009.01 DATE 5-30-2017	SHEET DESCRIPTION LEVEL 3 FLOOR PLAN	SHEET NUMBER A3

SP-16-17 Petitioner Site Plan



STUDIO THREE DESIGN architecture ⇔ interior design www.studio3design.net 317 595.1000 main 317 572.1236 fax 8604 Allisonville Road, Suite 330 Indianapolis, IN 46250	Cityside 123, LLC. CITYSIDE Bloomington, Indiana	PROJECT NO. 17009.01 DATE 5-30-2017	SHEET DESCRIPTION LEVEL 4 FLOOR PLAN	SHEET NUMBER A4

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE 123, LLC.

CITYSIDE

BLOOMINGTON, IN

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION: BLDG 1 - SOUTH ELEVATION

SHEET NUMBER: A5

SP-16-17
Petitioner
Renderings

1 / A5 BLDG 1 - SOUTH ELEVATION - 3RD ST.
3/32" = 1'-0"

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE 123, LLC.

CITYSIDE

BLOOMINGTON, IN

PROJECT NO.	SHEET DESCRIPTION	SHEET NUMBER
17009.01	BLDG 1 - EAST ELEVATION	A6
DATE		
5/30/2017		

SP-16-17
Petitioner
Renderings

1 / A6 BLDG 1 - EAST ELEVATION - WASHINGTON ST.
3/32" = 1'-0"

2 / A7

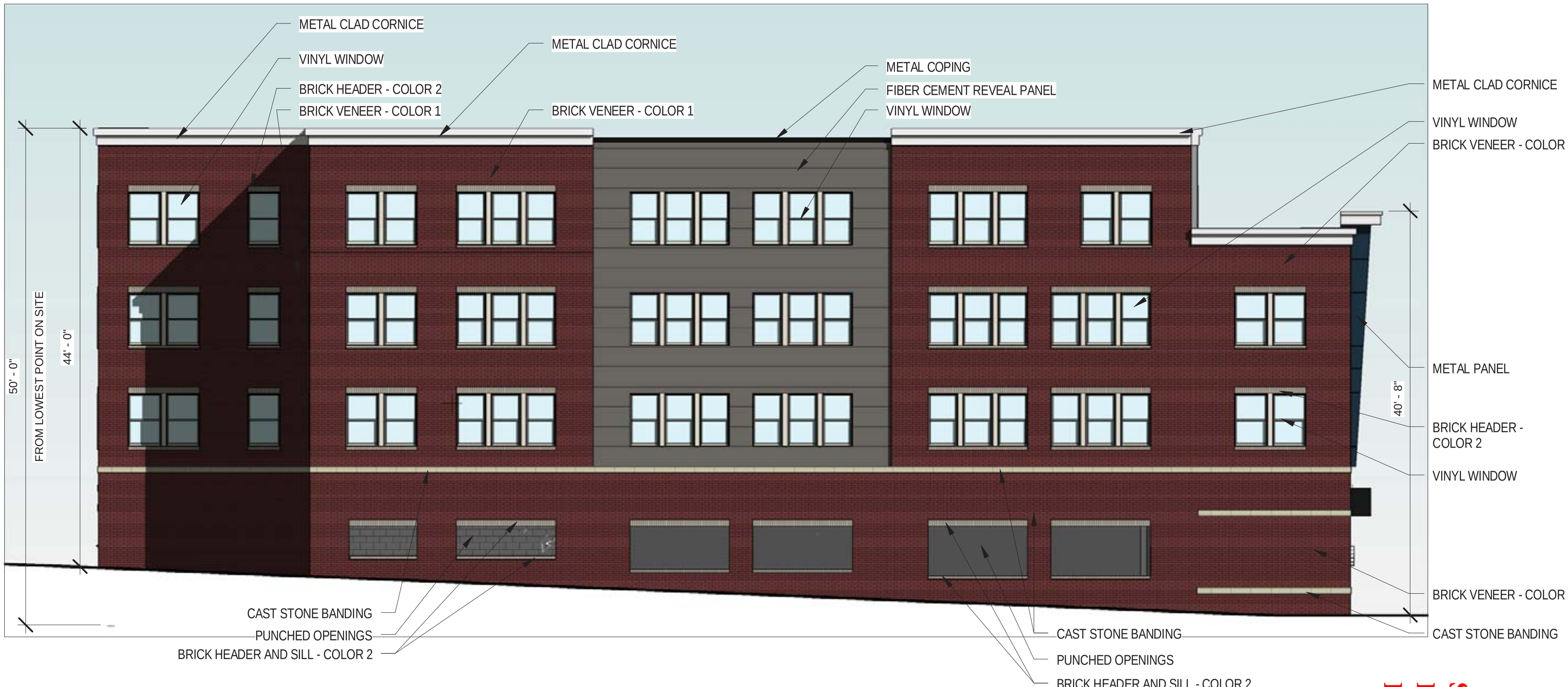
BLDG 1 - NORTH ELEVATION

3/32" = 1'-0"

SP-16-17
Petitioner
Renderings

(159)

STUDIO THREE DESIGN Architecture • Interior Design	CITYSIDE 123, LLC. CITYSIDE BLOOMINGTON, IN	PROJECT NO. 17009.01 DATE 5/30/2017	SHEET DESCRIPTION BLDG 1 - NORTH ELEVATION	SHEET NUMBER A7



1 / A8 BLDG 1 – WEST ELEVATION
3/32" = 1'-0"

SP-16-17
Petitioner
Renderings

SHEET NUMBER	SHEET DESCRIPTION	PROJECT NO.	DATE		
A8	BLDG 1 - WEST ELEVATION	17009.01	5/30/2017	CITYSIDE 123, LLC. CITYSIDE BLOOMINGTON, IN	STUDIO THREE DESIGN Architecture • Interior Design

(160)

1 / A9

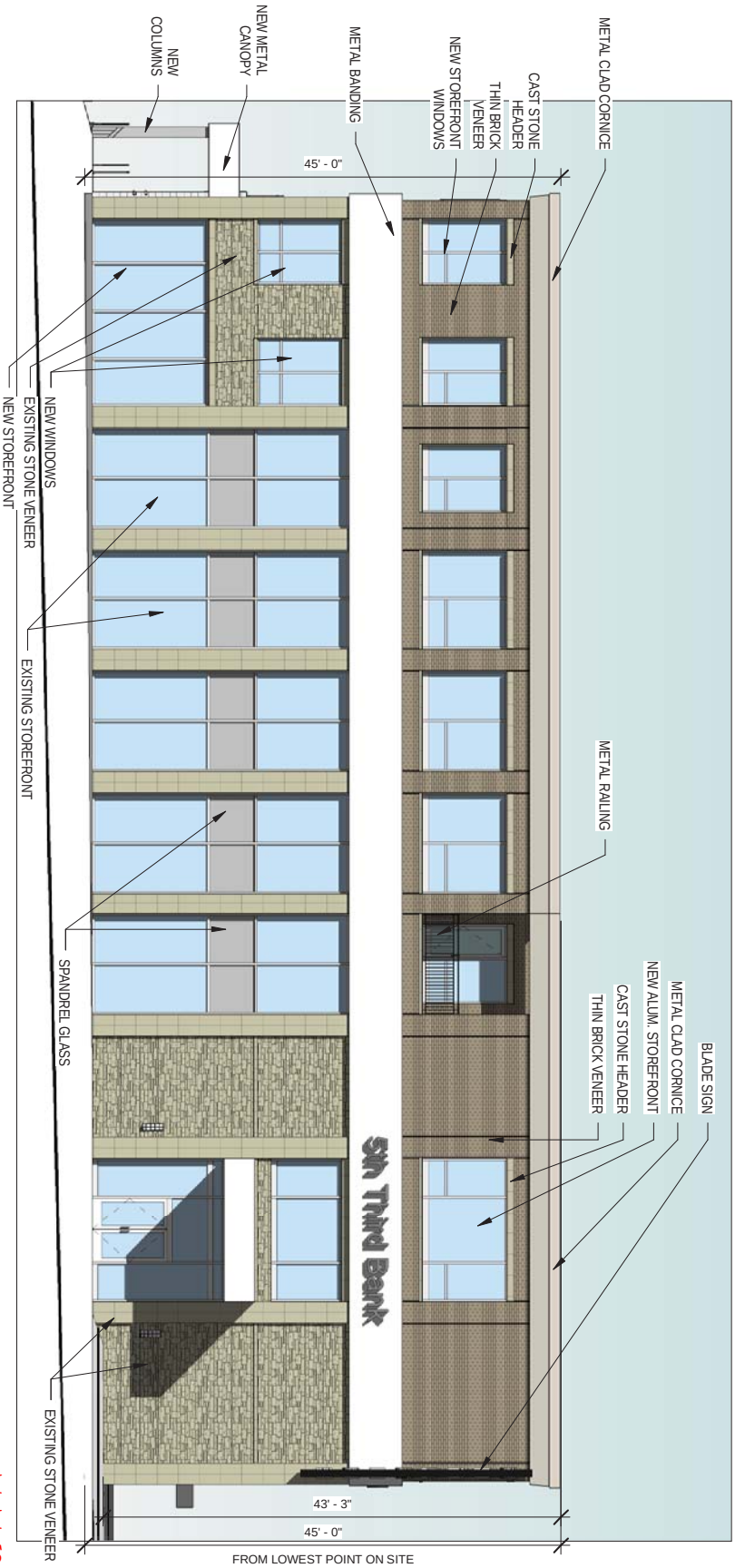
BLDGS 2 & 3 - NORTH ELEVATION - 4TH ST

3/32" = 1'-0"

SP-16-17
Petitioner Renderings

STUDIO THREE DESIGN Architecture • Interior Design	CITYSIDE 123, LLC. CITYSIDE BLOOMINGTON, IN	PROJECT NO. 17009.01 DATE 5/30/2017	SHEET DESCRIPTION BLDGS 2 & 3 - NORTH ELEVATION	SHEET NUMBER A9

(164)



1 / A10

BLDG 2 - EAST ELEVATION - WASHINGTON ST.

3/32" = 1'-0"

SP-16-17
Petitioner Renderings

(163)

STUDIO THREE DESIGN Architecture • Interior Design	CITYSIDE 123, LLC. CITYSIDE BLOOMINGTON, IN	PROJECT NO. 17009.01 DATE 5/30/2017	SHEET DESCRIPTION BLDG 2 - EAST ELEVATION	SHEET NUMBER A10

1 / A11

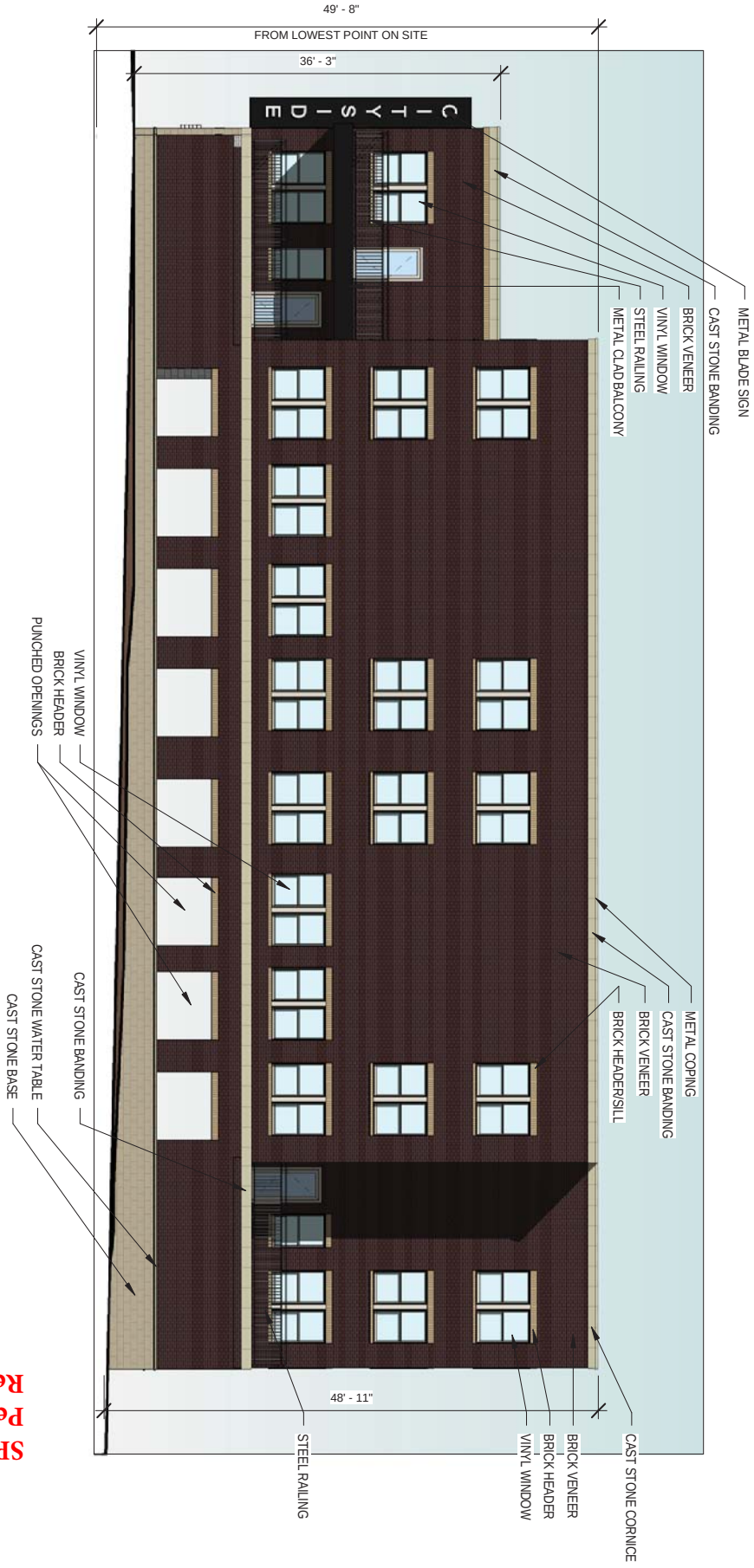
BLDG 2 & 3- SOUTH ELEVATION

3/32" = 1'-0"

SP-16-17
Petitioner
Renderings

(163)

STUDIO THREE DESIGN Architecture • Interior Design	CITYSIDE 123, LLC. CITYSIDE BLOOMINGTON, IN	PROJECT NO. 17009.01 DATE 5/30/2017	SHEET DESCRIPTION BLDGS 2 & 3 - SOUTH ELEVATION	SHEET NUMBER A11



1 / A12

BLDG 3 - WEST ELEVATION - ALLEY

3/32" = 1'-0"

SP-16-17
Petitioner
Renderings

(164)

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE 123, LLC.	PROJECT NO. 17009.01	SHEET DESCRIPTION	SHEET NUMBER
CITYSIDE	DATE 5/30/2017	BLDG 2 - WEST ELEVATION	A12
BLOOMINGTON, IN			

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE 123, LLC.

CITYSIDE

BLOOMINGTON, IN

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION: BLDGS 2 & 3 COURTYARD ELEVATIONS

SHEET NUMBER: A13

SP-16-17 Petitioner Renderings

2 A13 BLDG 2 & 3 COURTYARD ELEVATION - EAST
3/32" = 1'-0"

1 A13 BLDG 2 & 3 COURTYARD ELEVATION - WEST
3/32" = 1'-0"

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE 123, LLC.

CITYSIDE

BLOOMINGTON, IN

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION: BLDG 1 - SOUTHEAST PERSPECTIVE

SHEET NUMBER: A14

SP-16-17
Petitioner
Renderings

1 / A14 BLDG 1 - SOUTHEAST CORNER PERSPECTIVE

(999)

STUDIO THREE DESIGN (317) Architecture • Interior Design	CITYSIDE 123, LLC. CITYSIDE BLOOMINGTON, IN	PROJECT NO. 17009.01	SHEET DESCRIPTION BLDG 1 - SOUTHWEST PERSPECTIVE	SHEET NUMBER A15
		DATE 5/30/2017		

SP-16-17 Petitioner Renderings

1 A15 BLDG 1 - SOUTHWEST CORNER PERSPECTIVE

(168)

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE 123, LLC.

CITYSIDE

BLOOMINGTON, IN

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION	SHEET NUMBER
BLDG 1 - NORTHEAST PERSPECTIVE	A16

SP-16-17 Petitioner Renderings

1 A16 BLDG 1 - NORTHEAST CORNER PERSPECTIVE

STUDIO THREE DESIGN (169) Architecture • Interior Design	CITYSIDE 123, LLC. CITYSIDE BLOOMINGTON, IN	PROJECT NO. 17009.01 DATE 5/30/2017	SHEET DESCRIPTION BLDGS 2 & 3 - NORTHWEST PERSPECTIVE	SHEET NUMBER A17

SP-16-17 Petitioner Renderings

1 A17 BLDG 2 &3 NORTHWEST PERSPECTIVE

STUDIO THREE DESIGN (812) Architecture • Interior Design	CITYSIDE BLOOMINGTON, IN	PROJECT NO. 17009.01 DATE 5/30/2017	SHEET DESCRIPTION BLDGS 2 & 3 - NORTHEAST PERSPECTIVE	SHEET NUMBER A18

CITYSIDE 123, LLC.

SP-16-17 Petitioner Renderings

BLDGS 2 & 3 - NORTHEAST CORNER PERSPECTIVE

1 / A18

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE 123, LLC.

CITYSIDE

BLOOMINGTON, IN

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION: VIEW FROM 3RD & WALNUT

SHEET NUMBER: A19

SP-16-17 Petitioner Renderings

1 A19 VIEW FROM 3RD & WALNUT

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE

CITYSIDE 123, LLC.

BLOOMINGTON, IN

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION: VIEW FROM NORTH ON WASHINGTON

SHEET NUMBER: A20

SP-16-17 Petitioner Renderings

1 A20 VIEW FROM NORTH ON WASHINGTON

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE 123, LLC.

CITYSIDE

BLOOMINGTON, IN

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION	SHEET NUMBER
AERIAL - NORTHEAST	A21

SP-16-17
Petitioner
Renderings

1 A21 AERIAL PERSPECTIVE - NORTHEAST

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE

CITYSIDE 123, LLC.

BLOOMINGTON, IN

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION	SHEET NUMBER
AERIAL - SOUTHEAST	A22

SP-16-17
Petitioner
Renderings

1 A22 AERIAL - SOUTHEAST CORNER

STUDIO THREE DESIGN
Architecture • Interior Design

BLOOMINGTON, IN

CITYSIDE

CITYSIDE 123, LLC.

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION
SURROUNDING BUILDING HEIGHT COMPARISON

SHEET NUMBER
A23

SP-16-17
Petitioner
Renderings

SURROUNDING BUILDING HEIGHT COMPARISON

1 / A23

STUDIO THREE DESIGN
Architecture | Interior Design

CITYSIDE 123, LLC.

CITYSIDE

BLOOMINGTON, IN

PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION: FUTURE BUILDING HEIGHT COMPARISON

SHEET NUMBER: A24

1 A24 FUTURE BUILDING HEIGHT COMPARISON

SP-16-17
Petitioner
Renderings

STUDIO THREE DESIGN
Architecture • Interior Design

CITYSIDE 123, LLC.

CITYSIDE

BLOOMINGTON, IN

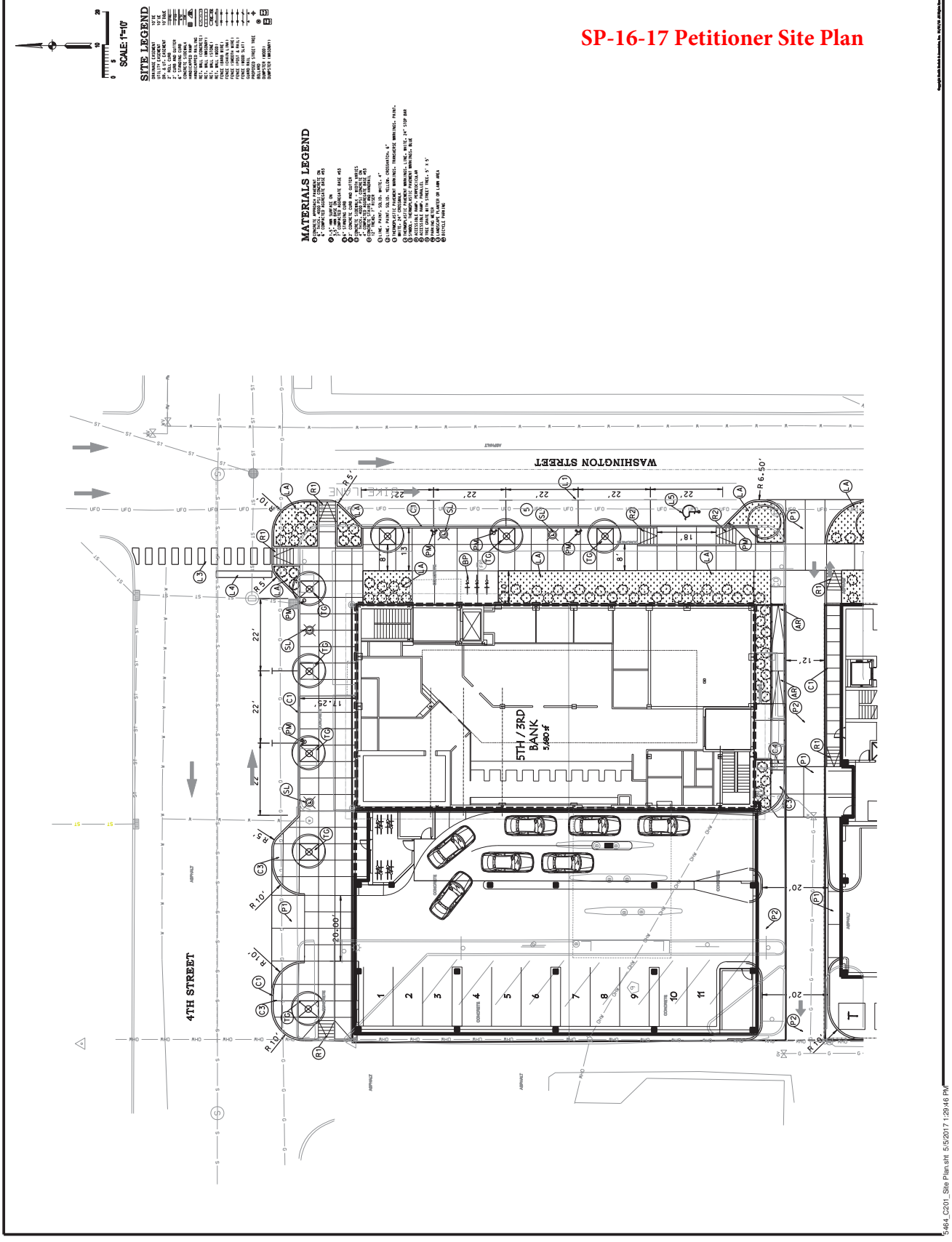
PROJECT NO.	DATE
17009.01	5/30/2017

SHEET DESCRIPTION	SHEET NUMBER
HISTORIC HEIGHT COMPARISON	A25

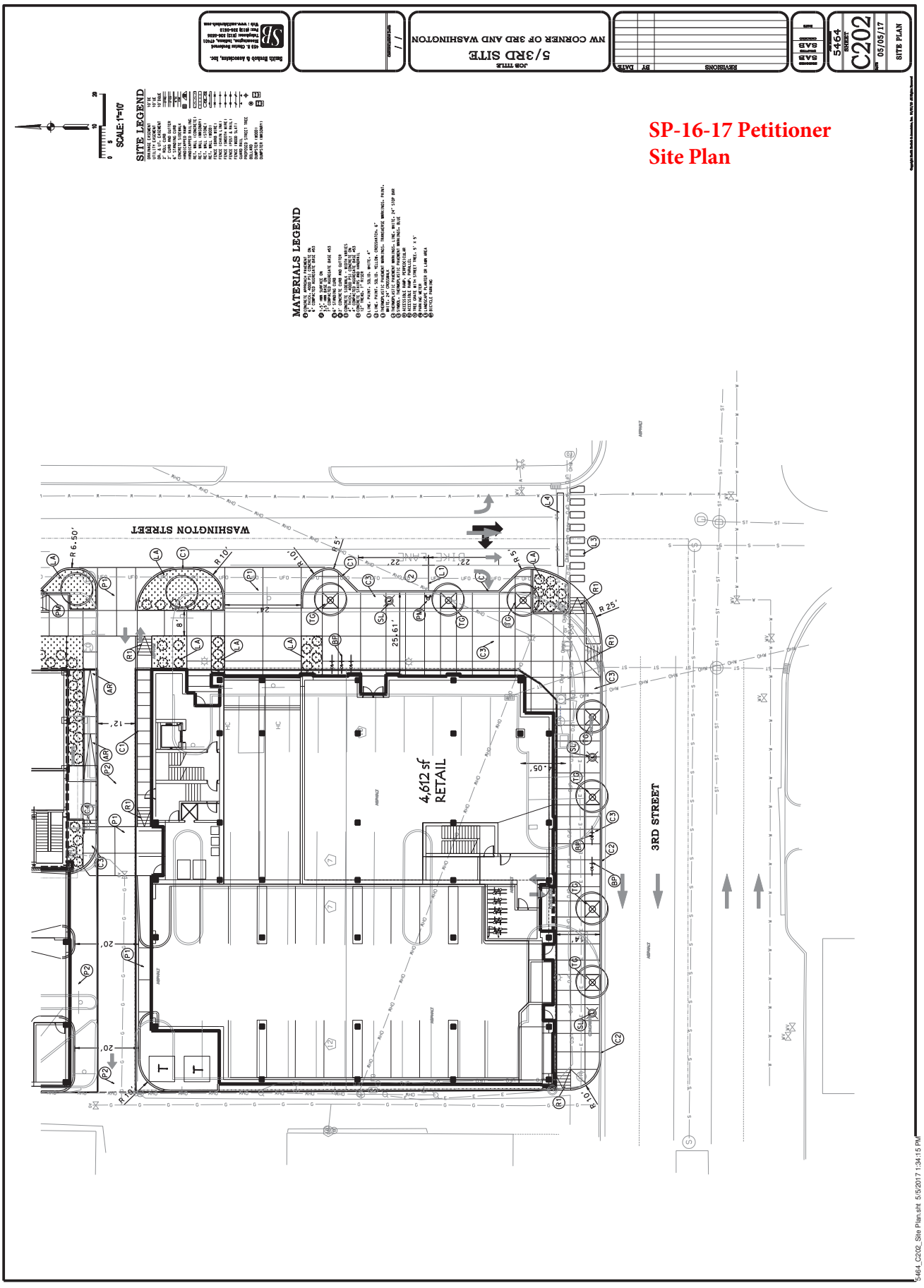
SP-16-17 Petitioner
Historic Structure Exhibit

1 A25 Historic Height Comparison
N. T. S.

SP-16-17 Petitioner Site Plan



SP-16-17 Petitioner
Site Plan



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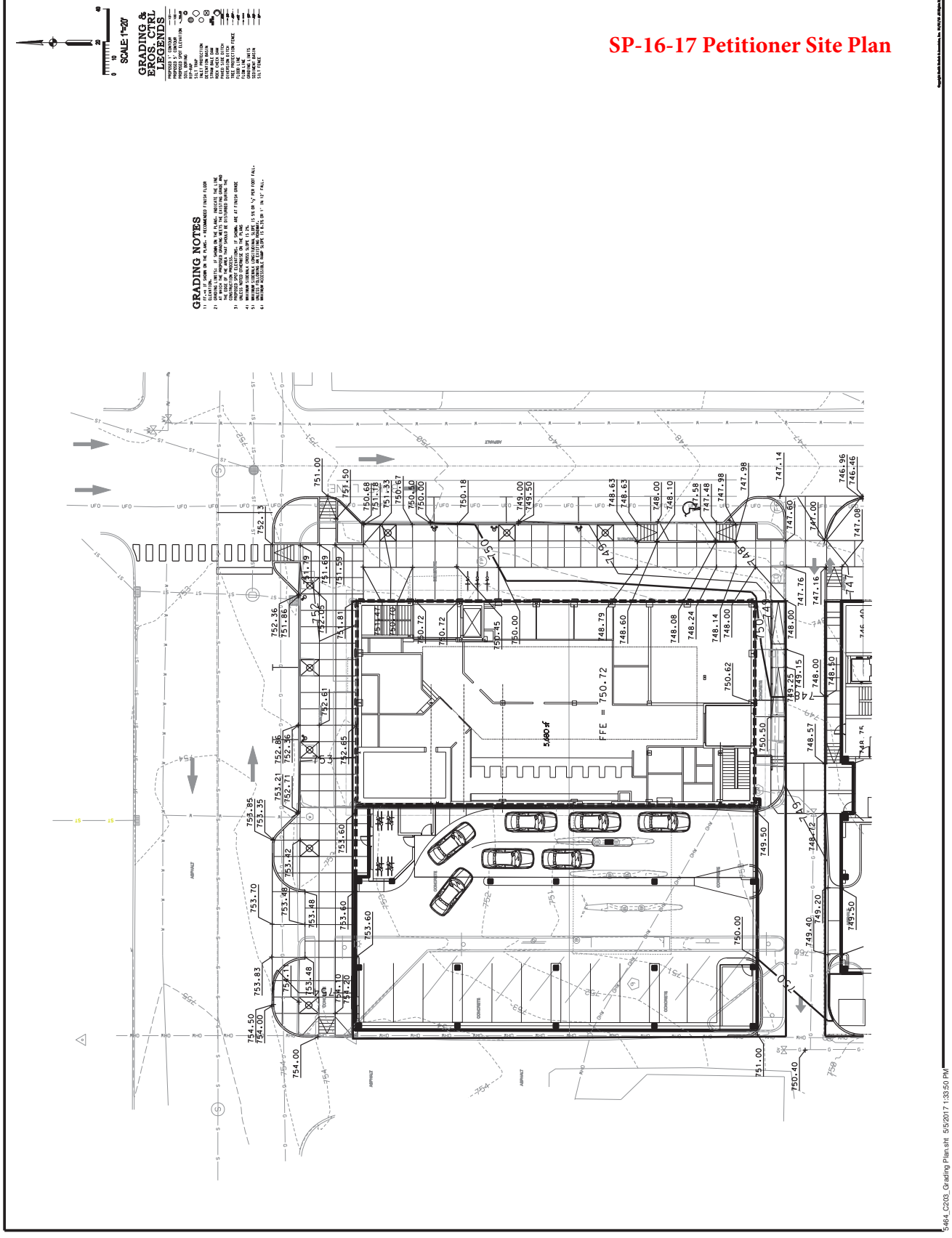
SP-16-17 Petitioner Site Plan



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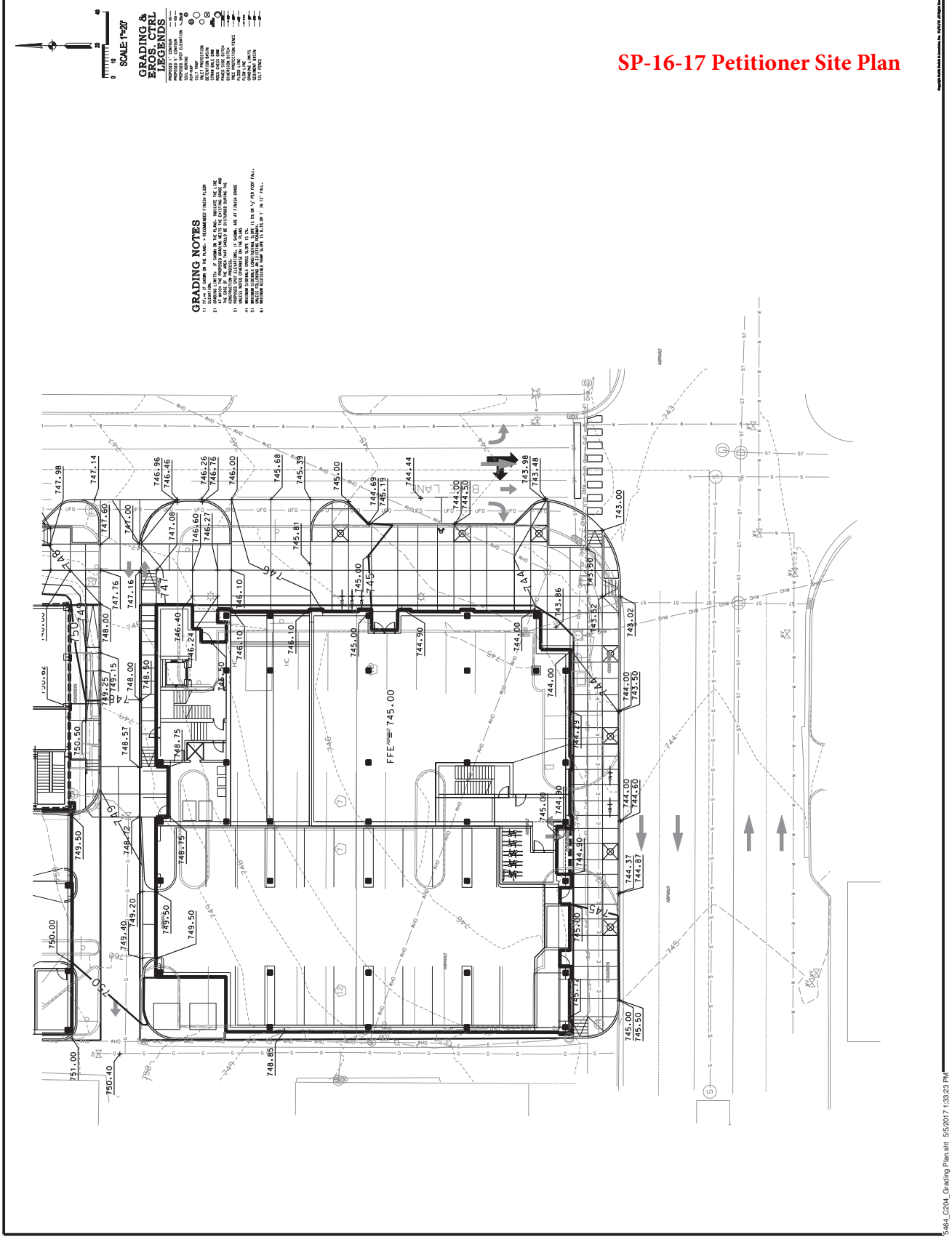
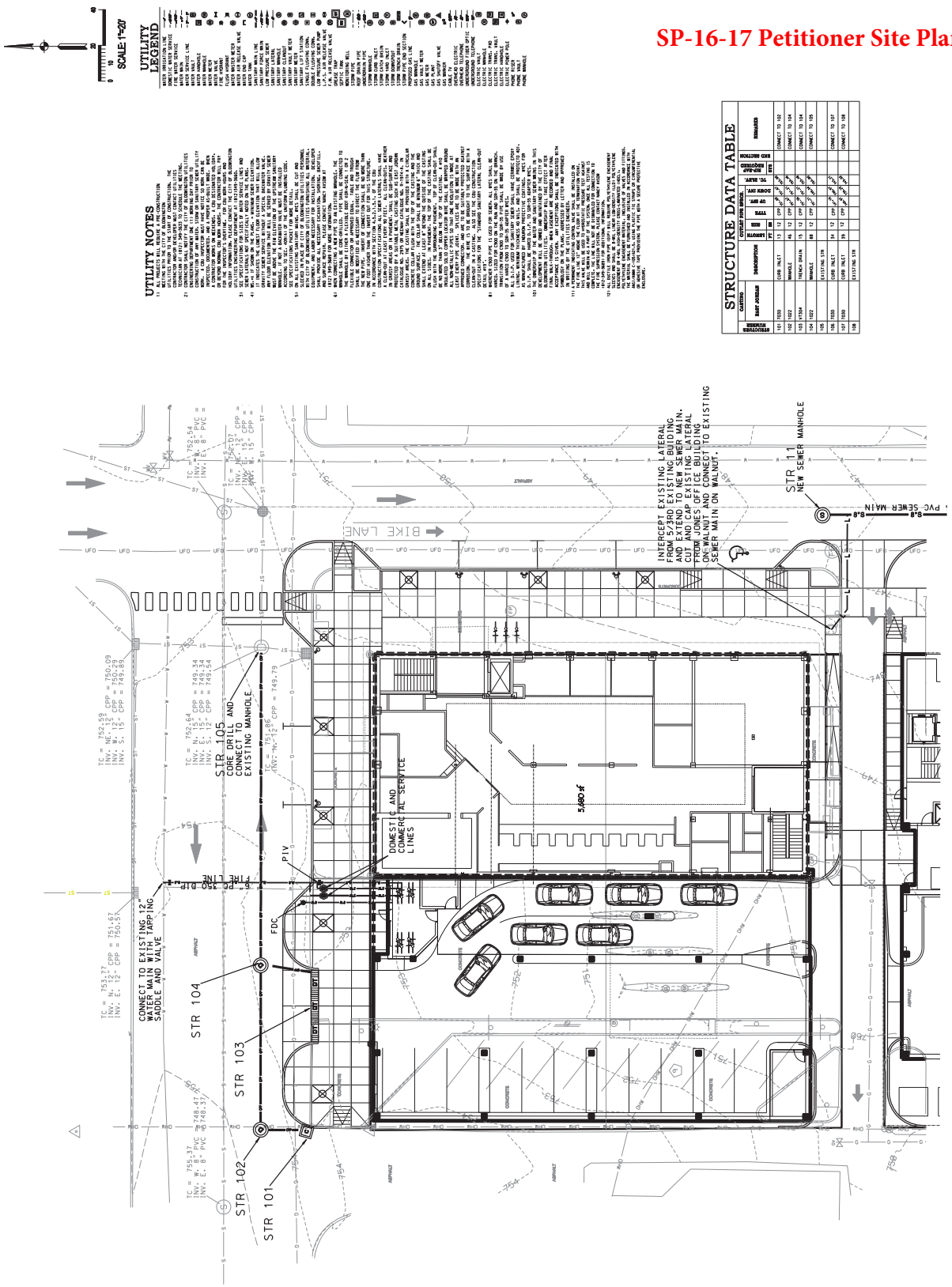
SP-16-17 Petitioner Site Plan



SP-16-17 Petitioner Site Plan



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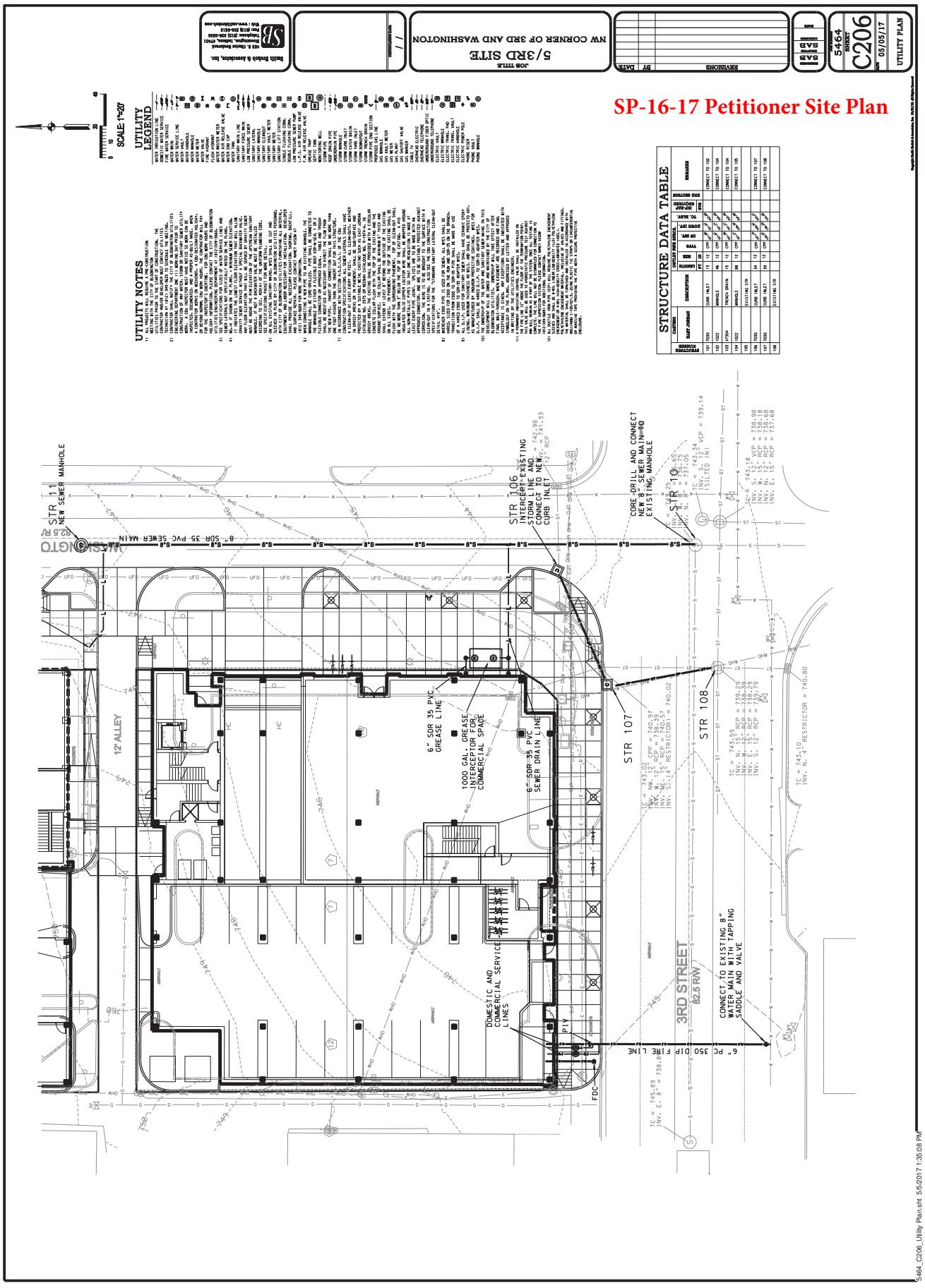
SP-16-17 Petitioner Site Plan



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BLOOMINGTON PLAN COMMISSION **CASE #: SP-17-17**
STAFF REPORT **DATE: June 12, 2017**
Location: 201 S. College Avenue

PETITIONER: Tariq Khan
1201 N. Allen Street, Bloomington

CONSULTANTS: Matt Ellenwood, Matte Black Architecture
2021 E. Wexley Road, Bloomington

REQUEST: The petitioner is requesting site plan approval for one four-story mixed use building.

BACKGROUND:

Area:	0.15 acres
Current Zoning:	CD – Downtown Core Overlay
GPP Designation:	Downtown
Existing Land Use:	Bar/Dance Club
Proposed Land Use:	Bar/Dance Club / Dwelling, Multi-Family
Surrounding Uses:	North – Business/Professional Office
	West – Business/Professional Office / Parking Lot
	East – Restaurant
	South – Bar/Dance Club

REPORT: The property is located on the southeast corner of 4th Street and College Avenue and is zoned Commercial Downtown (CD), in the Downtown Core Overlay. The property contains one two-story building. Surrounding land uses include a restaurant to the east, bar to the south, an office building across 4th Street, and a parking lot and office building to the west across College Avenue. A city parking garage is also in the immediate area, and the Downtown Transit Center is a block to the southeast. The building currently contains a bar, which will remain.

The petition site building was built in 1948 and is listed as 'Contributing' in the City of Bloomington Survey of Historic Sites and Structures, but is not part of a local historic district. As such, the addition is subject to demolition delay review. The petitioner took the design to the Bloomington Historic Preservation Commission on May 11, 2017 and the Commission released Demo Delay permit 17-09. Additionally, the Commission was quite favorable to the addition design and its enhancement of the Art Moderne style of the existing building. Properties north of 4th Street along College Avenue are part of the Courthouse Square Local Historic District. The Historic Preservation Program Manager provided a letter for the packet.

The petitioner proposes to develop this property by adding a two-story addition on top of the existing building. The addition would contain 10 1-bedroom apartments. A solar array would also be installed on the roof.

Plan Commission Site Plan Review: One aspect of this project requires that the petition be reviewed by the Plan Commission, per BMC 20.03.090. This aspect is as follows:

The Plan Commission shall review:

- Any proposal that does not comply with all of the Standards of *Section 20.03.120: Downtown Core Overlay; Development Standards* and *Section 20.03.130: Downtown Core Overlay; Architectural Standards*.
    - The proposal does not comply with 20.03.130(c)(1): Building Façade Modulation
    - The proposal does not comply with 20.03.130(c)(3): Building Height Step Back
    - The proposal does not comply with 20.03.130(b)(3)(C)(2): Window Sills and Lintels

SITE PLAN ISSUES:

Residential Density: The maximum residential density in the Downtown Core Overlay is 60 units per acre. The petition site is .15 acres. The petitioner is proposing a density of 8.718 units per acre, meeting the density requirements.

Non-Residential Uses on the First Floor: The existing non-residential use on the first and second floors would remain. Only a small portion of the first floor would be dedicated to a lobby and stairwells for the upstairs residential uses. The proposal meets the requirement.

Height: The maximum height in the DCO is 50 feet. The maximum height of the building as defined by the UDO is 49 feet 2 inches. The proposal meets the requirement.

Parking: The DCO does not require parking spaces for residential developments south of 4th Street, and does not require parking for non-residential uses. The petitioner proposes no parking. A city-maintained garage is located two properties east of the site, and the Downtown Transit Center is located one block southeast of the site. The proposal meets parking requirements.

Access: There are pedestrian entrances on the north, south, and west facades of the building. The existing historic front door and entry canopy along College Avenue will remain.

Bicycle Parking: 4 bicycle parking spaces are required for the non-residential use and 4 bicycle parking spaces are required for the residential use, for a total of 8 parking spaces. These need to be added to the plan.

Architecture/Materials: The existing building contains limestone block facades on both street frontages. The addition will utilize stucco and limestone accents. The style of the addition is designed to reflect and enhance the Art Moderne design of the existing building, including a focus on the horizontal plane. Block windows that are used in the existing building are replicated on both facades, and the vertical element at the main entrance is carried through the two additional floors above.

The two windows in the recessed portion of the building along College Avenue and the block window installations deviate from the code requirement for either windows & sills or window heads. All other architectural and window designs meet code requirements. The Plan Commission is being asked to approve a site plan that does not meet all of the standards of 20.03.130, per the review procedure outlined in 20.03.100.

Green Building Design: The petitioner will reuse an existing historic structure. The petitioner proposes to install a 24 panel, 7600 watt solar array system on the roof of the building. The array would not be visible from the street below.

Streetscape: Street trees and pedestrian-scaled lighting are required along 4th Street and College Avenue. One additional street tree, required bicycle racks, and street lights as approved by the Board of Public Works are required.

Impervious Surface Coverage: The Downtown Core Overlay allows for 100% impervious surface coverage.

Pedestrian Facilities/Alternative Transportation: The existing sidewalks will remain the same and be enhanced with the required street trees, street lighting, and bicycle parking facilities. If adjacent curb ramps do not meet ADA/PROWAG requirements, they will need to be updated.

Building Façade Modulation: BMC 20.03.130(c)(1)(A) requires a maximum façade width for each module of 65 feet for those sides of the buildings with street frontage. This regulation only applies to new buildings and additions. The 4th Street façade does not meet this requirement. The façade stretches 80 feet before it is inset for a length of 10 feet at the northeast corner. The Plan Commission is being asked to approve a site plan that does not meet all of the standards of 20.03.130, per the review procedure outlined in 20.03.100.

Building Height Step Down: While the building north of 4th Street is listed as contributing in the City of Bloomington Survey of Historic Sites and Structures, there are no listed buildings immediately adjacent to the petition site so it is not subject to this requirement.

Building Height Step Back: BMC 20.03.130(c)(3) requires that building facades over 45 feet in height shall step back the horizontal façade/wall plane a minimum of 15 feet from the horizontal façade/wall plane below 45 feet in height. The current design does not meet this requirement, as the building exceeds 45 feet in height and does not incorporate a step back. The Plan Commission is being asked to approve a site plan that does not meet all of the standards of 20.03.130, per the review procedure outlined in 20.03.100.

Void-to-Solid Percentage: The DCO sets a minimum void-to-solid requirement of 20% for upper stories. The proposal meets this requirements.

CONCLUSION: This petition meets all DCO Development Standards except Window Design, Building Façade Modulation, and Building Height Step Back. The petition incorporates innovative sensitive design in order to enhance an existing historic structure while improving the economic viability of maintenance of said structure. The deviations

from the Development Standards that are requested are a direct result of the petitioner's attempt to enhance the Art Moderne style of the existing building. The proposal also incorporates a solar array to improve the energy use footprint of the building. The city and the petitioner are continuing to work toward an agreement related to diversity of housing, as set forth in the Downtown Vision and Infill Strategy Plan. It includes various other positive aspects related to larger City goals including preserving an existing historic structure; compact urban form; the addition of housing stock in the downtown area; preservation of commercial space in the downtown; sustainable development design through the addition of a solar array; and innovative historically sensitive design.

RECOMMENDATION: The Planning and Transportation Department recommends that the Plan Commission continues the petition to the July 2017 hearing.

City of Bloomington
Housing and Neighborhood Development

June 5, 2017

Jacqueline Scanlan Senior Zoning Planner
Matt Ellenwood Matte Black Architecture,

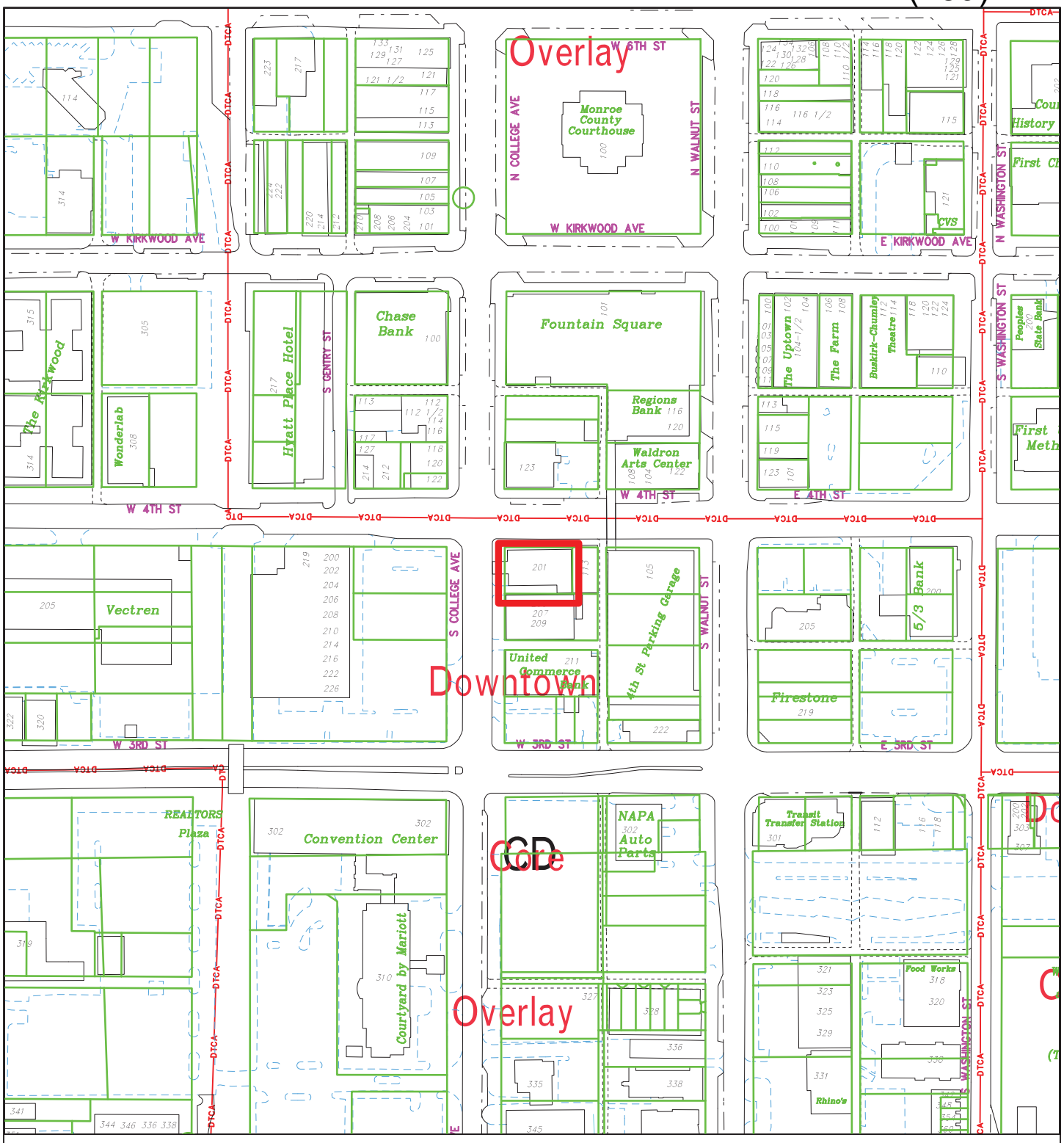
RE: SP-17-17
Tariq Khan 201 South College Avenue

The Bloomington Historic Preservation Commission has reviewed the elevations at the May 11, 2017 BHPC regular meeting by Tariq Khan for the development on 10th and Walnut. They appreciate the opportunity to make the following comments:

The general goal of infill contiguous to an area of historic properties is to highlight or maintain the properties of significance and not to divert attention or overwhelm them. This is further clarified for additions in the Secretary of Interior Standards stating that, "New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment." This property is a 1948 commercial building and former Moose Lodge built in the Art Moderne architectural style, which emphasizes horizontal orientation, smooth walls, flat roofs and streamlined horizontal elements.

The Commissioners comments were complementary of the beautiful proposed extension, which enhances what already exists. They were pleased that this well designed addition that honors the existing structure can also make the property commercially viable. They thought it was elegant and sympathetic to the downtown. When planning issues were discussed, the comment was that you wouldn't want modulation in this building as it would not be in character with the style.

Bethany Emenhiser
Historic Preservation Program Manager
Staff, Bloomington Historic Preservation Commission



By: scanlanj
19 May 17

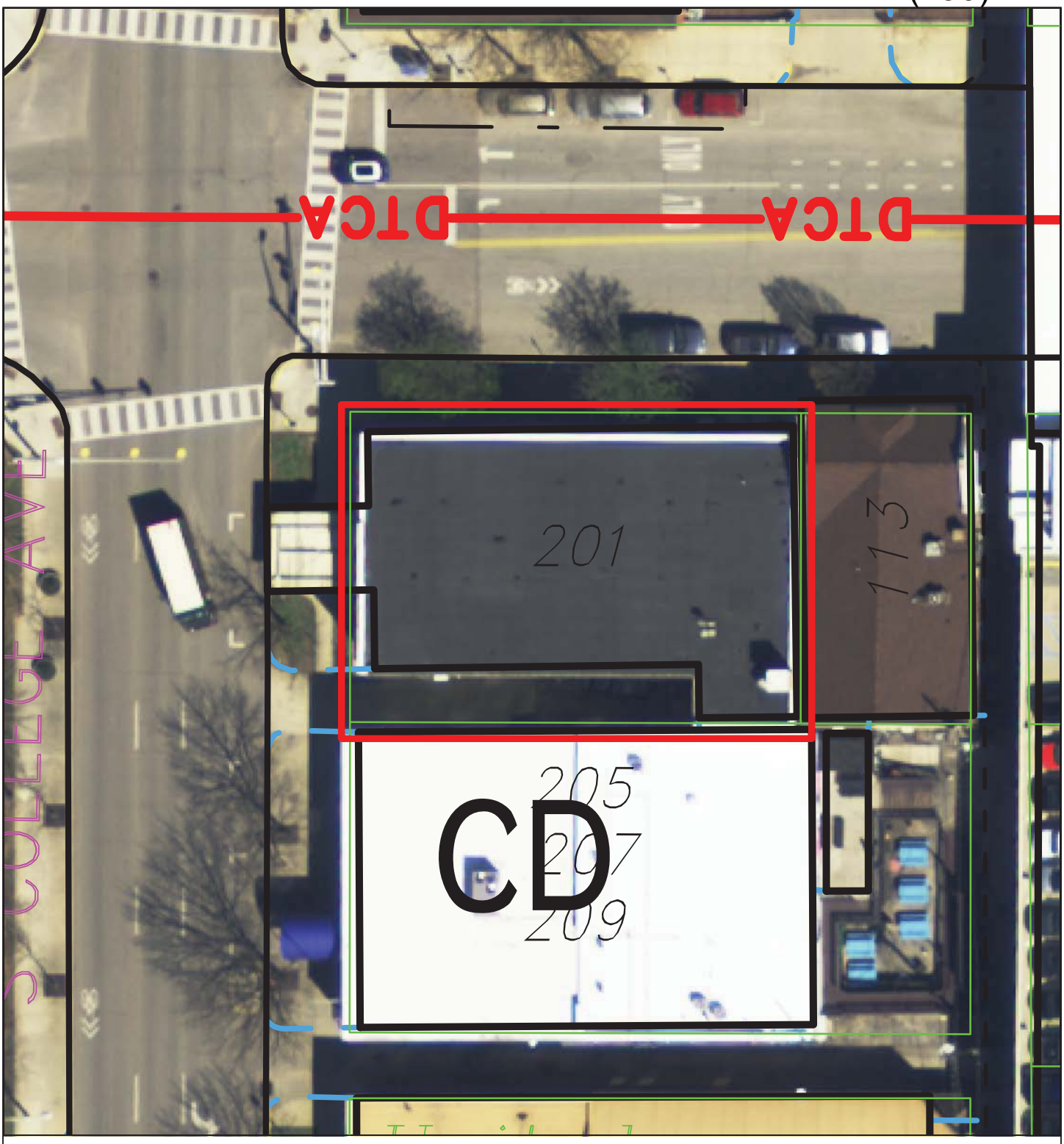
200 0 200 400 600

N

City of Bloomington
Planning & Transportation

Scale: 1" = 200'

For reference only; map information NOT warranted.



City of Bloomington
Planning & Transportation

By: scanlanj
19 May 17

30 0 30 60 90

N

Scale: 1" = 30'

For reference only; map information NOT warranted.

Petitioner's Statement

MATTE BLACK ARCHITECTURE

201 South College Avenue

Attention: Bloomington Plan Commission
Petitioner: Tariq Khan, property owner

Project Description

The petitioner is proposing a 2 story expansion of the existing 2 story building at 201 S College Avenue. The existing structure, originally built as a 1 story building in 1948, and expanded to its current 2 story configuration shortly thereafter, consists of a limestone and concrete block masonry (cmu) exterior with a combination of cmu and steel structural system. The petitioner purchased the property in 2008 and has done extensive renovations, including the buildout of an upscale bar on the second floor, currently leasable commercial space and a full commercial kitchen on the first floor. Property upgrades have included new sanitary, electrical and mechanical as well as new awnings, roof and exterior glazing (replaced old metal-framed windows).

In response to the growing demand for downtown housing and the need for "densification" outlined in the city's new comprehensive plan the petitioner is proposing to add 2 floors of apartments, **(10) 1 bedroom units**. This will require substantial building upgrades including a new elevator, sprinkler system, extended stair exits, ADA accessibility, trash and recycling storage, bicycle parking, mechanical, electrical and plumbing upgrades, etc. not to mention fairly intrusive structural retrofitting for the additional structural loads. The proposed expansion seeks to balance the goals of the zoning guidelines (outlined below) as well as the petitioner's interest in further enhancing the property as well as the neighborhood.

District Ordinance Guidelines

District: **Downtown Core Overlay (DCO)**
"Promote infill and redevelopment of sites using residential densities and building heights that are higher in comparison to other Character Areas within the Downtown."

Maximum Residential Density: 60 units per acre
Property is 6336 SF/43,560 (1 acre) = .145 acre x 60 = **8.7 DUE allowed**
Proposed Units: (10) 1 bedroom units @ .25/unit = **2.5 DUE proposed**

Maximum Impervious Surface Coverage: **100% allowed** / 100% existing

Maximum Structure Height: 50' allowed / **50' proposed maximum parapet height**

Residential Parking Standards: For the first (10) bedrooms, **no parking shall be required**.

Nonresidential Parking Standards: **No parking required.**

Building Setback Standards: Build-to Line: **0 feet**, Maximum Front, Side & Rear Setback: **0 feet**

Void-to-Solid Percentage: Upper Stories: **Transparent glass**… shall comprise a **minimum of 20%** and **maximum of 70%** of the wall area of each floor above the first floor façade facing a street.

Upper Story Windows: Window frame heights shall be a minimum of 1.5 times the window frame width. Proposed windows are 2 times the height of the window width.

Materials: Stucco is proposed as the primary material along with limestone accent on the west elevation at the existing main entry. (see "Architectural Design" below).

Vertical and Horizontal Design: The proposed addition expands the vertical emphasis of the west entry detailing while also incorporating the horizontal orientation appropriate for the style. (see "Architectural Design" below)

Building Façade Modulation: The proposed addition incorporates the horizontal orientation appropriate for the style and therefore refrains from a more traditional modulation. A waiver is sought for façade modulation. (see "Architectural Design" below)

Building Height Step Back: The proposed main parapet is a continuous height (varying between 42' and 46' from grade) along the street elevations with the exception of the main entry area on the west façade which is slightly taller at 50' above grade. A waiver is sought for building height step back. (see "Architectural Design" below)

Architectural Design

The existing structure was built in 1948 in the **Arte Moderne (or "Streamline Moderne") Style**. From Wikipedia, "streamline modern was both a reaction to Art Deco and a reflection of austere economic times; Sharp angles were replaced with simple, aerodynamic curves. Exotic woods and stone were replaced with cement and glass." Also from Wikipedia:

Common characteristics:

Horizontal orientation
Rounded edges, corner windows
Glass brick walls
Porthole windows
Chrome hardware
Smooth exterior wall surfaces, usually stucco (smooth plaster finish)
Flat roof with coping
Also no roof at all, with no coping
Horizontal grooves or lines in walls
Subdued colors: base colors were typically light earth tones, off-whites, or beiges; and trim colors were typically dark colors (or bright metals) to contrast from the light base

The original building utilized a few distinct elements of the style, namely the horizontal orientation of the metal entry canopy, horizontal awning style windows, glass block and smooth limestone. The subtle layering of the limestone pilasters flanking the main entry are also representative of the style as evidence in other notable structures from that era.

The proposed addition takes its design cues from the existing structure as well as the common characteristics listed above. Because the original limestone is both costly and difficult to match, it was determined that stone would be inappropriate for the majority of the expansion. Stucco seemed like a better fit as it was common for the style. Also, the application of horizontal bands better reflects the horizontality of the style while reducing the overall appearance of height. The vertical continuation of the existing entry and stairs together with gridded casement windows and glass block complete the stylistic improvements.

SP-17-17 Petitioner Statement

Innovative and Green Design

In response to the City of Bloomington's desire to see more innovative and sustainable design the proposed addition incorporates a number of essential elements of a forward-thinking urban environment. Here are those that are proposed or under consideration:

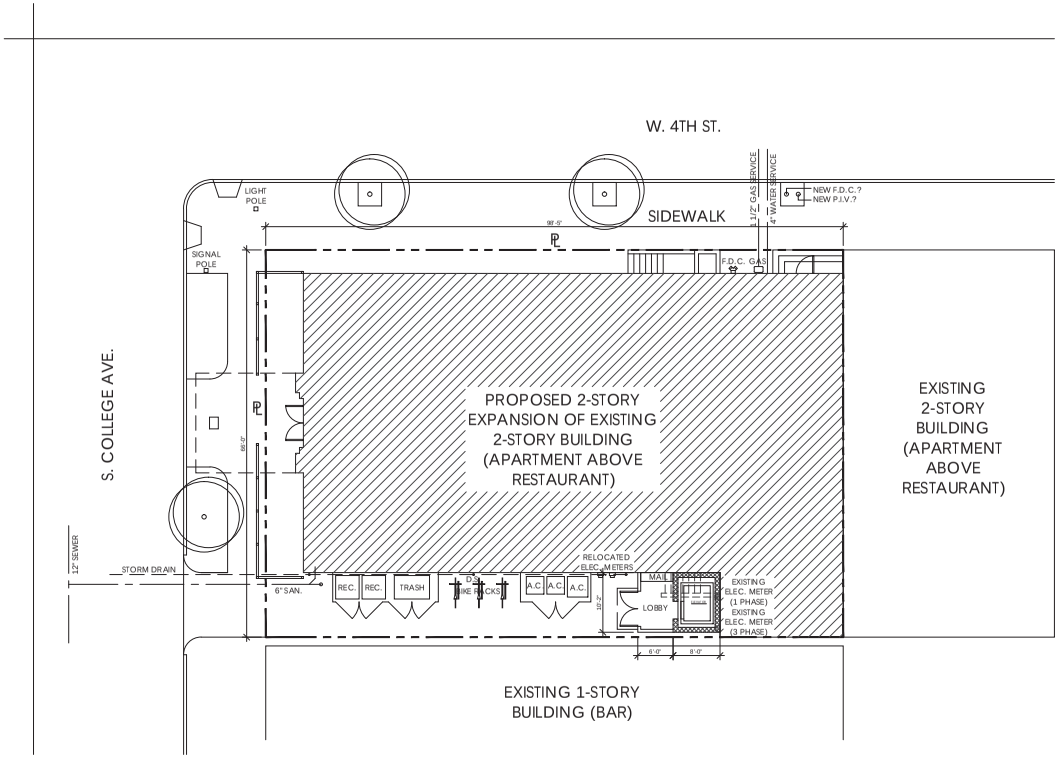
Urban Densification - expand the existing structure up to the allowable zoning height
Building Preservation – maintain the existing commercial uses on both floors
Mixed Uses – residential use added to create a more dynamic and active urban environment
Historic Preservation – maintain and enhance the significant architecture
Revitalization – inspire future growth and nearby development by example
Structural Reuse – additional floors will take advantage of existing structural bearing elements
ADA Accessibility – an added elevator will provide accessibility to the upper floors
Energy Efficient Fixtures – new appliances and fixtures will meet Energy Star & better
Highly Insulated Exterior – 2x6 exterior walls with R-19 insulation & R-38 roof insulation
Natural Daylighting – larger glazing and narrow unit depths for minimal lighting demand
Low E Glazing – thermally resistant frames with low solar heat gain
Reflective Roof Material – white or light colored roof to reduce the heat island effect
Solar PV Panels – dependent upon current incentives a solar array for onsite power generation
Recycling Collection – on site recycling easily accessible to residents

These elements along with the sensitive design response to an existing notable historic property will contribute to a more dynamic and inspired area within the downtown core. We hope that you agree and welcome any questions or comments.

Thank you for your consideration of this petition.

Matt Ellenwood, AIA, LEED AP

SP-17-17 Petitioner Site Plan



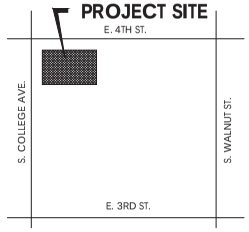
01 A1.0 SITE PLAN
SCALE: 1" = 10'-0"

GENERAL NOTES (APPLICABLE TO ALL TRADES)

1. ALL WORK TO BE IN ACCORDANCE WITH THE CURRENT AND LOCAL BUILDING CODES AND ANY AMENDMENTS OR INTERPRETATIONS OF THE LOCAL BUILDING OFFICIAL.
2. THESE DRAWINGS AND ALL NOTES ARE INTENDED TO SET MINIMUM STANDARDS OF CONSTRUCTION. IF THERE IS A CONFLICT BETWEEN DRAWINGS, NOTES OR MANUFACTURER'S INSTRUCTIONS, THE MORE STRINGENT REQS. SHALL APPLY.
3. CHECK AND VERIFY ALL DIMENSIONS IN THE FIELD AND NOTIFY OWNER & ARCHITECT OF ANY DISCREPANCIES.
4. ALL EXTERIOR DIMENSIONS ARE TO OUTSIDE FACE OF SHEATHING, CENTER OF WALL OPENING (DOOR OR WINDOW) AND CENTER OF COLUMN, U.N.O. INTERIOR DIMENSIONS ARE TO FACE OF STUDS AND FACE OF CABINETRY, U.N. O.
5. PROVIDE ALL NECESSARY TEMPORARY SUPPORT FOR WALLS, FLOORS AND ROOFS PRIOR TO COMPLETION OF PERMANENT VERTICAL AND LATERAL LOAD SYSTEMS.
6. DESIGN LOADS:
   ROOF: LIVE LOAD = 25 P.S.F., DEAD LOAD = 10 P.S.F.
   FLOOR: LIVE LOAD = 40 P.S.F. COMMON DECKS = 100 P.S.F.
   SOIL BEARING (ASSUMED): 2000 P.S.F.

DRAWING SHEET INDEX

LOCATION MAP



CODE REVIEW 2014 INDIANA BUILDING CODE (2012 INTERNATIONAL BUILDING CODE WITH INDIANA AMENDMENTS), ANSI A117.1-2009

CODE ITEM	CODE REFERENCE	VALUE
OCCUPANCY TYPE	SECTION 301	B/A-2: AT 1ST & 2ND FLOORS R2: AT 3RD & 4TH FLOORS
CONSTRUCTION TYPE	TABLE 602.1	II-B (EXISTING) V-B (PROPOSED)
	602.3	CMU W/STEEL JOISTS (EXIST.) WOOD (PROPOSED)
SPRINKLER SYSTEM	903.3.1.1	SPRINKLERED NFPA 13 (1ST & 2ND) NFPA13R (3RD & 4TH)
FIRE-RESISTANCE RATING	TABLE 601	1-HOUR REQUIRED AT BEARING WALLS?
	TABLE 602	1-HOUR REQUIRED AT EAST WALL (NON-BEARING EXTERIOR WALL & GREATER10' FIRE SEPARATION DISTANCE)
OCCUPANCY SEPARATION (FLOOR/CEILING)	TABLE 508.4 SECTION 711	1-HOUR REQUIRED (SPRINKLER AT R2 PER 903.3.1)
INTERIOR EXIT STAIRWAYS	SECTION 1022	2-HOUR
	SECTION 1022.7	1-HOUR EXTERIOR WALL 45 MIN. OPENING

BUILDING DATA		ACTUAL	ALLOWABLE
MAXIMUM HT. (STORIES)	TABLE 503 504.2, ALLOWABLE HEIGHT INCREASE DUE TO AUTOMATIC SPRINKER SYSTEM	2 STORY R2 OVER 2 STORY B/A-2	R2: 5 STORY B: 3 STORY A-2: 3 STORY
1ST & 2ND FLOOR AREA	B/A	5063 SF/FLOOR	B: 12,500 SF A-2: 9,500 SF
3RD & 4TH FLOOR AREA	R-2	4707 SF / FLOOR	R2: 16,000 SF
TOTAL BUILDING AREA		19,540 SF	-
# OF EXITS	SECTION 1021.2	2 PROVIDED	2 REQUIRED FOR R2 2 REQUIRED FOR B/A
MAX. EXIT ACCESS TRAVEL DISTANCE	TABLE 1016.2	78'	250'
OCCUPANCY LOAD	TABLE 1004.1.2	R: 200 GROSS = 23 OC CUPANCY X 2 STORY = 46 B: * A: * *actual occupancy load to be determined when tenant improvement plans are submitted...	

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201 SOUTH COLLEGE EXPANSION

201 S. COLLEGE AVE BLOOMINGTON, IN

DATE **05.11.17**
ISSUE **HPC REVIEW**
JOB NO. **17-04**
CHECKED BY **MDE**

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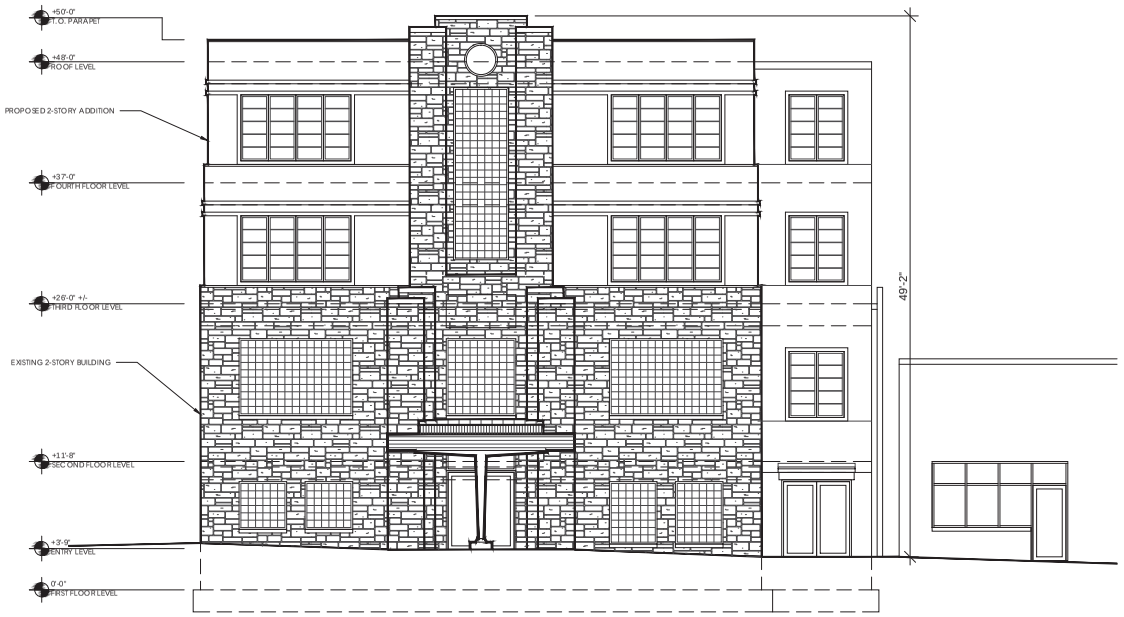
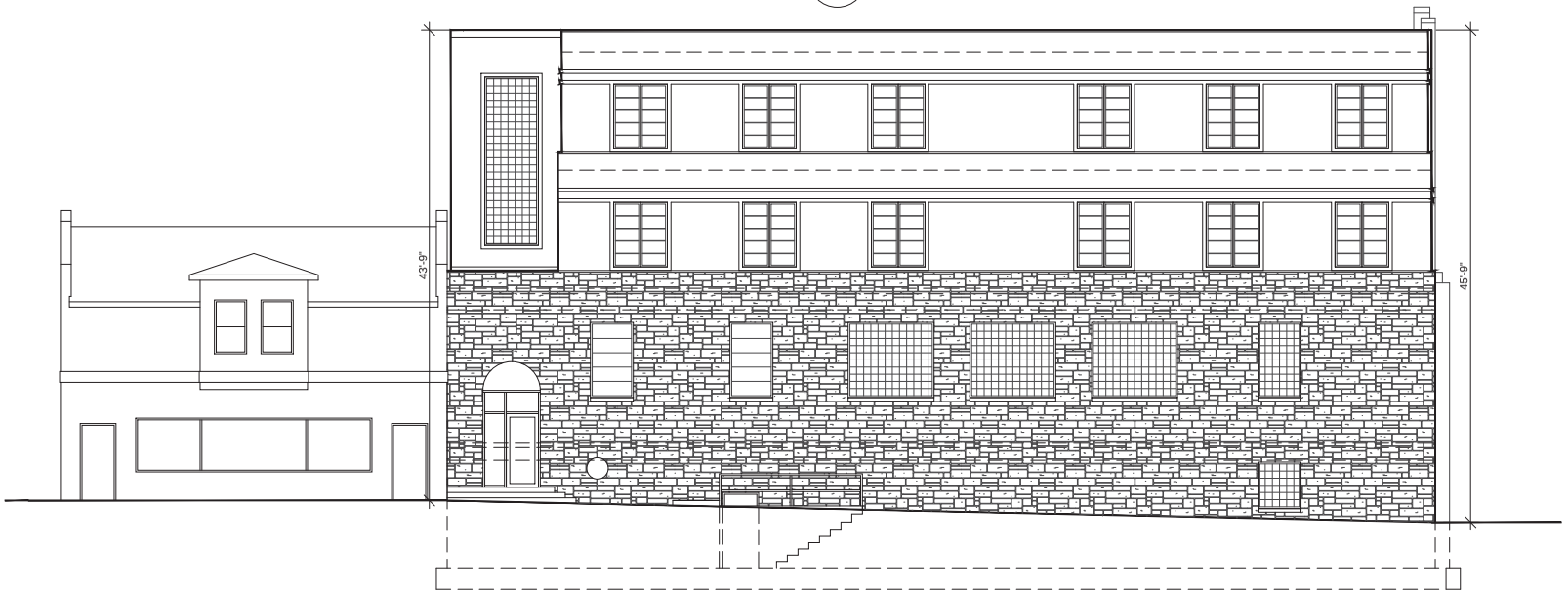
A1.0
COVER SHEET

SP-17-17 Petitioner Site Plan



02 A3.0 WEST ELEVATION
SCALE: 3/16" = 1'-0"



01 A3.0 NORTH ELEVATION
SCALE: 3/16" = 1'-0"

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201 S. COLLEGE AVE BLOOMINGTON, IN

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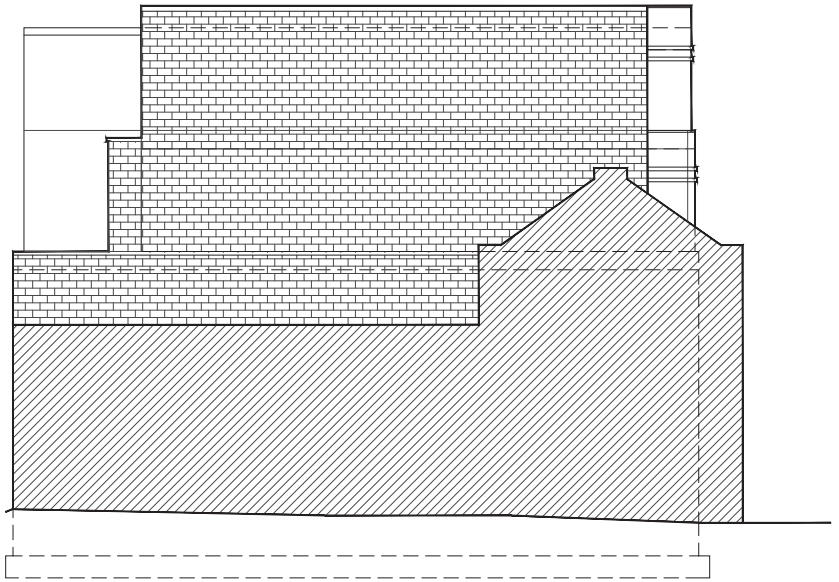
A3.0
ELEVATIONS

SP-17-17 Petitioner Site Plan



02 EAST ELEVATION
A3.1 SCALE: 3/16" = 1'-0"

01 SOUTH ELEVATION
A3.1 SCALE: 3/16" = 1'-0"

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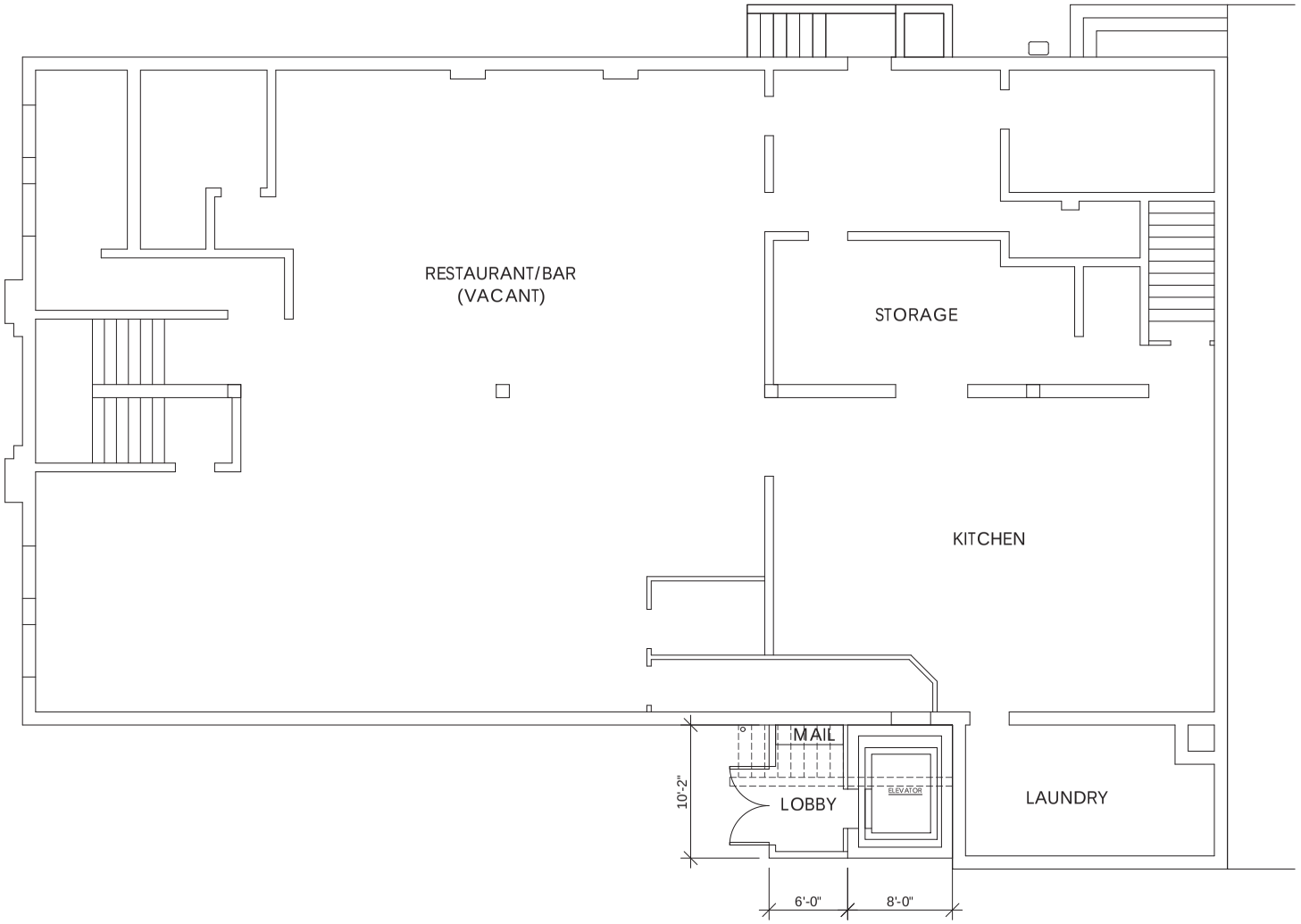
A3.1
ELEVATIONS

SP-17-17 Petitioner Site Plan



01 A2.0 FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

N

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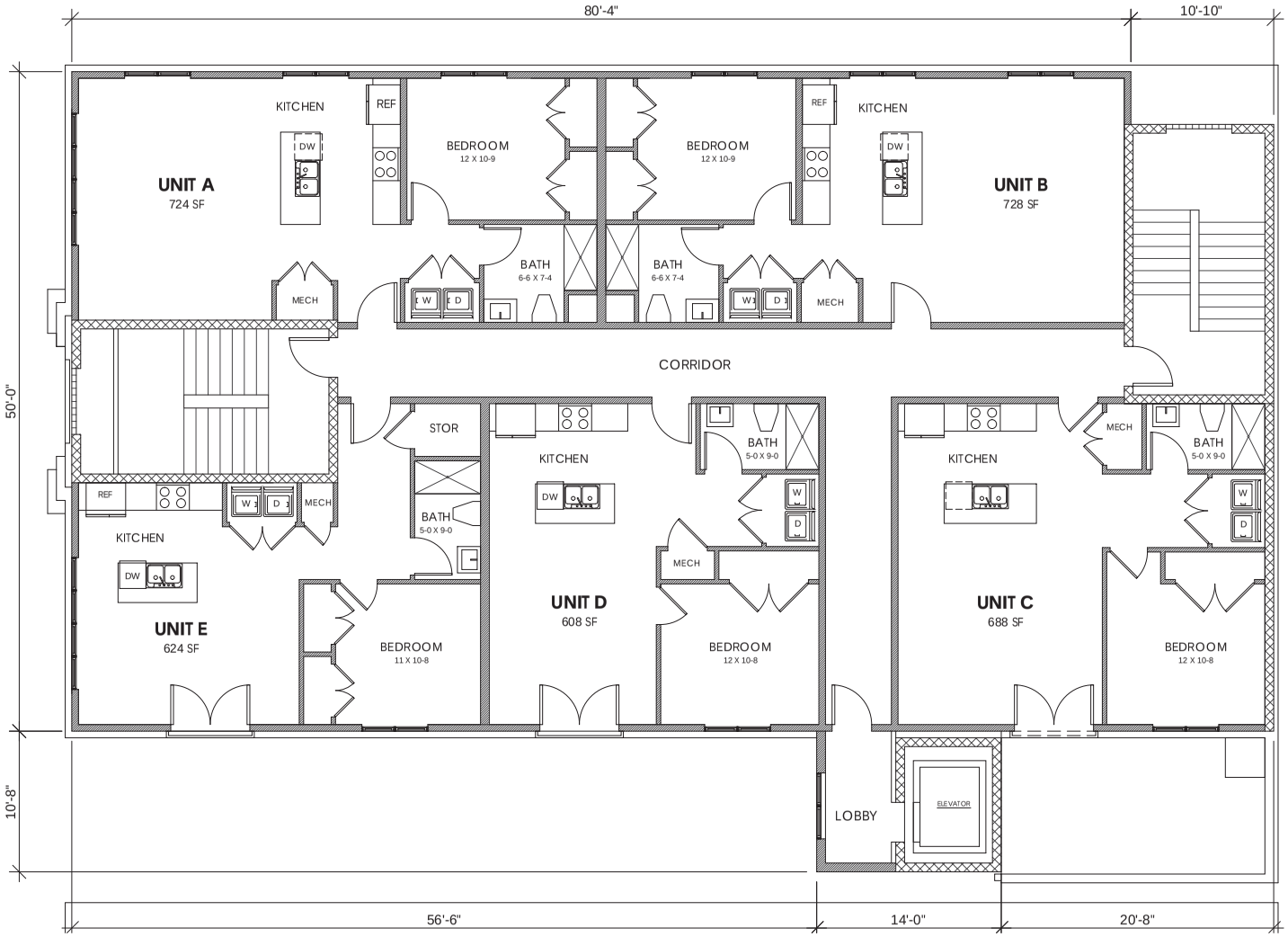
A2.0
FIRST FLOOR PLAN

SP-17-17 Petitioner Site Plan



01 A2.2 THIRD/FOURTH FLOOR PLAN

SCALE: 1/4" = 1'-0"

N

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A2.2

THIRD FLOOR PLAN

SP-17-17
Petitioner
Rendering

SP-17-17
Petitioner
Rendering

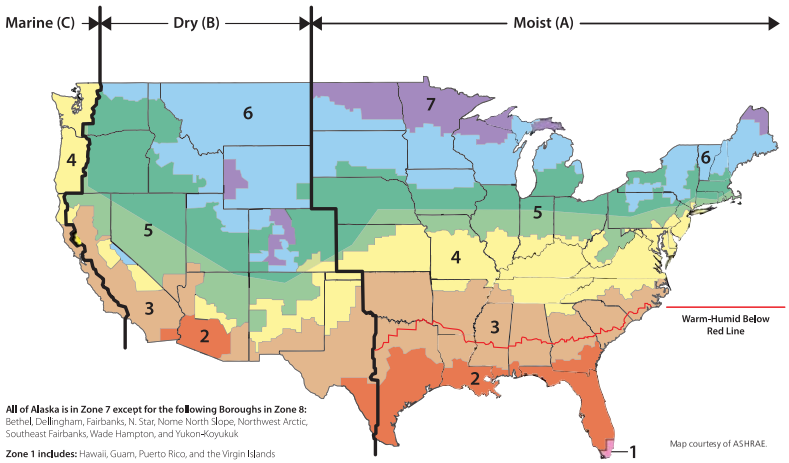

SP-17-17
Petitioner
Rendering
MATTE BLACK ARCHITECTURE (201)

SP-17-17
Petitioner
Rendering

(202)

Applicable In All U.S. Climate Zones

StoPowerwall® Systems are designed to comply with energy and durability standards across every U.S. climate zone.



Visit www.StoPowerwall.com for more information and a complete list of product specifications.

Sto Corp.
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Atlanta, GA 30331
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Toll Free 1-800-221-2397
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www.stocorp.com

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SB83 03/15 Printed in the U.S.A.

Sto | Building with conscience.

StoPowerwall®
Stucco Systems

Obtain the Proven Power of Smarter Stucco Walls

SP-17-17
Petitioner Stucco Information

(203)

StoPowerwall® Systems

StoPowerwall Systems combine portland cement stucco with a fluid-applied air and moisture barrier, advanced cavity wall design, continuous insulation (where applicable and required by code), and Sto® high-performance finishes. StoPowerwall System components include:

- StoGuard® Air and Moisture Barrier
- Sto DrainScreen™ Drainage Mat
- StoPowerwall Stucco (includes stucco produced by Sto's strategic manufacturing partners)
- StoPowerwall and Sto Powerflex® High Performance Textured Finishes (and primers as applicable)

When required by code, Dow STYROFOAM™ Type IV XPS rigid insulation—backed by Dow Chemical's 50-year thermal performance warranty—serves as the continuous insulation (ci) component.

When combined with other building-code-compliant materials—metal lath, building paper, wood, metal frame, or CMU back-up wall construction—and properly integrated into wall construction, StoPowerwall Systems provide lasting beauty and protection.

StoPowerwall comes in three distinct systems for different applications:

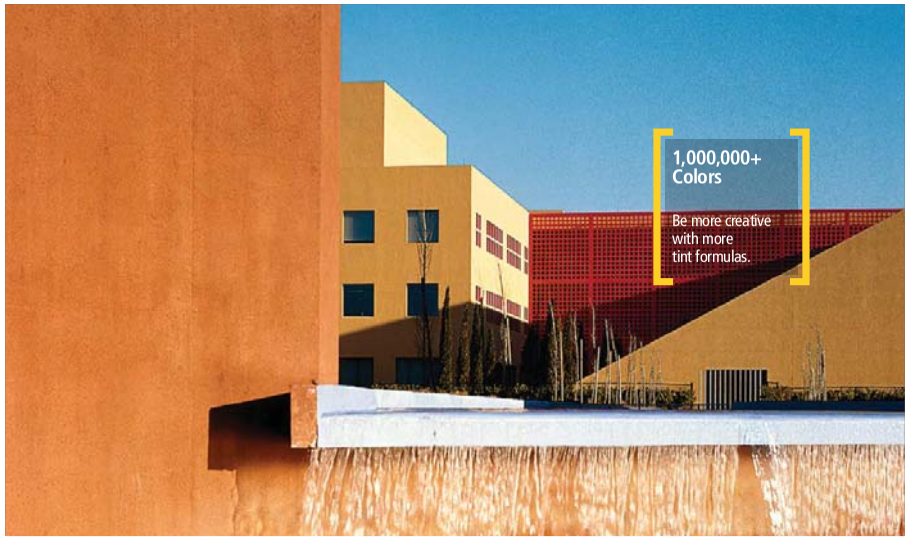
StoPowerwall ci
Offers superior thermal, air and moisture control by integrating StoGuard Air and Moisture Barrier with Dow STYROFOAM™ Type IV extruded polystyrene (XPS) rigid continuous insulation, an advanced cavity wall component, Sto DrainScreen, and Sto high-performance textured finishes.

StoPowerwall DrainScreen
Offers superior air and moisture control by integrating StoGuard Air and Moisture Barrier with Sto DrainScreen advanced cavity wall component and Sto high-performance textured finishes.

StoPowerwall ExtraSeal®
Provides a single-component, trowel-applied air barrier compatible with StoPowerwall Stucco (ICC ESR 2323) for direct applications to CMU wall construction, and the protection of Sto high-performance textured finishes.

SP-17-17
Petitioner
Stucco
Information

Create Lasting Impressions



To create highly attractive stucco walls that boost curb appeal, StoPowerwall puts more custom finish options, coatings, colors, and textures at your fingertips. Select Sto high-performance finishes in a wide array of tint choices designed for excellent color uniformity.

Sto finishes provide a strong, flexible outer skin that protects building exteriors while keeping them looking like new for longer.

To reduce cracks in stucco, select one of two options:

- StoPowerflex Elastomeric Finishes – flexible elastomeric finishes cover hairline cracks in stucco.
- Sto Armor Guard – uses Sto woven glass fiber reinforcing mesh with Sto base coat to add strength to the outer wall surface and resist cracking in stucco walls.

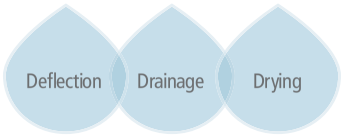
Controlling cracks in stucco walls means fewer callbacks, lower maintenance, and enhanced curb appeal.

SP-17-17
Petitioner
Stucco
Information

Moisture Protection Outside

Three elements of moisture management:

Controlling moisture is the key to minimizing maintenance and preserving the curb appeal of exterior stucco walls. StoPowerwall® Systems are engineered for superior moisture management by implementing three design principles important to any exterior cladding: Deflection, Drainage and Drying. Deflection is the most important and effective strategy to prevent water entry into walls and minimize the risk of water damage.



Deflect

Sto® high-performance coatings and finishes provide a strong, flexible outer skin that protects stucco buildings from moisture by deflecting water off the face of the cladding. They work by:

- Creating a more durable, easier-to-maintain surface with excellent weatherability.
- Resisting wind-driven rain and UV light degradation.
- Resisting algae, mildew, and mold growth.

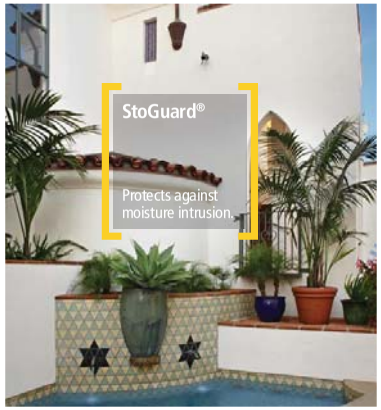
For example, Stolit® Lotusan® with Lotus-Effect® Technology offers a super-hydrophobic, high-performance finish that provides unprecedented water repellence.

Sto high-performance coatings and finishes, when combined with sound design and construction practices (such as the proper use of metal coping at parapets, flashing with drip edges beneath windows and doors to direct water to the exterior, and flashing at other locations such as sills, projecting features, deck attachments, and roof/wall intersections), as well as proper sealing around penetrations (such as doors, windows, and fixture attachments), can reduce maintenance and increase durability of the wall assembly.

Advanced Cavity Wall Design Inside

Drain

Placing a Sto DrainScreen™ drainage mat between the cladding and the StoGuard® seamless air and moisture barrier protects the wall assembly. It works by creating an air gap that promotes drainage. In the event water penetrates the exterior cladding, it can drain down and out of the wall cavity when properly integrated with flashing.



Dry

StoPowerwall ci and StoPowerwall DrainScreen Systems include an air gap by incorporating Sto DrainScreen in the assemblies to promote not only drainage, but faster drying. This feature is especially important in moist and marine climate zones. Sto DrainScreen operates in conjunction with a seamless, fluid-applied StoGuard air and moisture barrier, which protects the substrate, and resists moisture intrusion, while helping to prevent growth of mold and mildew.

Building Code Compliant Wall Assemblies

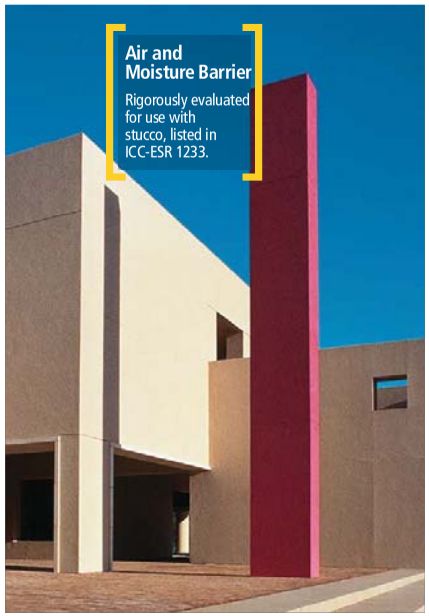
SP-17-17
Petitioner
Stucco
Information

StoPowerwall® Systems incorporate stucco products produced by Sto® or its manufacturing partners that comply with ICC Acceptance Criteria for Cementitious Exterior Wall Coverings (AC 11) and/or ASTM C 926.

Energy efficiency
For meeting energy codes, StoPowerwall ci incorporates up to two inches of Dow STYROFOAM™ Type IV extruded polystyrene (XPS) rigid foam insulation providing an R-value of up to 10. StoPowerwall ci complies with regulatory requirements for continuous insulation over steel and wood framing, including ASHRAE Standard 90.1-2013, the new IGCC/IECC energy code requirements for continuous insulation, and the Title 24 requirements for energy efficiency.

Water management
For water management, StoPowerall ci and StoPowerwall DrainScreen™ Systems incorporate advanced cavity wall design with Sto Drainage Mat and a continuous fluid-applied, vapor-permeable air and moisture barrier, Sto EmeraldCoat®, both listed components in ICC-ESR 1233.

Fire testing compliance
For fire safety, StoPowerall ci and StoPowerwall DrainScreen Systems have been tested in accordance with NFPA 285 and meet acceptance criteria for use on noncombustible construction (Types I-IV) and combustible construction (Type V) as described in ICC-ESR 1233.



Three Premium Systems

	StoPowerwall ci	StoPowerwall DrainScreen	StoPowerwall ExtraSeal®
Substrate Type	Wood, Gypsum sheathing	Wood, Gypsum sheathing	Masonry, Concrete
Air and Moisture Barrier Protection	Uses StoGuard® fluid-applied air and moisture barrier to provide superior protection against water penetration and air leakage. StoGuard EmeraldCoat provides a vapor permeable fluid-applied air and moisture barrier.		Uses Sto ExtraSeal, a single component air barrier barrier and scratch coat for CMU beneath ASTM C 926 stucco brown coats.[1]
Drainage and Drying	Incorporates Sto DrainScreen, a drainage mat that creates an air gap to facilitate drainage and faster drying.		Barrier wall design.
Continuous Insulation	Up to two inches of Dow STYROFOAM™ Type IV XPS (extruded polystyrene) insulation board installed inbound or outbound of sheathing for R-values of 5.0-10.0.	None	None
Stucco	Sto listed stucco (ICC ESR 2323) and stucco produced by Sto's manufacturing partners.		
Finish	Sto Powerflex® Silco: A ready-mixed silicone enhanced elastomeric textured wall finish for covering hairline cracks and enhanced water repellency. Sto Powerflex: A ready-mixed elastomeric textured wall finish for covering hairline cracks. Sto Powerwall: A ready-mixed flexible acrylic textured wall finish with high water vapor permeability. All finishes use marble aggregate—not quartz—for cleanest, most vivid colors.		
Other Components	Sto Armor Guard: Uses woven glass fiber Sto Mesh embedded in Sto base coat to resist cracking.		

1. Only applies to stucco brown coats evaluated for this application by Sto Corp., StoPowerwall Stucco (ICC-ESR 1233) and Quikrete 1200 Stucco (ICC ESR 1240).