## CITY OF BLOOMINGTON

## PLAN COMMISSION

December 9, 2019 @ 5:30 p.m. COUNCIL CHAMBERS \#115 CITY HALL

CITY OF BLOOMINGTON
PLAN COMMISSION
December 9, 2019 at 5:30 p.m.

## ROLL CALL

MINUTES TO BE APPROVED: August \& September 2019
REPORTS, RESOLUTIONS AND COMMUNICATIONS:

## PETITIONS:

SP-23-19 City of Bloomington
105 \& 111 W. $4^{\text {th }}$ St., and 222 S. Walnut St.
Request: Site plan approval for a new parking garage with waivers in the Commercial
Downtown (CD) zoning district.
Case Manager: Jackie Scanlan
PUD-36-19 Trinitas Development
1550 N. Arlington Park Dr. and 1723 W. Arlington Rd.
Request: Approval of Preliminary Plan Amendment and District Ordinance and rezone Business Park (BP), Residential Single Family (RS) and Planned Unit Development (PUD) to PUD.
Case Manager: Eric Greulich

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.

Assistant City Attorneys
Larry Allen Jennifer Lloyd
Barbara E. McKinney
Jacquelyn F. Moore
Christopher J. Wheeler

December 6, 2019
Bloomington Plan Commission
401 N. Morton Street, Suite 130
Bloomington, Indiana 47404
RE: Continuation of the New 4th Street Garage Petition
Dear Commissioners:
Thank you for your continued work on the Commission and working with us on our city's vital infrastructure projects. We introduced this petition ahead of a final court ruling on the disposition of the southern parcel because we wanted to engage the community and all of you in the process as early as possible. Simultaneously, it was necessary to demolish the existing garage because it posed a safety risk to parkers, and posed a hazard as long as the building remained unused.

After hearing the concerns of the Commission, the City agreed to continue the consideration of the final garage plan until we have a definitive ruling from the Court on the property acquisition.

The City has been negotiating for over a year to obtain 222 S . Walnut Street. We have diligently followed the legal requirements for acquiring the parcel as quickly as reasonably possible. Here is a brief timeline of the process:

- June 7: The City filed its complaint to acquire 222 S . Walnut Street. This complaint was filed after a formal offer based on two independent appraisals was rejected by the land owner.
- August 8: The City complied with an accelerated timeline for discovery and responded to extensive discovery requests by sharing hundreds of pages of records with the land owner and his attorneys.
- September 12: The Court set a hearing to consider the City's acquisition of the property. The City was ready to proceed with this hearing, but the Court postponed the hearing until October at the land owner's request.
- October 7: The Court conducted a hearing on the acquisition.

Generally, judges issue written rulings within 30 to 60 days following a hearing, but as of today, we have not received a decision from the Court. However, we anticipate that the ruling could be issued at any moment.

In consideration of the imminent Court ruling, the City is requesting that you vote to continue consideration of the plan. Your decision is crucial. If the petition is not continued, the process becomes more complicated: a denial of the City's request for a continuance constitutes a denial of the petition on the merits under the Plan Commission's rules. It has been suggested that the City withdraw the petition, but withdrawal and re-docketing may further delay the consideration of the petition. Under the Commission's rules, if the City withdraws its petition, the City is prohibited from reintroducing the petition for three months unless a majority of the Commission votes to re-docket the petition, which would likely introduce another month's delay.

At this point in the project, any delay in approval delays the garage's completion, which consequently prolongs the community's downtown parking concerns. The City has done everything in its power to move this case forward efficiently. We are asking the Plan Commission to consider the petition as soon as the Court rules. Under the Plan Commission's rules, voting to continue the petition is the most effective way to delay consideration while keeping the project on schedule.

Thank you for your consideration.
Sincerely,


Michael Rouker, City Attorney

BLOOMINGTON PLAN COMMISSION<br>STAFF REPORT<br>Location: 222 S. Walnut Street<br>105 \& 111 W. $4^{\text {th }}$ Street

CASE \#: SP-23-19
DATE: December 9, 2019

PETITIONER: City of Bloomington
401 N. Morton Street, Bloomington
CONSULTANTS: Bledsoe, Riggert, Cooper, and James
1351 W. Tapp Road, Bloomington
CSO Architects, Inc.
8831 Keystone Crossing, Indianapolis
REQUEST: The petitioner is requesting site plan approval for a new parking garage in the Commercial Downtown zoning district.

## BACKGROUND:

Area:
Current Zoning:
GPP Designation:
Existing Land Use:
Proposed Land Use:
Surrounding Uses:
.8 acres
CD - Downtown Core Overlay
Downtown
Business/Professional Office / Parking Garage
Commercial / Parking Garage
North - Waldron Arts Center
West - Bank / Parking Lot / Dwelling, Multi-Family / Bar/Restaurant
East - Office / Firestone Tire Company
South - Napa Auto Parts

CHANGES SINCE JULY HEARING: The petitioner has continued eminent domain litigation with the owner of 222 S. Walnut Street. Additionally, some of the details of the project have changed slightly, including the Walnut Street right-of-way design being modified to include bump-outs to improve pedestrian experience at the crossings.

REPORT: The property is located on the west side of Walnut Street between $3^{\text {rd }}$ and $4^{\text {th }}$ Streets and is zoned Commercial Downtown (CD), in the Downtown Core Overlay. Surrounding land uses include the Waldron Arts Center to the north; an office building and Firestone Tire Company to the east; a bank with parking lot, bars, a restaurant and apartments to the west; and Napa Auto Parts to the south. The Downtown Transit Center is southeast of the property. The property currently contains a business/professional office building, as well as an existing City-operated parking garage.

The petitioner proposes to redevelop this property by demolishing the existing buildings on site and constructing a new 6 story parking garage with commercial space and public amenity space on the first floor. The parking garage would contain 510 parking spaces. The design also includes 50 indoor bicycle parking spaces as well as a minimum of 4 outdoor spaces, office space for City Parking Staff, and 11,189 square feet of
commercial space on the ground floor, as well as restrooms available to the public. The petitioner is proposing to include various green features, such as electric vehicle charging stations and solar panels. The petitioner is seeking a Silver level Parksmart designation.

The petitioner proposes vehicular and pedestrian entrances on both $3^{\text {rd }}$ and $4^{\text {th }}$ Streets. The Unified Development Ordinance does not allow a vehicular entrance on the higher classified road (3 $3^{\text {rd }}$ Street), therefore the petitioner is seeking a variance from the Board of Zoning Appeals to allow that entrance. Additionally, the current design requires two variances related to the $4^{\text {th }}$ Street vehicular entrance as its width exceeds the allowable maximum and its location is too close to Walnut Street per code.

An alley runs along the west side of the property, connecting $3^{\text {rd }}$ and $4^{\text {th }}$ Streets. There is at least one business that derives primary access from the alley and the alley is often used by pedestrians.

The petitioner does not currently own the southernmost parcel included in the request. However, the City is in ongoing discussions with the owner about acquisition of the parcel and the Legal Department has advised that moving forward with a conditional approval is valid.

Plan Commission Site Plan Review: Multiple aspects of this project require that the petition be reviewed by the Plan Commission, per BMC 20.03.090. These aspects are as follows:

- The petitioner is requesting waivers to multiple standards in BMC 20.03.120 and BMC 20.03.130.
- The petitioner is proposing a 'parking garage/structure' as a primary use.
- The petition is adjacent to a residential use.


## SITE PLAN ISSUES:

Non-Residential Uses on the First Floor: While there is no residential component to the project, enclosed parking garages do not count toward the required non-residential ground floor space. So, this project is required to provide 50\% or greater ground floor area of non-residential and non-parking garage space. The project meets this requirement with a combination of commercial tenant space, office space for City staff, dedicated bike parking area, and public restroom space.

Build-to-Line: The UDO requires buildings in the Downtown Core Overlay to be built at the front property line. The proposal meets this requirement on $3^{\text {rd }}$ Street. The $4^{\text {th }}$ Street and Walnut Street facades are set back. The proposal does not meet this UDO requirement.

Height: The maximum height in the DCO is 40 feet. The UDO defines building height as "the vertical dimension from the lowest point of the building, structure, or wall exposed above the ground surface to the highest point of the roof, parapet wall, or uppermost part. Chimneys, vents, mechanical equipment or utility service structures shall not be included in the measurement of vertical dimension." The proposal measures 75 feet 8
inches tall per the UDO definition. The southeast corner of the building measures 65 feet tall from grade to the highest point and the northeast corner measures 60 feet 11 inches. The proposal does not meet this requirement.

Parking and Surrounding Roads: No minimum number of spaces are required for either the commercial space in the building or the parking garage use. The petitioner is proposing a total of 499 parking spaces in the building. While a total number of on-street spaces was not submitted, the petitioner does intend to continue on-street parking, and is showing a 'drop off zone' at the north end of Walnut Street. Any changes to the right-of-way will need Board of Public Works approval. The Department suggested bumpouts at the intersections of $3^{\text {rd }}$ and Walnut Streets and $4^{\text {th }} \&$ Walnut Streets to improve pedestrian infrastructure and better definition of vehicular lanes along Walnut Street, and those have been included.

Access: There are two proposed vehicular accesses to the parking garage, one on $3^{\text {rd }}$ Street and one on $4^{\text {th }}$ Street. The $4^{\text {th }}$ Street entrance is for three total lanes. One dedicated entrance lane, one dedicated exit lane, and one lane to alternate as an entrance/exit as needed. The UDO allows for a maximum driveway width of 24 feet on $4^{\text {th }}$ Street, and a maximum driveway width of 34 feet on any of the highest classified roads in the City. The petitioner is requesting a 40 foot entrance on $4^{\text {th }}$ Street, which is comparable to the existing entrance on the current garage at this location. The entrance width will require variance approval by the Board of Zoning Appeals. Additionally, a 100 foot separation from Walnut Street is required, and the petitioner is showing 50 feet. The entrance location will also require variance approval by the Board of Zoning Appeals.

Because of the existing median on $3^{\text {rd }}$ Street, that entrance would be right-in/right-out only. The UDO only allows a vehicular entrance on the lower classified road, which is $4^{\text {th }}$ Street in this instance. The $3^{\text {rd }}$ Street entrance will require variance approval by the Board of Zoning Appeals. Approval of this site plan is conditioned upon approval of the listed variances.

Pedestrian access to the garage is shown in the southwest and northwest areas of the building, near the stair towers and pay locations. 20.03.130(b)(6) requires recessed entry for pedestrian entrances to help identify and demarcate these locations. The petitioner is requesting deviation from that standard for the entrances to the garage. The Department has concerns about visibility of pedestrians from vehicles using the exits, and recessing of the pedestrian entrances may help to alleviate that concern. The Department asks that the petitioner continue to work on the pedestrian entrances to make them more visible and to improve pedestrian visibility in those areas.

Additionally, the Department would like the entrances for the commercial space(s) to meet the intent of the remainder of that reference, 20.03.130(b)(6)(B) \& (C), by incorporating distinctive awnings, canopies, or something similar identifying those entrances. Approval of a design of that nature will be required before a tenant can occupy any space.

An additional pedestrian entrance which should be near the indoor bicycle storage area would allow users to access the area without having to utilize the vehicular entrance on
$4^{\text {th }}$ Street. A condition of approval has been added to include that additional entrance.
Bicycle Parking: No bicycle parking is required for the parking garage use. The petitioner proposes 40 indoor bicycle parking spaces on racks, with an additional 10 bicycle parking locker spaces. The commercial space requires 4 bicycle parking spaces within 50 feet of the entrances. Inclusion of those 4 spaces is a condition of approval. Approved location and separation design of these outdoor locations will be worked out with staff during the grading permit process.

Architecture/Materials: The proposed building is a parking garage, and as such, does not meet many of the DCO architectural standards that are designed to create compatible design in more traditionally-used buildings. Those differences are described below.

The primary material to be used on the majority of the garage is brick. There will be accents included that will be limestone at the pedestrian level (first floor and header above) and 'cast-in-place' concrete accents above. The UDO does not allow cement block in the DCO. The petition does not meet materials requirements (use of cast-inplace concrete). While much of this will be concealed by the large vertical louvers, the last module of the garage is open at the north end of the garage on Walnut Street, making the concrete levels quite visible. The Department prefers that that portion be treated in some way, and no changes were made to this area after the July Plan Commission hearing. A condition of approval to improve this area is still included.

The northwest portion of the building also contains a large perforated metal screen wall to add visual interest.

BMC 20.03.130(c)(1) requires a maximum façade width for each module of 65 feet for those sides of the buildings with frontage and a minimum façade width of 25 feet. The offset is to be a minimum of five percent of the total façade length, extending the length and height of its module. This requirement is included to provide visual interest in new development and discourage large monolithic buildings. The parking garage use makes meeting this requirement difficult, as the space needed for parking spaces and drive aisles is standard and cannot easily be varied. The petition does not meet this requirement.

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 and above 45 feet in height. Again, the parking garage use makes meeting this requirement very difficult, as the spaces and aisles have standard lengths that need to be met. The petition does not meet this requirement.

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. Upper stories are required to have a minimum of 20\% void area. The DCO also requires a height-to-width ratio of $1.5: 1$ for upper story windows and the incorporation of lintels and sills. Because the parking garage is being designed with open air facades to facilitate increased natural light and air circulation, the design of the structure does not support these more traditional building design requirements. The petition does not meet these requirements.

Streetscape: Street trees and pedestrian-scaled lighting are required along $4^{\text {th }}$ Street, $3^{\text {rd }}$ Street, and Walnut Street. The site plan was amended after the July Plan Commission hearing in order to incorporate the tree plot along Walnut Street. The total number of street trees for the site should be 1 tree per 40 feet of frontage, not excluding vehicular drive cuts. This site requires the incorporation of 14 street trees with separation ranging from 20 to 40 feet on center. Only 12 street trees are shown. The petitioner may seek incorporation of bioretention in the tree plot area along Walnut Street. To that end, there may be a small reduction in the number of street trees, if alternative plantings are approved in their place. Street tree requirements are listed a condition of approval.

The petitioner is currently working with the Economic and Sustainability Department to incorporate art in the project to improve aesthetics and pedestrian experience.

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

Pedestrian Facilities/Alternative Transportation: Sidewalk exists along $3^{\text {rd }}, 4^{\text {th }}$, and Walnut Streets. The petition will meet UDO requirements to enhance those facilities with street trees and lighting.

No additional Bloomington Transit facilities are required with the development, and the Downtown Transit Center is across the intersection of $3^{\text {rd }}$ and Walnut from the development site.

The north/south alley that runs along the western edge of the site currently functions as a pedestrian connection and access to businesses along the alley. The Department would like to see the alley enhanced with a combination of pedestrian-scale lighting on the west side of the building and improvements to either the alley or the petition site to allow for more clear cues that the area is pedestrian-friendly. To that end, a sidewalk has been incorporated on the site.

Green Features: The petitioner is proposing to build the structure under the Parksmart Certification, to the Silver level. Some of the design aspects related to the Certification are the inclusion of a minimum of 10 electric vehicle charging stations with the capability to add more easily if demand requires; the inclusion of solar panels on the roof; excess bicycle parking; and an open design that allows for more natural light and passive air circulation.

## 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 (Comprehensive Plan);

## Findings:

- The site is in the Downtown area of the Comprehensive Plan.
- Traditionally, downtowns have served as central hubs of activity. (p. 50) The petition provides commercial space, as well as much needed public restrooms, and parking to support surrounding uses and the future planned expansion of development to the south.
- The Monroe County Convention Center and surrounding properties present another wonderful opportunity for growth of tourism, hospitality jobs, and investment in Downtown Bloomington. (p. 54) The petition provides parking and amenities to support the future expansion of the Convention Center and the existing needs of Downtown businesses.
- ...Vehicular parking demands have increased relative to a limited public parking supply. By some metrics, a parking 'problem' is a good indicator of a vibrant downtown. (p. 52) The petition is attempting to address the community desire for more public parking while remaining in scale with the surrounding existing and future developments.
(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 expanding parking options for its customers.
- The project does not provide high density development of mixed uses with storefront retail and residential dwelling uses, but does provide commercial space, as well as other public amenities.
- While the building is large, the desired use necessitates such design. The project does incorporate some pedestrian-oriented design through firstfloor window design, 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 intensifying the existing garage and adding improved commercial and office space.
- The proposal does further the Comprehensive Plan goals of sustainable development design through the incorporation of ground-floor nonresidential use and features such as solar panels.
(iii) Satisfies the requirements of Chapter 20.05, Development Standards;


## Findings:

- The project does not meet all applicable development requirements of Chapter 5 related to entrances and drives and the petitioner is seeking variances from the Board of Zoning Appeals.
(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 CSO district and guidance for the Plan Commission in 20.03.010. The following items address those intent and guidance statements

## Findings:

- There are no immediately adjacent structures listed the City of Bloomington Survey of Historic Structures.
- The project draws upon traditional design by using traditional materials and incorporating pedestrian scale ground floor design and development, while allowing for an intense use above that is community-serving.
- The project redevelops an existing site that currently contains a defunct parking garage in the process of being demolished, as well as a one-story office building. The new development allows for more parking to support surrounding uses, as well as public restroom space, bike parking, office, and commercial space at a height greater than those of surrounding Overlays.

ENVIRONMENTAL COMMISSION RECOMMENDATIONS: The Bloomington Environmental Commission (EC) has made five recommendations concerning this development.
1.) The Petitioner shall work with the Senior Environmental Planner to bring the plan into compliance.

Staff Response: An approved Landscape Plan is required before release of a Grading permit.
2.) The Petitioner shall commit to achieving a Gold Parksmart Certification.

Staff Response: The Department encourages the petitioner to pursue green building practices. It is not required per UDO standards at this time.
3.) All headers, accent courses, and cornice details shall be crafted from local limestone.

Staff Response: Based on conversations with the petitioner, all accents at pedestrian level will be limestone, though origin was not specified. Requiring local limestone use is not a part of current UDO standards, though it is encouraged.
4.) The alley behind the parking garage shall be reconstructed using 'green alley'
techniques.
Staff Response: The Department encourages green practices, and does desire pedestrian improvements in this area. It is not required per UDO standards at this time.
5.) The petitioner shall research the feasibility of stormwater capture using bioswales in the landscaped strips adjacent to Walnut Street.

Staff Response: The Department believes that the petitioner has interest in incorporating this green feature. If so, the Department asks the petitioner to coordinate with the Senior Environmental Planner on its incorporation related to street trees.

CONCLUSION: This petition is unique in the DCO area, as large public parking garages are not a common request. The site currently contains a large garage that has been determined to be in need of replacement. The site also contains a one-story office building. The proposal includes more parking than is currently available on-site, as well as commercial space, City office space, public restrooms, and a large enclosed bicycle parking area. The portions of the UDO that the petition does not meet largely relate to architecture and how new downtown buildings are desired to reflect traditional design. This parking garage is designed as a parking garage, as opposed to a faux office building, while incorporating pedestrian-level interest through material and design of the first level and prominent corners of the building. The petition also seeks to incorporate green development practices through the Parksmart certification process.

RECOMMENDATION: Based on the findings of fact found in the report above, the Department recommends approval of SP-23-19 with the following conditions:

1. This approval is contingent upon acquisition of the property at 222 S . Walnut Street. If the property is not acquired, a new petition will need to be filed for review and approval.
2. The approval is contingent upon approval of the variances by the Board of Zoning Appeals related to entrances and drives, as listed in this report.
3. An additional pedestrian entrance will be included near the indoor bicycle storage area to allow users to access the area without having to utilize the vehicular entrance on $4^{\text {th }}$ Street.
4. Required bicycle parking for the commercial spaces will be added to the site plan before a grading permit is approved.
5. The petitioner will submit a site plan that meets the minimum street tree requirement. If the petitioner desires to use a portion of the tree plot area for bioretention to serve the site, the Senior Environmental Planner must review such a plan and approve any reduction in street trees.
6. The petitioner will amend the elevations of the northernmost module of the Walnut Street façade to treat or cover the exposed concrete elevations.


City of Bloomington
Planning \& Transportation

By: greulice

Scale: $1^{\prime \prime}=100^{\prime}$


# City of Bloomington 

# Bloomington Environmental Commission 

# MEMORANDUM 

Date: July 8, 2019
To: Bloomington Plan Commission
From: Bloomington Environmental Commission
Subject: SP-23-19: City of Bloomington, Fourth Street Parking Garage
105 \& 111 West $4^{\text {th }}$ St., and 222 South Walnut St.

The purpose of this memo is to convey the environmental concerns and recommendations provided by the City of Bloomington Environmental Commission (EC) with the hope that action will be taken to enhance the project's environment-enriching attributes. The EC is aware that this petition addresses variances and waivers, but they are not related to environmental quality. The EC reviewed the petition and offers the following comments and requests for your consideration.

## 1.) LANDSCAPE

Because this site falls within the Commercial Downtown Zoning District and the Downtown Core Overlay District, there are few landscaping requirements; nevertheless, the plan is currently not compliant with Unified Development Ordinance (UDO) requirements. The EC recommends that the Petitioner work with the Senior Environmental Planner to bring the plan into compliance.

## 2.) ENVIRONMENT-PROTECTING BUILDING PRACTICES

The EC recommends that the Petitioner arrange to achieve a Gold Parksmart Certification instead of only a silver one. Gold Certification is easy to achieve based on our review of the Parksmart Certification criteria. If the city is actually committed to making this structure sustainable, this certification provides a reasonable and effective way to act on that commitment. While sustainable practices sometimes appear to be a bit more expensive in the short term, it is widely accepted that in the long term they save money and resources; evidenced by the City's decision to establish an assistant director and commission for sustainability, and install solar energy and obtain a LEED certification for City Hall.

This garage was controversial throughout the community, as it also was within the EC. Constructing it as sustainably as possible is the least the city can do to address the concerns of folks on both sides of the automobiles vs alternative transportation debate.

## 3.) LOCAL MATERIALS

The EC is disappointed that the design does not contain any of the local limestone that this region is
famous for. Using concrete that is limestone colored is not an acceptable replacement. We recommend that all proposed masonry headers, accent courses, and cornice details be crafted from local limestone instead of concrete.

## 4.) GREEN ALLEY

The EC recommends that the alley behind the parking garage be reconstructed using "green alley" techniques. The alley will no doubt be destroyed during construction and will have to be rebuilt anyway, so that makes it a good candidate for a green infrastructure best practice, called a green alley. The City of Chicago made this practice commonplace and published the Green Alley Handbook https://www.chicago.gov/dam/city/depts/cdot/GreenAlleyHandbook.pdf to help other municipalities. Although it is narrow, this alley could benefit from some of the practices outlined in the handbook. Some pedestrian-friendly amenities, such as lighting on the sides of the building, landscaping, and functioning pervious pavement could convert this eyesore space into an inviting multi modal way.

## 5.) BIOSWALES

The small strips of landscaping along Walnut Street possibly could be designed to capture stormwater runoff. Even though it may only account for a small amount of the local stormwater, every little bit of green infrastructure helps the whole. The EC recommends that the Petitioner research the feasibility of stormwater capture using bioswales in the landscaped strips adjacent to Walnut Street.

## RECOMMENDED CONDITIONS OF APPROVAL

1.) The Petitioner shall work with the Senior Environmental Planner to bring the plan into compliance.
2.) The Petitioner shall commit to achieving a Gold Parksmart Certification.
3.) All headers, accent courses, and cornice details shall be crafted from local limestone.
4.) The alley behind the parking garage shall be reconstructed using "green alley" techniques.
5.) The petitioner shall research the feasibility of stormwater capture using bioswales in the landscaped strips adjacent to Walnut Street.

ARCHITECTURE • INTERIOR DESIGN
June 3, 2019

City of Bloomington Planning Commission
401 N. Morton Street
Bloomington, IN 47403

RE: City of Bloomington
4th Street Parking Garage, 111 W. 4th Street
Waivers from Downtown Core Overlay District Requirements

Dear Planning Commission Members:

On behalf of the City of Bloomington, we respectfully request your consideration of our request for waivers from Section 20.03.120 DCO Development Standards of the City of Bloomington, Unified Development Ordinance as follows below:
20.03.120.b.(2) Maximum Structure Height: The facility program call for the development of between $500-550$ parking spaces. To achieve that requirement 7 parking decks are being provided with the stair tower maximum height reaching 80 feet above the lowest grade at the building.
20.03.120.e.(6) Recessed Entrance: The facility's pedestrian entrances are immediately adjacent to the existing north south alley. Recessing the entrance creates a hide, blind corner and security issue.
20.03.120.e.(6.).(c).(B) Façade Modulation: The modulation of the façade will greatly impact the efficiency and cost of the garage. The required modulation does not lend itself to efficient garage layout or function.
20.03.120.e.(6.).(c). 2 Building Height Step Down: In order to accommodate the City's facility program of providing at least $500-550$ spaces on the property available, in compliance other aspects of the UDO development standards, seven parking decks are required and thus the height of 80 feet is necessary.
20.03.120.e.(6.).(c).(3).(A) Building Height Step Back:: The functionality of the parking garage facility cannot accommodate this step back requirement above the 35 foot level.

We greatly appreciate your affirmative consideration of our request for the above waivers.
Sincerely yours,


Joseph E. Raper. AIA
Project Manager

## Bledsoe Riggert Cooper James

LAND SURVEYING • CIVIL ENGINEERING •GIS

## Transmittal Letter

| TO: | Jacqueline Scanlan, Development Service Manager <br> City of Bloomington Planning and Transportation Department <br> 401 N. Morton Street, Suite 130 |
| :--- | :--- |
|  | Bloomington, Indiana 47404 <br> 812-349-3423 |
| FROM: | William S. Riggert, PE |
| SUBJ: | $4^{\text {th }}$ Street Parking Garage |
| DATE: | October 21, 2019 |

Jackie,
Attached, for your review and comment, please find updated plans and elevations for the November 4, 2019, Plan Commission Hearing.

Please let us know if you have any questions or concerns and if there is time to make additional adjustment, if need be, prior to issuing the Plan Commission Packet to the Plan Commissioner's.

Thanks,
Bill
ec: Josh Scism, CORE
Joe Raper, CSO
Steve Aldrich, CSO
Eileen Davis, CSO
Alyssa Prazeau, CONTEXT
Dan Neubecker, BRCJ
xc: $\quad$ File - Project No. 10089
BRCJ $100894^{\text {th }}$ Street Parking Garage - cob-js-001.trans_2019-10-21




4th Street Parking Garage - Baseline Design for Estimating N Bloomington, IN | 03 July 2019

$\square \longrightarrow-\square$






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4th Street Parking Garage - Baseline Design for Estimating








Max Points Altem $^{\text {Ma }} \quad$ Mol

## 



| A5 - Sustainable Purchasing Program | Organized Sustainable Purchasing Program | 2 |  |  | 2 | Facility participates in a recognized sustainable purchasing buying program for can demonstrate a history of sustainable purchasingl, and at least $50 \%$ of the non-capital purchasing activity (by dollar. amount) is sustainable. The facility management commits to continue this level of sustainable purchasing. | o Narrative describing the nature and content of materials purchased on a regular basis a Contract with a third-party that verifles the organization's participalinon in a green purchasing program, or invoices demonstrating a one year history purchasing environmentally sustainable or regional products a Written statement committing the parking structure to continue environmentally sustainable purchasing practices on an ongoing basis |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Purchasing of Product Groups | 1 | 1 |  |  | All product purchases within five (5) or more product groups are environmentally sustainable and/or regionally manufactured. The facility management commits to continue Ihis level of sustainable purchasing. |  |  |
| AS - Proactive Operational Maintenance | Proactive Operational Maintenance | 6 | 6 |  |  | Facility adheres to a maintenance manual that includes the practices outlined in the standard. | $\square$ Copy of facility maintenance manual as well as all associated invoices, logs, schedules, and punch lists that verify the procedures outtined in the manual are being followed $\square$ Writfen commitment by facility owner to adhere to maintenance manual procedures on a conlinuing basis | Proactive maintenance program will be developed |
| A7. Cleaning Procedures - Occupied Spaces | Cleaning Products \& Hand Cleaners | 2 |  | 2 |  | Parking structure meets criteria (1) 75 percent of all cleaning chemicals meet criteria (2) and 75 percent of all hand cleaners meet criteria (3) (calculation based on cost). | A copy of an invoice from the parking structure's cleaning supply distributor detailing supplies purchased with distributor contact information <br> - Documentation of maintenance personnel training describing their education in proper cleaning supply procurement, use, maintenance, and disposal <br> - Photographs of step-by-step instrcutions next to all cleaning supplies. <br> - One of the following: <br> 1. Written statement from parking structure operator indicating a commilment to adhere to environmentally sate cleaning practices on an ongoing basis <br> 2.If a facility does not utilize any cleaning supplies in the occupied spaces, they must provide a written statement attesling to the use of no cleaning supplies. | Cleaning products etc used in retail spaces |





| A14-Third Parly Sustainability Certification | Platinum LEED 2009 or v4 | 12 |  |  | 12 | Recognize parking structures that have achieved a third-party environmental sustainability cerificication. | Documentation demonstrating LEED, Green Globes, or other qualifying program cerlification. include relevant documents pertaining to certificalion levels, project boundaries, active registration, and program application submission package. Documentation and certification need to be current at the time of Green Garage Certification application submission. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gold LEED 2009 or v4 | 10 |  |  | 10 |  |  |  |
|  | Silver LEED 2009 or v4 | 8 |  |  | 8 |  |  |  |
|  | Certified LEED 2009 or v4 | 6 |  |  | 6 |  |  |  |
|  | Cerifiled any level LEED v2,2 | 4 |  |  | 4 |  |  |  |
|  | Four Green Globes | 12. |  |  | 12 |  |  |  |
|  | Three Green Globes | 10 |  |  | 10 |  |  |  |
|  | Iwo Green Globes | 8 |  |  | 8 |  |  |  |
|  | One Green Globes | 6. |  |  | 6 |  |  |  |
|  | Energy Conservation or Environmental Sustainability Program | 2 |  |  | 2 |  |  |  |
| A15-Credentialed Management | LEED Protesslonal Credential (AP or AP with speclaity) | 4 |  |  |  | Management directly responsible for day-to-day parking structure operations has earned and maintained a qualified environmental sustainabiltiy credential. | - Copy of certificate earned, including name of manager and expiration date of credential where relevant a Letter documenting that the accredited person is responsible for management of day-to-day operations of the facliliy pursuing Green Garage Cerification | Review if parking manager has a certification |
|  | Green Globes Assessor (GGA) | 4 |  |  | 4 |  |  |  |
|  | LEED Green Associate | 3. |  |  | 3 |  |  |  |
|  | Green Globes Protesional (GGP) | 3 |  |  | 3 |  |  |  |
|  | Certified Administrator of Public Parking (CAPP) | 2 |  |  | 2 |  |  |  |
|  | Cerrified Parking Protessional (CPP) | 2 |  | 2 |  |  |  |  |
|  | Facilities Management Administrator (FMA) or Real Property Administrator (RPA) | 1 |  |  | 1 |  |  |  |
|  | Certified Facility Manager (CFM) | 1. |  |  | 1 |  |  |  |
|  | Parksmart Advisor (formerly Green Garage Assessor) | 1 |  |  | 1 |  |  |  |
|  | Alternative Program | 4 |  |  | 4 |  |  |  |
| A16-Life Cycle Assessment | ICA performed and savings implemented on project totaling over $\$ 2$ million | 8 |  |  | 8 | Perform a life cycle assessment LCA, before undertaking new construction or major renovations and retrofits, that validates the construction decisions. | LCA reports describing the various construction options, including the typical baseline, and the data associated with each option. Data required in support of the LCA should include six primary categories: <br> 1. resource extraclion processing <br> 2. product manufacturing <br> 3. on-site construction of assemblies <br> 4. related Iransporiation <br> 5. maintenance and replacement cycles over an assumed building service life <br> 6. structural system demolition and transportation to landfill <br> - Invoices and/or images to demonstrate that the construction option(s) with the savings <br> determined by the LCA was implemented |  |
|  | LCA performed and savings implemented on project totaling over $\$ 1$ million | 6 |  |  | 6 |  |  |  |
|  | LCA pertormed and savings implemented on project totaling over $\$ 500,000$ | 4 |  |  | 4 |  |  |  |
|  | LCA performed and savings implemented on project fotaling over $\$ 100,000$ | 2 |  |  | 2 |  |  |  |
| (Must be at least 20) Subtotal |  | 90 | 32 | 16. |  |  |  |  |


| Parksmart Certification Measure | Options | Max Points Avallable | Attempt | Maybe | Not Attempt | Objective/Option Description | Required Documentailon | Notes/Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Programs |  |  |  |  |  |  |  |  |
| B1-Placemaking | Placemaking | 6 | 2 |  |  | Parking structure has implemented placemaking features and/or programing on the property that successfully integrate the garage into the surrounding communily. | a Detailed narrative describing the program, idea, or innovation, associated participants and demonstrated results. Include the points sought for each placemaking inifialive. - Images of physical placemaking features, and/or schedules and literature demonstrating placemaking | Placemaking part of street level retail or garage used at times for community events. |
| B2 : Access to Mass Transit | Access to Mass Transit | 4 |  |  | 4 | Parking structure is located within a publicly maintained one-half mile walk of a mass transit stations, or the facility runs a shuttle service that carries patrons to a mass transit station. | Images of signage, websites, flyers and other communications that demonstrate the parking structure is promoting the use of and access to local mass transit <br> - Mapping imagery (i.e.: Mapquest, Google Maps) confirming the distance to the side via a pedestrian friendly path |  |
| B3 - Wayfinding Systems External | Dynamic Signage | 1 | 1 |  |  | Parking structure vacancy is updated on dynamic signage in the local area to provide drivers with parking vacancy information. | - Images of dynamic signage that are labeled with location of signage |  |
|  | Waytinding System | 2 |  | 2 |  | Parking structure is isisted on an external wayfinding plafform technology (such as a smart phone application or web site) Ihat provides location. navigation, and pricing information. | O One of the following: <br> 1. Signed contract with reservation services company <br> 2. Memorandum of understanding with a parking reservalion company <br> 3. Screen shot images of the parking facility's fisting on a parking application or web site |  |
|  | Reservation System | 1 |  |  | 1 | Parking structure is listed on an external wayfinding platform (such as a smart phone application or web sile) that allows customers to make reservations prior to entering the facility. | O One of the following: <br> 1. Signed contract with reservation services company <br> 2. Memorandum of understanding with a parking reservation company <br> 3. Screen shot images of the parking facility's listing on a parking application or web site 4. Copies of reservation policy and customer information describing the process if phone reservations are accepted |  |
| B4 - Waylinding Systems Internal | Parking Guidance via Single Space Detection | 4 |  |  | 4 | Implement internal wayfinding systems to reduce the time required to locate and park vehicles once drivers have entered the parking facility. | 0 Narrative describing <br> 1. Wayfinding technologies and practices in use 2. For level counting, details of the space boundaries <br> 3. System/process for monitoring the vehicle counts <br> 4. Process for manually validating and corecting vehicle count discrepancies <br> 5. Make/model of automatic electronic signage and sensor technologr 6.Floor plan (or description) of sign and sensor locations |  |
|  | Parking Guidance via Electronic Level Occupancy Delection | 3 |  |  | 3 |  |  |  |
|  | Parking Guidance via Automatic Variable Signage | 2 | 2 |  |  |  |  |  |
|  | Parking Guidance via Manual Count and Static Signage | 1 |  |  | 1 |  |  |  |


| B5- Traffic Flow Plan | At least four tratic flow strategles | 4 |  |  | 4 | Operator employs a minimum of four strategies oullined in the standard during all special event and high traffic periods, and two during all operations. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average idle lime of 5 seconds of less | 4 |  |  | 4 | Operator can demonstrate that average vehicle idle time does not exceed 5 seconds on egress. | - Summary log of exil protocols and procedures |  |
|  | At least three fraffic flow strategies | 3 | 3 |  |  | Operator employs a minimum of three of the strategies outlined in the standard during special event and high traffic periods. |  |  |
|  | At least two traffic flow strategies | 2 |  |  | 2 | Operator employs a minimum of two of the stralegies outlined in the standard during special event and high traffic periods. |  |  |
| B6- Carshare Program | Carshare Hub | 5 |  | 5 |  | Parking structure supports a carshare hub with a minimum of two vehicles. | - Photographs of the spaces reserved for carshare vehicles in your facility <br> o Carshare program narative describing how the <br> program is organized and implemented <br> a Commitment to maintain carshare hub on an ongoing basis <br> $\square$ One of the following: <br> (Option 1 ) Documentation demonstrating that the parking lacilify has partnered with a carshare company <br> (Option 2) Copies of vehicle registration if the facility owner or operator owns the vehicles | Review if there could be a car share hub lacated in the garage for 2 vehicles. |
|  | Alternative Fuel Vehicles in Carshare Hub | 1 |  |  | 1 | Parking structure populates the carshare hub with only hybrid or alternative fuel vehicles (see section B9) | - Documentation on vehicles avatlable through program |  |
| B7- Rideshare Program | Rideshare: Reserved Spaces | 2 |  |  | 4 | Parking structure reserves al leasi $2 \%$ of parking spaces within the project boundary for rideshare, promotes the availability of these spaces, and commits the property to reserving addional spaces to meet rideshare demand. | $\square$ Document describing the specifics of rideshare program, Including rideshare usage and efforts to sustain and grow program participation - Table showing the total number of spaces in the facility, and number of spaces committed to rideshare program(s) |  |
|  | Rideshare: Incentives | 2 |  |  | 2 | Parking struclure provides incentives fi.e.: discounted parking, raffle for rideshare users or free amenity use) to rideshare users and promotes the availability of these incentives. | - Written commitment that the property will continue to add addifional rideshare spaces to meet user demand - Documentation of additional rideshare incentives, if offered |  |
| B8 - Low-emitting and Fuel Efficient Vehicles | Preferred parking for low-emititing and fuel efficient vehicles | 2 | 2 |  |  | Parking structure provides incentives to promote the use of low-emitting and fuel efficient vehicles. | $\square$ Narrative of low-emitting and fuel efficient vehicle incentive program, including the procedures and penalties used to enforce the program <br> $\square$ Photographs of posted rate signes explaining program detalls <br> - Program documentation and promotional materials used to intorm the public about the program <br> - Report demonstrating utilization of program |  |
|  | Discounted rates for low-emitting and fuel efficient vehicles | 2 |  |  | 2 |  |  |  |
| Page 9 of 17 |  |  |  |  |  |  |  |  |


| B9 - Alternative Fuel Vehicles | AFV: Rcscrivcd Parking Spacos, | 3 | 3 |  |  | Reserve two percent ( $2 \%$ ) of the parking spaces within the project boundary for AFVs (minimum of two spaces per structure). These spaces shall be clearly marked for AFV use. If a facility provides electric vehicle charging stations or other AFV fueling stations, these spaces may be included in AFV count. | $\square$ Documentation that the AFV incentives are sufficiently promoted and displayed <br> - Narrative describing the policies for verifying proper use of AFV spaces, as well as procedures and penallies for handling violators - Images of preferred, exclusive AFV parking locations amassing at least 2 percent of the total number of spaces <br> $\square$ Documentation or images of discounted AFV parking rates if applicable |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AFV: Rate Discount | 3 |  |  | 3 | Provide a rate discount to all monthly and reservation AFV patrons of at least 20 percent. |  |  |
| B10 - Alternative Fuel Fleet Vehicles | At least $50 \%$ of fleet vehicles are powered by allernative fuels | 4 |  |  | 4 | Encourage the use of shuttle, security, and other fleet vehicles that use alternative fuels. | o Summary listing of all vehicles in fleet with fuel source denoted <br> $\square$ Narrative detailing any special circumstances a Invoices related to purchases of AFVs or copies of vehicle registration(s) | Review it AFVs used in vehicles used for security or other services |
|  | At least $25 \%$ but less than $50 \%$ of fleet vehicles are powered by altenative tuels | 2 |  | 2 |  |  |  |  |
| B11-Bicycle Parking | Meets Tier One and Tier Two criterio | 6 |  |  | 6 | Tier 1 Criteria includes providing 100 bicycle parking spaces for every 20 vehicle parking spaces within the profect boundary, providing a rack or other means for locking or securing bicycles, signage, both interior and exterior, direcling people to the designated bicycle parking areas. and providing at least 50 percent of all bicycle parking covered via permanent strcutre, such as roof, overhang, awning, or bicycle locker. Tier 2 Criteria includes providing restrooms and water fountains/access to drinking water, showers and/or private changing rooms, storage lockers for personal gear, and a mechanic station or work bench with tools to fix simple bicycle repairs, air pump, and proper lighting. | $\square$ Invoices realted to equipment purchases <br> $\square$ images of each installed feature and <br> associated slgnage <br> - Site aerial view limage or architectural <br> schematic) showing bicycle facilities relative to <br> building entrances <br> o Documentation listing vehicle and bicycle <br> capactiy |  |
|  | Meels Tier One criteria | 4 | 4 |  |  |  |  |  |
| B12- Bicycle Sharing/Rental | Contains bicycle sharing or bicycle rental hub | 6 |  |  | 6 | Promotes a bicycle sharing/rental hub(s) within one quart mile walking radius of the garage, featuring signage within the garage promoting and encouraging the use of the hub. | For on -site bicycle sharing, plans showing capacity of garage, location of bicycles and number of bicycles <br> a image showing bicycles and storage mechanism <br> $\square$ Printed map showng the parking structure and bicycle sharing locations within or near the parking structure <br> - Images or coples of program marketing materials | Review if rental hub within quarter mile of garage |
|  | Promotes bicycle sharing or bicycle rental hub | 4 |  | 4 |  |  |  |  |
| B13-Marketing/ Educational Program | Marketing/Educational Program | 4 | 4 |  |  | Parking structure incorporates a public, permanent educational program to demonstrate. environmentally sustainable design and operations. | almages depicting the porgram, photos or other files as appropriate $\square$ Narrative description of the program, objective and its implementation |  |
| (Must be at least 20) Subtotal |  | 64 | 21. | 13 |  |  |  |  |

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| Parksmart Certification Measure | Options | Max Points Available | Attempt | Maybe | $\begin{array}{r} \text { Not } \\ \text { Attempt } \end{array}$ | Objective/Option Description | Required Documentation | Notes/Remarks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| TECHNOLOGY AND STRUCTURE DESIGN |  |  |  |  |  |  |  |  |
| C1-Idle Reduction Payment Systems | Idle Reduction Payment Systems | 4 | 4 |  |  | Parking structure has implemented a payment system that reduces or elliminates idling in the egress parking lanes. | - Images of entrance and exit tanes <br> - Images of payment systems <br> c Narrative describing the facility's payment, system and how it reduces vehicle idling upon exit | There will be a pay-on-foot system |
| C2-Fire suppression Systems | Halon Free Fire Suppression Systems | 2 | 2 |  |  | All of the fire suppression equipment in the parking structure is documented to be free of halon. | $\square$ One of the following for every fire suppression device installed in the parking structure: <br> 1. Image of fire extinguisher or suppression system <br> label or inspection tage that demonstrates a halon-free system <br> 2. Bill of sale showing model number(s) and accopanied specifications describing the system fire suppression materíals |  |
| C3-No/Low VOC Coatings, Paints, Sealants | No/Low VOC Coatings, Paints, Sealants | 2 | 2 |  |  | Parking structure has procured and applied only no or low-VOC materials, as defined above, over the last two years and intends to continue utilizing these materials in the future. | - Manufacturer and product name of all coatings applied over the past two (2) years and documentation demonstrating that these coating are no- or low-VOC <br> a Listing of areas where coatings have been applied, Including application dates and description <br> a Copy of policies put in place regarding no- or low-VOC materials or commitment that only noor low-VOC materials will be procured and applied in the future |  |
| C4 - Tire Inflation Stations | Tire Inflation Stations | 2 | 2 |  |  | Parking structure meets the criteria outline in the standards for the intlation station, including having installed pedestal or wall-mounted electric tire inflation station, signage directing patrons to the stations, and a dedicated area or stall for safe operation. | Device make and model with year purchased - Image of the dedicated area where patrons can access inflation station - Image showing proper signage and instructional information for patrons - Description of maintenance and operational plan |  |
| C5 - EV Charging Stations | Two or more DC fost Chargers | 5 |  |  | 5 | Parking facility is outfitted with electric vehicle supply equipment (EVSE), commonly refered to as EV charging stations. | a Make, model, charging level ( $(1,1, D C)$ and quantity of each EVSE <br> - Number of charging points installed <br> a images of installed device(s) wilh signage - Description of plan to enforce access rules for EV spaces |  |
|  | One DC Fast Charger | 4 |  |  | 4 |  |  |  |
|  | Two or more AC Level II EV Chargers, equaling at least $1 \%$ of all parking spaces | 5 | 5 |  |  |  |  |  |
|  | Two or more AC Level 11 EV Chargers, equaling at least $0.5 \%$ but less than $1 \%$ of all parking spaces | 4 |  |  | 4 |  |  |  |
|  | At least one AC Level II EV Charger, equaling less than 0.5\% of all parking spaces | 2 |  |  |  |  |  |  |
|  | Levell equipped spaces equaling af least $0.5 \%$ of all parking spaces | 1 |  |  | 1 |  |  |  |
|  | No additional payment is required to charge vehicles | 1 |  |  | 1 |  |  |  |


|  | Energy Efflclent Systern | 2 | 2 |  | One or more of the energy efficient mechanical systems listed in the standard has been installed in equipment serving the occupled spaces, | - Narrative describing efficient energy systems, energy sources, and the size/locaation of the conditioned zones <br> o Specification data sheol for each HVAC system olmages of rating plates of each heating and cooling device, showing the model number and ENERGY STAR rating |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | COSensors | 1 |  | 1 | Sensors capable of detecting unsafe levels of CO are instailed and engage the ventilation system at appropriate power tevels to maintain sale air quality at all occupied limes. | - Narrative describing the air qualify sensor syslem, make and model of components, locations of sensors, and types of contaminants being monitored <br> a Specification data sheet for the air quality sensors and control systems |  |
| C6. HVAC systems Occupied Spaces | Programmable Thermostats | 2 | 2 |  | Programmable thermostats have been installed and programmed with temperature setbacks to reduce the system demand when the occupied spaces are vacated. | a Narralive describing each make, model, and quantily of thermostat units in use, <br> heating/cooling zones and locations of thermostats <br> $\square$ Description of Building Management System (BMS), if in use <br> - Documented plan detailing the time and temperature settings and setbacks, along with procedures for altering the plan to accomodate changes of season, daylight savings time shift, holidays, and any other applicable scheduling changes <br> - lmages of thermostat devices showing units are not obstructed | Retail space considered "Occupied space" as part of garage. |
|  | Environmentally Sater Coolants | 1 | 1 |  | Parking strucutre does not use any CFC or HCFC as HVAC coolants. | O One of the following: <br> 1. Model, make, and specification data sheet for each system that utilizes coolant, with the coolant type clearly idenitifled <br> 2. Images of equipment label showing the coolant type in use for each HVAC system in use |  |


| C7-Ventilation systems Parking Decks | Demand Controlled Ventilation | 3. |  | 3 | Facility uses air quality sensors mounted throughout the garage to detect undesirable levels of carbon monoxide (CO). Sensors must be configured to (1) directly control fan operation, or (2) be continuously connected to a dedicated monitoring and control instrument which controls the fans, or (3) be continuously connected to a building automation system that controls the tans. | - Manufacturer's specifications for air quality sensors that demonstrate at least $+1-5 \%$ accuracy, drift not to exceed $5 \%$ per year, and calibration is not required more than once per year |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Variable Air Flow System | 2 |  | 2 | Fans are configured to provide proportional ventilation fi.e. equipped with VFD or multi-fan arrays in all zones wilh individual fan controls). | a Complete inventory of the existing ventilation system, including model numbers, age, specifications (full electrical and capacity information) and everyage run time of all system components (fans, motors, sensors) |
|  | Schedule or Occupancy Controls | 1 |  | 1 | Fan motors are directly controlled by scheduled timers, occupancy sensors, or other systems that are programmed or detect human or environmental behavior in order to predict the gas levels inside of the structure, as opposed to measuring the air quality levels in real time. | - For timers, include documentation on manufacturer's specifications, table showing the time schedule that is programmed, operaling. hours of facility, and managers procedure for updating the schedule for changes in operating hours <br> - For occupancy sensors, include specification for all equipment and narralive describing the system operation |
|  | Callibration and Maintenance | 1 |  | 1 | Ventilation system, including all sensors and motors, are inspected and callibrated at least once every two years. | - lnvoice of maintenance, inspection, and callibration service performed within the last 24 months <br> - Written policies for having maintenance performed or written statement that operator commits to inspection and callibration service at least once every two years |
|  | Design for Natural Ventilation | 6 | 6 |  | Facility has been designed with natural ventilation chimneys or is open air and does not have any ventilation systems installed in any of the parking decks. | a Archifectural drawings or images demonstrating that facility was designated for open air natural ventilation, highlighting the ventilation chimneys and exterior vents or windows. <br> $\square$ Written statement declaring the facility does not have any mechanical ventilation systems serving any of the parking decks |
| C8-Lighting Controls | At least $75 \%$ of lighting fixtures controlled by occupancy sensors | 6 |  | 6 | Control lighting fixtures using preset progroms and/or monitoring sensors to reduce the facillty's. energy consumption. | - List of the lighting control equipment (including make and modell <br> a Image sof each lype of lighting control device a Lighting plan that illustrates the type. quantity. and location of each controlled fixture <br> o Schedules of all timer control sequences (if applicaable) |
|  | At least $50 \%$ of lighting fixtures controlled by occupancy sensors | 4 | 4 |  |  |  |
|  | At least $50 \%$ of lighting fixtures controlled by advanced programmable system | 3 |  | 3 |  |  |
|  | At least $50 \%$ of lighting fixtures controiled by simple timer | 2 |  | 2 |  |  |
|  | At least 25\% of lighting fixtues on lighting controls | 1 |  | 1 |  |  |
|  | At least $60 \%$ of (exterior) lighting fixtures confrolled by photocells or occupancy sensors | 2 | 2 |  |  |  |
|  | At least $60 \%$ of (exterior) lighting fixtures controlled by programmable timer | 1 |  | 1 |  |  |


| C9 Energy [fficient Lighting System | Lighting Power Density (LPD) | 7 | 4 |  | The ratio of wattage of the installed luminaries compared to the floor area of the illuminated space. The lower the ratio, the more efficient the lighting technology system is. | - Calculations of Lighling Power Density supporled by all of the following data: <br> 1. Installed lighting count and specifications (showing average lamp life) <br> 2. Floor plan denoting facility square footage |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average Rated Lamp Life | 1 | 1 |  | A light source with a higher Average Rated Lamp Life ( $>1=65,000$ hours) has a reduced environmental impact. | o. Invoices or confract with lighting recyeling company that handles the removal of expired lamps. |  |
| C10 Stormwater Management | Implement an Erosion and Sedimentation Control Plan | 2 | 2 |  | Implement an Erosion and Sedimentation Control Plan (ESC) that meets or exceeds municipal and local watershed flood and erosion control Iargets, or comply with the Green Globe Stormwater Management Criteria for quantity. | - Erosion and Sedimentation Control PIan (ESC) or documentation of compliance with Green Globe Stormwater Management Criteria for quality |  |
|  | Meet or exceed Municipal and Local Watershed Water Quality Control Targets | 2 | 2 |  | Meet or exceed municipal and local watershed water quality control targets, fi,e. 80 percent TSS removall or demonstrate compliance with Green Globe Stormwater Management Criteria for quality. | $\square$ Documentation demonstrating adherence to municipal and local watershed quality control targets with respect to Total Suspended Solids Plan, or compliance with Green Globe Stormwater Management Criteria for quality |  |
|  | Retain minimum of $50 \%$ of total average rainfall | 2 |  | 2 | Retain minimum of 50 percent of the lotal average rainfall volume, verified by a Site Water Batance Assessment or demonstrate compliance with Green Globe Stormwater Management Criteria. | - Site Water Balance Assesment for a minimum of 50 percent of the total average rainfaill volume, or compliance with Green Globe Stormwater Management criteria |  |
| C11-Rainwater Harvesting | Rainwater Harvesting | 4 |  | 4 | Parking structure harvests rainwater wilh a collection system containing a storage capacity of 7,500 gailons or more. | - Narrative describing the system, process for Utilizing the rainwater, and estimates for amoun of fresh water that is saved by the rainwater <br> colleclion system <br> a images of rainwater catchment, storage, and <br> delivery system <br> $\square$ Rainwater harvesting system design plans. <br> - Equipment and installation invoices |  |
| C12-Greywater Reuse | Greywater Reuse | 2 |  | 2 | Parking stucture has installed a system to capture and properly use greywater. | - Narative describing the system and the amount of fresh water it conserves <br> o images of the greywater system <br> - Design plans of the greywater system <br> - Equipment and installation invoices |  |
| C13 Indoor Water Efficiency | Efficient Fixtures | 2 | 2 |  | All faucets, toilets, and urinals within the project boundary meet the criteria in the standard including (1) all faucets are EPA WalerSense approved or have WaterSense-approved aerators (or equivalent), (2) all public faucets have a maximum flow rate of 0.4 gallons/minute, and (3) all toilets and urinals within the structure are Watersense-approved (or equivalent) or are waterless. | W. WaterSense Credit-provide one of the following: <br> 1. A copy of all faucet and toilet recelpts and specification sheel for each fixture <br> 2. A dated plumbing inspection report confirming installation of acceptable fixtures <br> - LEED Credil-provide one of the following: <br> 1. Copy of the LEED certification demonstraling the acceptance of WE3 <br> 2. Calculations of documented baseline versus design case water use | Retail space considered "Occupied space" as part of garage. |

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|  | At least $5 \%$ and less than $25 \%$ of energy is offset by RECs | 1 |  |  | 1 |  | RECS at the same or higher percentage of the energy consumed by the facility. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| C17- Design for Durability | Design for Durability | 6 | 6 |  |  | Facility complies with the options outlined in the standard for the applicable design form(s) in use within the project boundary. | - Complete documentation conlirming compliance with applicable options outlined above. If more than one consiruction form has been employed, provide the appropriate documentation for each form. <br> - Written statement by a licensed professional endorsing the project's adherence to these options. |  |
| C18 - Energy Resiliency storage | Grid Interaclive Energy Storage | 2. |  |  | 2 | A grid interaclive energy storage solution has been integrated into the garage's electric infrastructure. | - Electrical single line drawing demonstrating the design of the grid interactive storage solution - Images of the installed energy storage solutions a Narrative describing renewable energy integration |  |
|  | Grid and On-site Renewable Interactive Energy Storage | 4 |  |  | 4 | A grid interactive energy storage solution has been integrated into the garage's electric infrastructure and on-site renewable energy source. |  |  |
| (Must be at least 20 ) Subtotal |  | 88 | 51 | 11 |  |  |  |  |
| innovat |  |  |  |  |  |  |  |  |
| DI-Innovative Approach | innovative Approach | 6 | 2 | 2 |  | Recognize facilities that deploy environmental sustainability initiatives beyond the scope of the measures in the Green Garage Certification Standard. | innovative Approach <br> - Detailed narrative describing the innovative approach and strategies used to achieve environmental sustainability benefil <br> Q Supporling documentation for the metrics used to verify compliance, demonstrating quantitative performance improvements for environmental benefit (establishing a baseline of standard performance for comparison) Exemplary Performance Documentation demonstrating the facility has exceeded an existing Green Garage Certification Measure's maximum metric by at least $50 \%$ - Assumptions made to determine baseline and justification for improvements over the baseline | Additional durability provisions and detailing |




City of Bloomington
Plan Commission
401 N Morton St.
Suite 130
Bloomington IN 47404

Dear Commission Members,

Indiana Limestone, known to geologists as Salem Limestone, is the nation's premier building stone, gracing between 50 and $75 \%$ of all limestone-clad buildings in the nation. Many of the nation's, Indiana's, and your city's most iconic buildings are constructed of Indiana Limestone. Moreover, the City of Bloomington flows into the spectacular campus of Indiana University with almost all buildings south of the railroad line built with Indiana Limestone.

Yet, in the construction of the new fourth street parking garage, renderings do not show the use of Indiana Limestone. What is shown is the use of masonry and precast concrete that is called "limestone colored." Mr. Adam Wason informed me that at least banding with limestone is planned for the first floor.

I am surprised by the lack or limited use of Indiana Limestone in this structure and others that recently have been constructed in Bloomington. What is more surprising is the City of Bloomington is sitting in "Limestone Country;" and with Monroe and Lawrence Counties, the City celebrates our limestone heritage each June. Has this been forgotten? Have we forgotten about the warm beauty, sense of place, and permanence that our world-class stone provides? Do we forget to promote our own local economy? Can we actually ask the nation to use Indiana Limestone when we do not?

I encourage you to ask for a new rendering that uses real limestone from our local community. It may be only a parking garage, but all that daily use and pass this structure on foot or in a vehicle will just by looking at it know that they are at home in Bloomington, Indiana.

With deepest regards,


Todd A. Thompson
4295 North Kinser Pike
Bloomington, IN 47404
(812) 332-0203

## Arend $i d$ Abel

 Scott D. Gilchrist Julie AndrewsVess A. Miller"
Daniel S. Chamberlain Gabriel A. Hawkins Jeffrey A. Hammond** Edward B. Mulligan V

Michael W. McBride Jonathan A. Knoll J. Eric Rochford

Justin C. Kuhn Nicole Makris Lisa M. LaFornara Amina A. Thomas

Elizabeth M. Hyde Shauneste N. Terrell

Of Counsel:
George W. Hopper
Laura C. Jeffs

## SENT VIA HAND DELIVERY

October 4, 2019

## City of Bloomington Plan Commission

401 N. Morton Street, Suite 130
Bloomington, IN 47404
City of Bloomington Board of Zoning Appeals
401 N. Morton Street, Suite 130
Bloomington, IN 47404

## Re: Notice of Objection to Approval of $4^{\text {th }}$ Street Parking Garage Plan Commission Petition No. SP-23-19 Board of Zoning Appeals Petition No. V-17-19

To whom it concerns:
This firm represents 222 Hats, LLC and its member Juan Carrasquel. This letter is being sent to you to formally notify you that the legality of the $4^{\text {th }}$ Street Parking Garage ("Project") is the current subject of a condemnation lawsuit, City of Bloomington, Indiana v. 222 Hats, LLC, Cause No. 53C01-1906-PL-001293 ("Lawsuit"). Landowner, 222 Hats, LLC, by its member/manager, Juan Carrasquel, has filed objections to the taking of his real estate in the Lawsuit on both constitutional and procedural grounds.

Mr. Carrasquel attended at least one Plan Commission Meeting at which the Project was discussed. At this Meeting, Mr. Carrasquel objected to and ask the Plan Commission to reject the City's petition because it was a blatant violation of BMC 20.09.030(a)(2)(D), in that the City filed a Petition related to land owned by Mr. Carrasquel without his "signed written consent."

Petition SP-23-19, pending before the City of Bloomington Plan Commission, and Petition V-17-19, pending before the City of Bloomington Board of Zoning Appeals, both have been continued on more than one occasion. Landowner objects to and asks these Commissions to reject these Petitions on the following grounds:

1) Landowner's filing of Objections to the City's proposed taking of its real estate, on which the Monroe Circuit Court has not yet ruled.
2) The Bloomington Municipal Code is unconstitutional as applied to the 222 Hats, LLC.
3) These Petitions violate BMC $20.09 .030(\mathrm{a})(2)(\mathrm{D})$, which requires the "signed written consent of the owner if other than the applicant." Landowner has not and will not

## COHEN \& MALAR, LIP

 the Plan Commission and Board of Zoning Appeals are improper as a matter of law.4) A public meeting was held by Bloomington's Board of Public Works at 401 North Morton Street, Bloomington Indiana on April 30, 2019, at 5:30 p.m. Pursuant to the Agenda posted for this meeting, there was no mention of Resolution 2019-43: Authorization to Purchase Private Property for Public Need $4^{\text {th }}$ St. Garage Project ("Resolution") being discussed or voted upon at the meeting.

Please be advised that 222 Hats, LLC objects to the approval or consideration of the Project, including any waiver or variances needed or requested for the Project. Moreover, 222 Hats, LLC intends to appear before both of these Commissions/Boards to place its objections on the record. To the extent any of its objections are overruled or the Project is approved, 222 Hats, LLC intends to appeal such rulings) to the Circuit Court of Monroe County.

222 Hats, LLC reserves and is not waiving any rights that it has to object to the Project and to appeal any approvals given to the Project.

Best regards,
 222 Hats, LLC


Attorney for 222 Hats, LLC
cc via email only: Jeffrey Redfern, Institute for Justice

# BLOOMINGTON PLAN COMMISSION <br> STAFF REPORT <br> Location: 1550 N. Arlington Park Drive 

CASE \#: PUD-36-19
DATE: December 9, 2019

PETITIONER: $\quad$| Trinitas Development |
| :--- |
|  |
|  |
| 201 Main Street Suite 1000 Lafayette IN |

CONSULTANTS: Bynum Fanyo Associates
528 N Walnut Street, Bloomington
REQUEST: The petitioner is requesting approval of a Preliminary Plan Amendment and District Ordinance and Rezone of Business Park (BP) and Residential Single Family (RS) to a Planned Unit Development.

## BACKGROUND:

## Area: <br> Current Zoning:

GPP Designation:
Existing Land Use:
Proposed Land Use:
Surrounding Uses:
40.75 acres

Business Park/Residential Single Family/Planned Unit
Development
Neighborhood Residential
Undeveloped
Dwelling, Multi-Family/Single Family Residential
North - Dwelling, Single-Family
West - State Road 37 / Interstate 69
East - Dwelling, Single-Family
South - Office / Industrial Use

REPORT: The property is located north of West $17^{\text {th }}$ Street at the north end of Arlington Park Drive. The property is north of offices and industrial development and a multifamily development that maintain frontage on $17^{\text {th }}$ Street and is bounded by single family lots to the north and east and State Road 37/Interstate 69 to the west. The western portion of the property is zoned Business Park, while the eastern portion is zoned Planned Unit Development (PUD) and Residential Single Family (RS).

The petitioner proposes to amend the existing District Ordinance and PUD Preliminary Plan in order to allow for the BP and RS portions of the site to be added to the PUD and to amend the list of uses for the PUD to allow for multi-family and single family residences. This site was previously petitioned for a similar rezoning petition in 2018 under PUD-13-18, however that petition was ultimately denied by the Common Council. The petitioner has made several overall changes to the petition and is coming forward with a new proposal.

The proposed petition currently features 387 units and 825 bedrooms with a mix of 45 single family lots, 162 townhouses, 113 units of multi-family student rentals, and 112 cottage (duplex) units. The petitioner proposes a total of 361 on-site parking spaces, which equals 0.43 parking spaces per bedroom. There will also be 97 on-street parking spaces. The petition includes a possible bedroom count of 109 one-bedroom units, 326 two-bedroom units, 74 three-bedroom units, and 128 four-bedroom units. Approximately 13.89 acres of preservation will also be set aside in a conservation easement. Access to the site will come from two connections to $17^{\text {th }}$ Street to the south and a connection to Arlington Drive to the east.

The current petition involves 4 areas of development and land uses-
Area A-This area will be developed with single family residences consisting of 45 lots on 12.87 acres. The lots are approximately 40 ' $\times 120^{\prime}$ and are being proposed to be given to the City for affordable housing. The area will be graded with all roads and infrastructure installed before given to the City. The lots have been designed in a grid-like pattern and a majority of them will utilize alley access along the rear of the lots. All lots will front on a public street. The Department recommends that this area be included in Phase 1 to insure that it is built.

Area B- This area will be developed with 162 townhomes on 7.11 acres. The proposed density utilizing DUEs will be 13 units per acre. This area is proposed to feature 70 one-bedroom units, 70 two-bedroom units, 16 three-bedroom units, and 6 four-bedroom units. There will be 96 parking spaces for the 255 bedrooms in this area, which equals 0.37 parking spaces per bedroom. There is an intermittent stream with associated riparian buffer that runs through part of this property as well as several wetlands that are being set-aside in conservation easements. There are 3 road crossings through the riparian buffer areas, however these are allowed. There will not be any disturbance in the required wetland conservation areas. These units are being set-up with individual utility connections so that they can be sold separately in the future. These buildings will be two to three-stories in height.

Area C- This area will be developed with 113 units on 8.18 acres. The proposed density utilizing DUEs will be approximately 13 units per acre. This area will be developed with one building, approximately $65^{\prime}$ tall, and will be used for student housing. This area is immediately adjacent to the State Road 37/Interstate 69 highway. There are proposed to be 12 one-bedroom units, 57 two-bedroom units, 41 three-bedroom units, and 3 four-bedroom units. There will be 98 parking spaces within the building for the 261 bedrooms, which equals 0.37 parking spaces per bedroom.

Area D- This area will be developed with 112 duplex units on 7.11 acres. The proposed density utilizing DUEs will be 9.75 units per acre. There are proposed to be 26 one-bedroom units, 38 two-bedroom units, 12 three-bedroom units, and 36 four-bedroom units. These units will all front on a public street with on-street parking spaces along the front. The main parking areas have been designed to be located in the rear of the structures. There will be 168 on-site parking spaces for the 309 bedrooms which equals 0.54 parking spaces per bedroom, there will also be 102 onstreet parking spaces in this phase. These buildings will be one and two-stories in height. A portion of this area has an intermittent stream and wetland that have been shown to be placed in a conservation easement. This area also has an electric line that runs along the east side of the property with a 100 ' wide easement.

COMPREHENSIVE PLAN: This property is designated as Neighborhood Residential. The Comprehensive Plan notes the following about the intent of the Neighborhood Residential area and its redevelopment:

- The Neighborhood Residential district is primarily composed of residential land uses with densities ranging from 2 units per acer to 15 units per acre.
- All of the proposed uses within this development are residential.
- The proposed density within this development is within the range outlined in the Comprehensive Plan.
- Single family residential development is the dominant land use activity
- This petition features a range of housing types, including single family residences.
- Natural or landscaped front, side, and rear yards
- The current design provides for roughly 3-4 feet between each unit and the sidewalk in front of the unit. The configuration of the units does not allow for many usable front, side, or rear yards on the lots.
- Buildings are no more than three, but most often two stories or less.
- The buildings within this development (except for the building in Area C) will be no more than three stories in height, and will mostly be two-stories.
- Sensitive habitats and unsuitable areas for development should be protected and restricted from high-intensity human activities
- All environmentally sensitive areas will be set aside in the required conservation areas. This petition also includes setting aside 13.89 acres of land that will be in a conservation easement. This equals almost $35 \%$ of the entire property that will not be developed. The area being set aside is also the area that was not disturbed with previous grading on the site and is the highest quality in regards to tree species and soil. While there are 3 roads shown through riparian buffer areas, these are permitted disturbances within the UDO.
- Public streets, sidewalks, and other facilities provide good access to other uses within the district, to area parks and schools, and to adjacent districts
- The petitioner proposes a series of public streets on the site to connect those areas. The main connection utilizes existing right-of-way to extend to $17^{\text {th }}$ Street and connects east to Arlington Road. There will be an internal multi-purpose path that will run throughout this development and extend to $17^{\text {th }}$ Street. The petitioner is setting aside a large amount of the overall property (that will serve as open space for the residents). While there is not a central park feature or specific amenity center, the open space area is proposed to serve that function.
- The wide range of architectural styles is a characteristic that should be maintained for this district
- The petitioner is proposing anti-monotony standards for this petition that require a diversity in rooflines, overall building footprint, building color, exterior materials, and setbacks. The Department feels that specific finishing materials should be outlined as well to insure high quality buildings.
- Public streets, sidewalks, and other facilities provide access and mobility which in some cases meets the " 20 -minute neighborhood" metric: Some destinations are accessible within a 20 -minute walk
- Again, pedestrian connections are provided, but there are not many existing facilities in the immediate area and no public facilities, such as parks or small commercial nodes, are provided in the project.
- Using 'Complete Street' guidance to achieve a well-connected, active transportation network is a priority and has been included in their petitioner statement.
- Buildings face the primary street with a range of small to large front yards in relation to the building setback from the street
- All front yard spaces are small and are 3-4 feet from the back of the sidewalk.
- Higher density developments (greater than four units per acre) provide on-site parking in the side or backyard areas
- The parking area for the higher density student building will be provided in the interior of the building. The parking areas for the portions of the site have been located in the rear of the structures as much as possible. In addition, on-street parking spaces are also provided to supplement the on-site spaces.
- On-site parking is not the dominant site design feature, and on-street parking is available on at least one side of the street
- On-street parking is provided in most of the proposed rights-of-way and surface parking lots have been placed in the rear of the units to the extent possible.
- Sidewalks and front yard landscaping further establish a more traditional residential context
- Sidewalks are included, but front yards are minimal along the duplex units. The areas around the townhomes on Area B feature larger front yards. The reduced front yards for some of the multi-family components are mitigated by the large amount of overall area that is being set aside. The single family lots will be developed with a 15 ' front yard setback to provide the front yard and open space envisioned in the Comprehensive Plan.
- New and redevelopment activity for this district is mostly limited to remodeling existing or constructing new single-family residences
- This is a unique location that offers a large scale development opportunity, but has several unique constraints including being immediately adjacent to Interstate 69, as well as a large electric line easement that spans the site. The petition involves a range of housing types, including single family residences.
- Optimize street, bicycle, and pedestrian connectivity to adjacent neighborhoods and other 20-minute walking destinations.
- This petition features an interior multi-use path that will run throughout the site and connect to $17^{\text {th }}$ Street to the south and Arlington Park Drive to the east. Recently installed sidewalks along $17^{\text {th }}$ Street also help promote pedestrian connectivity through this area.
- Create neighborhood focal points, gateways, and centers. These could include such elements as a pocket park, formal square with landscaping, or a neighborhoodserving land use. These should convey a welcoming and open-to-the-general-public environment
- A clubhouse is provided for use of the residents, as in a typical large apartment complex. No specific public amenities, as listed above, are provided. However, as mentioned the proposed 13.89 acres that are being set aside in a contiguous area do provide a large area for passive recreation and internal pathways.
- Ensure that appropriate linkages to neighborhood destinations are provided
- Vehicular and pedestrian linkages are included, but again, there are not many neighborhood destinations in this area, and the opportunity to create one with this development has been missed.
- Large development should develop a traditional street grid with short blocks to reduce the need for circuitous trips
- The single family component to this features the traditional street grid with alleys in the rear. The location of existing environmental features within Area B for the townhome development makes it difficult to incorporate a traditional grid in that area. The duplex units within Area D utilize a more traditional design with on-street parking spaces in front of the units and linear streets. Parking for Area D is provided within a portion of the electric line easement that could not otherwise be utilized.
- Support incentive programs that increase owner occupancy and affordability (including approaches promoting both permanent affordability and home ownership for all income levels).
- The petitioner is proposing to give to the City the 45 lots within this development that are outlined for single family residences. This area would be graded and all
supporting infrastructure including roads, utilities, sidewalks, and street trees installed. These lots could then be used to assist in meeting the affordable housing needs of our community.

The development of this large Neighborhood Residential property lacking public frontage should incorporate a street grid with traditionally-designed residential properties and neighborhood and public amenities, as called for in the Comprehensive Plan. Traditional neighborhood development, as it relates to lot design, is the predominant development pattern envisioned within the Neighborhood Residential area and should be accomplished to the maximum extent possible. While $100 \%$ compliance with the Comprehensive Plan guidance is not always feasible. Area A is designed to meet those Comprehensive Plan goals, while Areas B through D are more environmentally restricted and complicate a traditional design.

## PRELMINARY PLAN/DISTRICT ORDINANCE:

Residential Density: The proposed residential density for the site ranges from 4 units/acre to 13 units/acre. This density is within the suggested Neighborhood Residential density limits of 2 to 15 units per acre. However, a continuing area of concern is the density and design proposed for this site relative to surrounding single family uses.

Height and Bulk: The district ordinance needs to state the dwelling unit equivalency standards that are being used with this petition. It would also be beneficial to state that the standards for this PUD are those of the current UDO, and not of the proposed new UDO. Occupancy within the multi-family buildings has been specifically limited in the district ordinance. For 1 and 2 bedroom units, the occupancy is limited to 3 unrelated adults per unit and in the 3 and 4 bedroom units, occupancy is limited to 5 unrelated adults per unit.

Parking and Surrounding Roads: A total of 361 on-site parking spaces are proposed in a series of parking lots and drive aisles on the property plus 102 on-street parking spaces. The number of on-site parking spaces equals 0.44 parking spaces per bedroom ( 0.56 spaces per bedroom factoring in the on-street spaces).

Access: There are two proposed vehicular and pedestrian accesses roughly 335 feet apart on $17^{\text {th }}$ Street. The western access connects to $17^{\text {th }}$ Street through an existing platted right-of-way, while the eastern access utilizes an access easement through the property to the south. There is an additional vehicular and pedestrian access proposed through an existing parcel to Arlington Road to the east of the site.

Sidewalks are planned on the internal public rights-of-way and a multi-use path is included to connect the project to $17^{\text {th }}$ Street.

Bicycle Parking: The development has 825 proposed bedrooms. The petitioner has committed to providing one bicycle parking space for every 4 bedrooms. This equals a total of 207 bicycle parking spaces provided. Of those, half must be covered ( 104 spaces) and one-quarter ( 52 spaces) must be long-term spaces.

Architecture/Materials: The district ordinance outlines that the structures within this development shall be of a contemporary design. They have proposed anti-monotony standards that
are outlined in their district ordinance. The Department would suggest adding an additional standard that all buildings in Area B and D are required to have pitched roofs. In addition, the Department suggests adding a list of approved finishing materials for all of the multi-family buildings. Specific design elevations will be approved with the final development plan petition, but it is essential to outline the standards in the district ordinance, and the Department is also seeking to set a minimum number of designs for areas B and D .

Streetscape: The project has little frontage along the adjacent public streets, but is proposing that all internal streets be public. The internal proposed roads contain parallel, on-street parking and sidewalks. While some of the internal streets show a sidewalk on both sides, some street cross sections do not show a tree plot. This must be corrected prior to the next hearing. All public streets must have a minimum 5' wide concrete sidewalk and minimum 5 ' wide tree plot with street trees not more than $40^{\prime}$ from center. The petitioner will be following the Transportation Plan and Complete Streets design guidelines for the new internal public roads.

Alternative Transportation: A Bloomington Transit bus line runs along $17^{\text {th }}$ Street, but has no direct access to the site. The transit facility is approximately 400 feet from the western portion of the petition site and 1000 feet from the eastern portion of the petition site. Someone walking from the northeast portion of the petition site would need to walk about half a mile to get to the bus stop. The petitioner has met with Bloomington Transit to discuss a private Bloomington Transit operated shuttle for this development. The petitioner would be entering into an agreement with Bloomington Transit to provide a bus transit service open to the public, rather than operating their own shuttle. The details of that agreement are outlined in their petitioner statement.

Environmental Considerations: There appear to be multiple environmental constraints on the site, including streams and steep slopes, and potential sinkholes and wetlands. The petitioner met on-site with the Senior Environmental Planner and members of the Environmental Commission to identify areas of sensitivity on-site that need to be preserved. The design was created in order to protect the sensitive areas on the northern portion of the site. All portions of the site that have intermittent streams present or wetlands will be set aside in conservation easements. While there will be 3 stream crossings in Area B, those are allowed by the UDO. No deviations from any of the environmental preservation standards are proposed or are approved with this petition.

Housing Diversity: The petitioner is proposing to dedicate to the City the 45 single family lots within this development. The petitioner would bear the cost of installing all infrastructure (streets, utilities, sidewalk, street trees) and grading of the lots prior to dedication to the City. This would need to be required with the first phase of this development.

Sustainability Features: With this petition there would be electric vehicle charging stations installed within Areas B, C, and D for at least $2 \%$ (or 8 spaces) that are plug-in ready. These spaces are also being proposed to be covered with solar arrays, this aspect should be made a commitment within their district ordinance. The petition will also provide on-site recycling for all tenants. The petitioner has outlined several other sustainability features in their district ordinance.

ENVIRONMENTAL COMMISSION RECOMMENDATIONS: The Bloomington Environmental Commission (EC) made 11 recommendations concerning this development, which are listed below:
1.) The Petitioner should increase the pervious surface coverage (decrease the impervious
coverage) of the site to meet the minimum standards of the UDO.
2.) The Petitioner should increase the pervious surface coverage in such a way to maintain contiguous strips of habitat connectivity as described in the EC's Bloomington Habitat Connectivity Plan.
3.) The Petitioner should preserve within Conservation Easements, the environmentally sensitive, high quality wooded areas.
4.) The Petitioner should increase the buffer along Interstate 69 to at least 50 feet in width.
5.) The invasive species should be eradicated from the Conservancy Easement areas.
6.) The Petitioner should design with Low Impact Development practices and avoid using only one large detention facility.
7.) The Petitioner should use green, sustainable building practices to reduce the carbon footprint of all the buildings on the site.
8.) Because the site is adjacent to native woodlands, all landscape material should be native to south central Indiana with the exception of some street trees.
9.) The District Ordinance should specifically allow clothes lines to be installed.
10.) Any required state and federal permits should be obtained before any city permits are granted.
11.) The Petitioner should address the additional questions by the final revision deadline prior to the next hearing.

STAFF RESPONSE: Because this is a PUD, any of these requirements can be included in the consideration of the petition. The Department encourages the petitioner to address these comments by the next hearing.

CONCLUSION: The petitioner has designed this petition to accomplish the goals outlined in the Comprehensive Plan for the Neighborhood Residential designation. The site is unique in that it lacks any significant public street frontage and is bordered by a single family residential neighborhood to the east, multi-family residences and offices to the south, and an Interstate to the west. This petition has attempted to be sensitive to the neighboring existing uses, while addressing diverse housing concerns, and providing public benefit. The Department and the Comprehensive Plan both contend that the design should include gridded streets with traditionally-designed detached units for the majority of the site, which this petition attempts to accomplish.

The petitioner has made strides to improve the petition from the previous 2018 petition by incorporating public roads that create areas of some gridding in Area A and increasing environmental protections throughout. One public benefit provided by this project is much needed single family housing lots available for affordable or workforce housing development. Traditional neighborhood development, as it relates to lot design, is the predominant development pattern of the surrounding Neighborhood Residential to the east and is expected in this area. A continuing
shortfall with this petition is a lack of a mixed-use aspect and no public amenities beyond vehicular and pedestrian connections through the site.

RECOMMENDATION: The Planning and Transportation Department recommends that the Plan Commission forward this to the required second hearing.

## MEMORANDUM

Date: $\quad$ December 19, 2019
To: Bloomington Plan Commission
From: Bloomington Environmental Commission
Subject: PUD-13-18: Chandler's Glen
Trinitas Development, west side
1550 N. Arlington Park Drive

The purpose of this memo is to convey the environmental concerns and recommendations of the Environmental Commission (EC) with the hope that action will be taken to protect and enhance the environment-enriching attributes of this property. The EC reviewed the petition and inspected the property and offers the following comments and requests for your consideration, and recommendations that it believes should be incorporated.

This is the first of two hearings for the change from multiple zoning districts, to one Planned Unit Development (PUD), which is a zoning district that develops its own regulations instead of following the regulations in the Unified Development Ordinance (UDO).

The EC applauds the Petitioner for the revisions to the original version of the plan, which added environmental protections such as the UDO-required riparian buffers. However, questions remain. Because this is such a large development, the list of questions to still be answered is rather long.

Although the Petitioner has revised the plan to protect more pervious land, the EC maintains its original position and does not support this petition because it allows a reduction in wooded, pervious surface coverage.

## EC CONCERNS OF ENVIRONMENTAL SIGNIFICANCE:

## 1.) IMPERVIOUS SURFACE COVERAGE

The District Ordinance (DO) states that the site is 39.29 acres in total with 13.89 acres as green space and 25.4 acres as impervious surface. That equates to $64.6 \%$ of the total site covered with impervious surface.

The four Site Areas are using design standards from four different zoning districts, except where the DO says otherwise. Area A will use design standards from the Residential Core (RC) district, Area B from Residential Multifamily (RM), Area C from Residential High-Density (RH), and Area D from Residential Multifamily (RM). According to the DO, Areas A and C will have less impervious surface coverage than the maximum allowed under UDO regulations, and Areas B and D will be over their UDO-allowed maximum amount.

An RC district is allowed $45 \%$ impervious surface and Area A is planned for $27 \%$. An RH district is allowed $50 \%$ impervious surface and Area C is planned for $27 \%$. An RM district is allowed $40 \%$ impervious and Area B is planned for $46 \%$. An RM district is allowed $40 \%$ and Area D is planned for $61 \%$.

Some Site Areas are over their impervious surface coverage maximum and some are under. However according to the DO the entire sire comes out to be $65 \%$ impervious surface coverage, and the EC believes that is too much.

The literature is filled with scientific evidence that proves that except for extreme reduction of carbonequivalent emissions, planting more trees is the action we can take to best fight the Earth's imminent climate emergency. Reducing the amount of pervious surface coverage in PUDs is, in the EC's view, a very bad idea, and we have argued against such a reduction for years. Now that the scientific data that prove the benefits of wooded areas are mainstream, the EC believes the Plan Commission would be negligent to allow reducing pervious surface coverage beyond what our regulations allow, which is a minimum anyway.

The EC believes that any PUD should not reduce the environmental protection requirements to less than the Unified Development Ordinance (UDO) standards. These standards went through a public process and were vetted by the citizenry and voted on by our lawmakers. Therefore, the EC recommends that the Petitioner preserve at least the minimum UDO-required pervious surface acreage as is required in the UDO.

## 2.) THE BLOOMINGTON HABITAT CONNETIVITY PLAN, NOVEMBER 2017

The EC's Bloomington Habitat Connectivity Plan (BHCP) is meant to guide protection and development of plant and animal habitats in a connected pseudo-circle around downtown Bloomington. This circle will connect three main areas of existing high quality habitat; Griffy Lake, Clear Creek, and Jackson Creek. Even after the Petitioner reduced the size of the development from the original plan, this revised rendition of the proposal still does not follow the BHCP completely. The EC recommends that the Petitioner preserve and enhance all the contiguous areas of high quality wooded areas and the riparian buffers, at least as much as UDO standards require.

## 3.) TREE AND FOREST HABITAT PRESERVATION

The EC inspected the site and found that it is primarily wooded with most of the area being dominated by mixed-age native hardwoods. There is relatively young, successional growth along the interior road and near stream channels that includes walnut, ash, boxelder, cottonwood, sycamore, cedar, sumac, and redbud trees. The vegetation under the power lines has recently been removed entirely.

A large area along the north end and along the west side supports a higher-quality forest with older trees, less early-succession growth, and a diverse native understory. Some of the tree species found include

City of Bloomington
Bloomington Environmental Commission
cottonwood, sycamore, tuliptree, shagbark hickory, red oak, white oak, and black cherry. The forest floor within this area is blanketed with a native understory that lacks the abundant invasive species found in the younger successional growth where the site has been previously cleared. This understory includes mayapple, rue anemone, trout lily (both yellow and white), spring beauty, toad shade trillium, Solomon's seal, toothwort, bloodroot, wild geranium, wild strawberry, plantain, and more. These wooded areas are high quality in the context of what is left within the City's boundaries, and should be preserved.

The proposed impervious surface coverage will result in substantial loss of forest wildlife habitat and forest ecosystem services within the City planning jurisdiction. Consequently, to best serve the City's environmental integrity, more space should be set aside as conservation easement.

## 4.) HIGHWAY BUFFER WIDTH

The EC believes that the proposed 30 feet of buffer between the highway and the development is not wide enough for habitat connectivity, noise and air pollution protection, and visual impacts, and should be at least 50 feet wide.

## 5.) INVASIVE SPECIES

The invasive species, primarily bush honeysuckle, should be removed from the site, with follow up maintenance as needed. This is especially important to perform in the Conservation Easements.

## 6.) LOW IMPACT DEVELOPMENT

This PUD should contain the requisite controls to protect environmental quality as these parcels develop by ensuring adequate BMPs that are at least as effective as those found in the UDO. Therefore, the EC recommends that the plan be crafted to include state-of-the-art Low Impact Development (LID) best practices.

Low Impact Development is an integrated, holistic strategy for stormwater management, and thus is especially important at this site because of its size and topography. The premise of LID is to manage rainfall at the source using decentralized small-scale controls that will infiltrate, filter, store, evaporate, and detain runoff close to the sources.

Examples of the types of LID practices that could be used are listed below.

1. Floodwater storage that can manage runoff timing
2. Multiple small biofiltration basins and trenches
3. Vegetated roofs
4. Pervious pavement
5. Well-planned native landscaping
6. Avoidance of curbs and gutters, to allow sheet flow

The District Ordinance currently allows only one post-construction detention basin. Current LID BMPs indicate that multiple smaller basins are more effective. Therefore, the EC believes that the District Ordinance should not allow only one post-construction detention basin, as written now, and because this is a proposed PUD, this change could be specified.

## 7.) GREEN BUILDING

The EC recommends that commitments be made in the District Ordinance for incorporating environmentally sustainable green building and site design features in the design for all the buildings, not just the amenity building.

## 8.) NATIVE PLANTS

The District Ordinance states that native plants will be used in the landscape plan. Please commit to using all native species with the possible exception of the street trees. Native plants exemplify Indiana's natural heritage and benefit native birds and insects, particularly pollinators. For additional suggestions, please see the EC's Natural Landscaping materials at www.bloomington.in.gov/beqi/greeninfrastructure/htm under 'Resources' in the left column. We also recommend an excellent guide to midwest sources of native plants at: http://www.inpaws.org/landscaping.html. Native plants provide food and habitat for birds, butterflies and other beneficial insects, promoting biodiversity in the city. Furthermore, native plants do not require chemical fertilizers or pesticides and are water efficient once established.

The Landscape Plan shows 284 Street Trees, of only four species. Three species are not native and the fourth is a species that the Urban Forester doesn't want to use for Street Trees because of it overabundance. The Petitioner should change the Street trees to offer more diversity of native trees. There is no other landscaping shown at this time.

## 9.) ALLOW CLOTHESLINES

Clotheslines reduce energy consumption. The Covenants, Conditions, and Restrictions for all of the neighborhood, homeowner, or condominium associations should not restrict the use of clothes lines in yards. This should be clearly stated in the District Ordinance.

## 10.) STATE AND FEDERAL PERMITS

If any disturbance to any waterways or wetlands is anticipated, the Petitioner should obtain the necessary state permits from the Indiana Department of Environmental Management or the federal Army Corps of Engineers before any city permits are granted.

## 11.) ADDITIONAL QUESTIONS TO BE ADDRESSED BY PETITIOER

A. Will the Amenity Building be open for everyone in all four Site Areas?
B. What happens if Site Area C and D are constructed, and the Petitioner halts work?
C. The District Ordinance states the strip of proposed preserved wooded area along the western edge is 50 ft . wide, while the plan shows it at 30 ft . wide. How wide is it planned to be?
D. What impact will the 50 ft . Duke Energy power easement traversing the site have on the Conservation Easement? The easement swath needs to be removed from the total acreage calculation for the Conservation Easement.
E. What is the status on the agreement with Bloomington Transit regarding a new bus route to serve this site?
F. Considering the District Ordinance states the Project will be designed and built with the pedestrian in mind and encouraging residents to rely less heavily on personal automobiles, is it possible to expand the bus service agreement to include weekends, rather than only Monday through Friday?
G. In the District Ordinance, page 6, under parking requirements, it is stated that the number of parking spaces (excluding the single-family area) is .56 spaces per bedroom. However on page 4 , the number of parking spaces do not calculate as that. At 825 beds, the number of parking spaces would be 462 , not 458 . Please explain the discrepancy.
H. The District Ordinance states there will be 8 vehicle charging stations, yet the plan shows 12 . How many charging stations are proposed?
I. The District Ordinance states there will be 3 stations to collect recyclables, yet the plan shows only two. Where is the third station proposed?
J. The plan shows one station for trash and recycling in areas C and D combined. Is this the only location for residents to take their materials until the site is handed over to the city?
K. Explain the energy savings expected to be realized by installing Energy Star appliances. Also please commit to installing Energy Star appliances throughout all rental units, not just the clubhouse.
L. Please detail what products are planned to be used that are low volatile organic compounds (VOCs), and include how much lower the VOCs are expected to be compared to products that are not classified as low VOC.
M. Please indicate how you plan to document to the city's satisfaction the purchase of regional building materials.
N. Why is the Petitioner limiting the Duke Energy consulting program to the amenities building? Please include all buildings.

## EC RECOMMENDATIONS:

1.) The Petitioner should increase the pervious surface coverage (decrease the impervious coverage) of the site to meet the minimum standards of the UDO.
2.) The Petitioner should increase the pervious surface coverage in such a way to maintain contiguous strips of habitat connectivity as described in the EC's Bloomington Habitat Connectivity Plan.
3.) The Petitioner should preserve within Conservation Easements, the environmentally sensitive, high quality wooded areas.
4.) The Petitioner should increase the buffer along Interstate 69 to at least 50 feet in width.
5.) The invasive species should be eradicated from the Conservancy Easement areas.
6.) The Petitioner should design with Low Impact Development practices and avoid using only one large detention facility.
7.) The Petitioner should use green, sustainable building practices to reduce the carbon footprint of all the buildings on the site.
8.) Because the site is adjacent to native woodlands, all landscape material should be native to south central Indiana with the exception of some street trees.
9.) The District Ordinance should specifically allow clothes lines to be installed.
10.) Any required state and federal permits should be obtained before any city permits are granted.
11.) The Petitioner should address the additional questions by the final revision deadline prior to the next hearing.


PUD-36-19 Trinitas Development
1550 N. Arlington Park Drive
Plan Commission
2016 Aerial Photograph
By: greulice 6 Dec 19

500

| 0 | 500 | 1000 | 1500 |
| :--- | :--- | :--- | :--- |

City of Bloomington
Planning \& Transportation

Scale: $1^{\prime \prime}=500^{\prime}$

Corporate HQ
201 Main Street, Suite 1000
Lafayette, IN 47901

November 4, 2019

## Terri Porter

Director, Planning \& Transportation
City of Bloomington
401 N. Morton Street
Bloomington, IN 47404
RE: Trinitas Planned Unit Development, "W. $17{ }^{\text {th }}$ Street."
Dear Ms. Porter,
Trinitas Ventures is pleased to submit the enclosed Planned Unit Development (PUD) application for the subject project. We very much appreciate the many hours City personnel has spent engaging with our team on this proposed development. We have taken that feedback, as well as comments from other City and community stakeholders, and put a plan together that we feel achieves the goals and objectives outlined in the Comprehensive Plan and also addresses important issues and concerns with respect to workforce housing needs and environmental and transportation demands.

We respectfully request to be placed on the December 9, 2019 agenda for the City of Bloomington Plan Commission for consideration of our rezone (PUD) petition. In addition, we would like to request a waiver of the $2^{\text {nd }}$ Plan Commission meeting. If we are successful in the rezone petition, we ask that future development plans be delegated to staff for review and approval.

Thank you, and we look forward to working with staff, the Administration, Plan Commission and City Council on this project.

Sincerely,


[^0]
## DISTRICT ORDINANCE

## W. $17^{\text {th }}$ Street

## A Planned Unit Development

## Trinitas Development LLC

## November 4, 2019


*images in document are representative, not final

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## W. $17^{\text {th }}$ Street

## Planned Unit Development

The W. 17th Street Project (the "Project") is a proposed development on the northwest side of Bloomington, just east of Interstate 69, north of $17^{\text {th }}$ Street, west of Arlington Road and located within the Crescent Bend Neighborhood. This proposed residential development will include a mixture of residential units including apartments, townhomes, duplexes and single-family homes. The site consists of 39.29 acres of land with an overall proposed density of 9.85 units per acre. The plan includes approximately 13.89 acres of green space intended to protect existing environmental features. There is one planned entrance off Arlington Road and two points of access off $17^{\text {th }}$ Street. Currently, the property is zoned PUD and Business Park. A portion of the property was a part of a now expired PUD that included an affordable housing development along $17^{\text {th }}$ Street. This former PUD established one point of access off $17^{\text {th }}$ Street. Another portion of the property is currently zoned Business Park and has been developed over several years with smaller commercial buildings along $17^{\text {th }}$ Street. This provides a second point of access off $17^{\text {th }}$ Street.

The proposed development incorporates new urbanist design principles and draws on the existing UDO and Comprehensive Plan to set standards for the development. The desire for complete streets, a variety of housing types, a modified gridded street pattern and meaningful open space have been major drivers for design of the Project. The site layout focuses on preserving existing environmental features such as trees and sloped areas and, most importantly, existing waterways. As environmental features were identified the design resulted in four (4) primary areas of development:

## SITE AREAS



Arlington Road
A. Area A (Single-Family Lots) - The lots outlined in the northeastern portion of the site are purposefully designed with owner-occupied single-family homes in mind. Trinitas is proposing to convey 45 finished (buildable) lots to the City so that the City may decide how best to deliver homes that address Bloomington's workforce housing needs. All infrastructure, including utilities, will be completed by Trinitas prior to conveyance of the lots to the City.
B. Area B (Townhomes) - Townhomes are designated in the southeast section of the property. These townhomes will be for rent units located immediately south of the single-family area.
C. Area C (4-story Multi-family and Amenity Building) - This area consists of one to two 4-story buildings that will feature for rent apartment units. This building(s) will also incorporate a Clubhouse featuring a business center, collaboration areas, fitness rooms, and provide other indoor and outdoor amenity space for residents. Another feature of this building(s) will be a small retail space thought to house coffee, tea and an assortment of snacks available to the public.
D. Area D (Cottages) - Cottages, also referred to as duplexes, will be located in the southwest portion of the site and will be for rent units.

Trinitas anticipates completing the Project over a 24 -month period once construction begins. The preliminary schedule includes completing Area C and D in Year 1 with the balance of the Project, Area A and B, finished in Year 2.

Overall, Trinitas believes the Project will substantially improve the aesthetic and economic value of the area and add to the compact urban form within the urban service boundary of the City of Bloomington. The recently adopted Growth Policy Plan calls for neighborhood residential—qualifying densities ranging from 2-15 units per acre. The proposed density for the W. $17^{\text {th }}$ Street Project is 9.85 units per acre on average across all areas of the development.

## Overall Site Features

## Project Data:

Gross Acreage - 39.29
Total Units (Areas B-D) - 387
Total Beds (Area B-D) - 825
1 Bedrooms - 109
2 Bedrooms - 326
3 Bedrooms - 210
4 Bedrooms - 180
Parking Spaces (Area B-D) - 458
Single-Family Lots (Area A) - 45

## Land Use and Development Standards

The Project proposes four (4) areas of residential development as shown on the site plan in Exhibit A. Each of these areas has specific development standards identified from the Bloomington Unified Development Ordinance (UDO). When a standard is not specifically identified in this document, the referenced UDO District, is intended to govern.

## Open Space and Environmental Conservation

The site plan incorporates 13.89 acres of undeveloped land. This land, accounting for $35 \%$ of the total site area, will remain as dedicated open space or within a Conservation Easement for the benefit of the City of Bloomington. The majority of this area is on the northern and northwestern portions of the site, however, there are undisturbed buffers that extend along the entire western boundary with "fingers" of undisturbed area in and through the central portion of the site.

A limited tree survey is currently underway with focus on a 50-foot wide strip within the proposed open space easement on the western property boundary.

Please note the existence of a 50-foot Duke Energy power easement located in the center of the site and traverses the entire property from north to south.

## Access and Roadways

There will be two (2) entrances to the site located off W. $17^{\text {th }}$ Street and one entrance accessible from/to Arlington Road. Information regarding the two (2) W. $17^{\text {th }}$ Street access points is listed below.
W. 17 ${ }^{\text {th }}$ Street Eastern Access via N. Arlington Park Drive: A 50' roadway and utility easement was recorded with the Arlington Park (Glick Arlington Park LLC as owner), Phase I plat. This plat is recorded in plat cabinet C envelope 196 (see note 4). Trinitas is in discussions with Glick asking Glick to dedicate this Easement land to the City as public right-of-way.
W. $17^{\text {th }}$ Street Western Access via 60-foot Roadway and Utility Easement: Parcel 1, Tract 1 of the Morris subdivision shows Morris owns a 60' wide strip of land from $17^{\text {th }}$ street to the remainder of the property which has a Roadway and Utility Easement overlay. Since this Easement is to the benefit of the Morris tract, upon purchasing the land (Summer 2020) Trinitas will 1.) vacate the Easement, then 2.) dedicate this land to the City as public right-of-way via the platting process.

Roadways throughout the site are intended to be public where feasible and are designed to meet City standards. These roadways will be dedicated to the City at time of plat recordation.

A multi-use path is designed along the entire length of the main roadway running through the site connecting Arlington Road to W. $17^{\text {th }}$ Street.

## Transportation

Trinitas has received a proposal from Bloomington Transit ("BT") to create a new bus route that would serve the proposed development. Trinitas intends to enter into an agreement with BT to provide bus transit services for the Project In lieu of operating its own, private shuttle service for daily transportation to and from
various points within the City. Trinitas' residents will have the non-exclusive right to access and ride the service at no charge using a means of identification for free passage which shall be mutually agreed upon by BT and Trinitas.

The BT proposal for a new bus route includes a schedule to operate on a 40-minute frequency, MondayFriday, on a year-round basis from approximately 7:00 am to 10:00 pm and will include multiple stops in the Downtown and IU Campus areas. Any agreement between Trinitas and BT is thought to include a 3-year base term for service. Additional terms are outlined in an email from Lew May to Jeff Kanable dated October 16, 2019 and is included in Exhibit B, Supportive Information. Final terms will be agreed upon approximately 12months in advance of completion of the Project and are subject to approval by the BT Board of Directors and Trinitas Executive Committee.

## Pedestrian Access

The Project will be designed and built with the pedestrian in mind, encouraging residents to rely less heavily on personal automobiles. This is accomplished through a mix of well-connect multi-use paths and sidewalks throughout the site. A 10-foot multi-use path will run parallel to the main roadway from Arlington Road to W. $17^{\text {th }}$ Street. Sidewalks allow pedestrians to easily walk throughout the site, to the bus stop, to the Clubhouse and amenity area or even to the recreational area and open spaces. Walking is just one (1) alternate transportation option residents of the Project will enjoy. Bicycle, scooter and other means of transportation also exist as a result of the interconnectivity of sidewalks and paths throughout the Project.

## Occupancy

Occupancy shall be governed by
Occupancy for all other Areas shall be:

1. 1 and 2-bedroom unit occupancy is limited to 3 unrelated adult persons.
2. 3 and 4 -bedroom unit occupancy is limited to 5 unrelated adult persons.

## Parking requirements

Parking for the overall development, excluding the single-family lots in Area A, is .56 spaces on a per bedroom basis. A 15' parking setback for the perimeter of the overall PUD area is provided.

Bicycle parking shall be provided based on one space per four bedrooms. This parking will be dispersed throughout the Project.

## Sustainability Initiatives

The following sustainability/green initiatives will be implemented in designated areas of the development.

1. The parking for units within Areas B-D shall have a minimum of $2 \%$ or 8 spaces that are plug-in ready for electrical vehicle charging stations. Trinitas is currently planning for these spaces to be covered with solar arrays on the roof of those structures. The intent is for solar power to generate the electricity to the electric vehicle charging stations. There will be wayfinding signage directing residents of their location.
2. Designated areas accessible to waste haulers and building occupants for the collection and storage of recyclable materials have been positioned in three separate areas of the site and are noted on the site plan.
3. To reduce water usage on-site, we will eliminate all irrigation and utilize native plantings.
4. The use of natural light in the clubhouse will be incorporated into the design to reduce interior light pollution.
5. Lighting controls and occupancy sensors within designated areas of the clubhouse will be utilized to reduce energy consumption.
6. Energy efficiency will be realized through the installation of energy star appliances throughout the clubhouse.
7. Water usage will be controlled throughout the clubhouse utilizing low flow plumbing fixtures.
8. Stormwater treatment and detention throughout the site will incorporate bio-filtration strips at the edge of some parking areas for stormwater to sheet flow off and into these areas for immediate treatment.
9. Utilization of low volatile organic compounds will be utilized during construction of the clubhouse, including items such as: paint, adhesives, sealants, flooring and insulation.
10. The development will purchase a minimum of $10 \%$ regional building materials (by cost) that are sourced and manufactured within 500 miles of the site.
11. The 4-story Multi-Family and Amenity Building will comply with Energy Standard for Buildings ASHRAE 90.1-2007.
12. The building envelope for the clubhouse will incorporate the following:

- Window $=0.40$ U Factor non-metal, 0.50 U Factor metal, 0.40 SHGC
- Roof insulation value $=$ R20
- Wall Insulation value = R13 wood framed wall

13. Each ventilation system in the clubhouse that supplies outdoor air to occupied spaces will have particle filters or air cleaning devices that have a minimum efficiency reporting value (MERV) of 13 or higher, in accordance with ASHRAE Standards 52.2-2007.
14. Smoking will be prohibited in all public areas within the community during all times including but not limited to the clubhouse, fitness areas, pool area, courtyard area, and sports courts.
15. Trinitas will participate in consulting program offered by Duke Energy to identify efficiencies in design to maximize energy savings for four story building in Area C.
16. On site recycling.

## Services (including mechanical, utility and trash services)

Utility services boxes, telecommunication devices, cables, vents, flues, chillers, fans, trash receptacles, dumpsters and service bays located on private property shall be screened from view from the public street. No dumpsters will be located within the front setback area of any public street.

## Sign Standards

The Project will potentially have free-standing signs located near each of the entrances at $17^{\text {th }}$ Street and Arlington Road. Each of these signs shall have a maximum square footage of 36 square feet per side and have a maximum height of six feet. Signs in each area will conform to the underlying UDO District.

## Site Drainage Standards

All drainage standards shall be in accordance with the City of Bloomington Utility standards and engineering practices however, the following design considerations may be incorporated into the entire Project site for the BMP plan including stormwater retention/detention and stormwater quality:

1. The drainage area (contributing or effective) of the entire Project site is allowed to be served by one post-construction BMP or can be split into many throughout the site.
2. The maximum treatable ponding depth for stormwater quality areas may be up to 4 feet.

## Architecture

Proposed structures are intended to reflect a contemporary residential development. Each of the areas as defined herein are intended to have flexibility and predictability in product type while also consisting of an overall theme that weave together each of the Areas A-D. Representative images can be found within this document. More specific detail pertaining to each Area A-D can also be found within this document.

Structures in Areas A, B and D are intended to be one to three stories in height with front porches and rear patios. Area C proposes a four-story apartment building(s) over a parking garage. Exterior construction across each of the Areas will include high quality siding with some additional architectural accents such as shake and/or board and batten in addition to residential windows and doors.

The Project will follow the anti-monotony standards as specified herein. The community will be adequately landscaped with native plantings and buffer yard landscaping. Planting emphasis will be placed on the east and west property lines. Each dwelling unit shall feature landscaping which will consist of native plantings, shrubbery and perennials. Final landscape plans will be provided with each final Area plan and will be consistent with the UDO as adopted on the date the preliminary plan is approved.

## Lot Standards and Uses

| Area | Description | Acreage |  | Units |
| :--- | :--- | :--- | :--- | :--- | DUE

## Open Space

| Area <br> Space (Ac.) | Description (Ac.) | Open Space | Protected |  |
| :--- | :--- | :--- | :--- | :--- |
| A | Single-family lots | 12.87 | $34 \%$ | 3.74 |
| B | Townhomes | 7.11 | $43 \%$ | 1.87 |
| C | Multi-family apartments | 8.18 | $75 \%$ | 5.61 |
| D | Duplexes or townhomes | 11.13 | $30 \%$ | 1.06 |

## Anti-monotony Code

The following variations will be used to break up the monotony in the design such that no two structures sitting side by side are identical in at least 2 aspects as listed below at the time of building permit. Examples of proposed colors and exterior materials are found within the body of this document.
A. Difference in roofline.
B. Difference in overall building footprint.
C. Difference in building color.
D. Difference in exterior materials.
E. Setback

## Easements

Easements shall be per UDO standards.


## Area A

Area $A$ is a single family residential platted lot subdivision designed to the standards of the Residential Core (RC) District of the Unified Development Ordinance of the City of Bloomington. This area is intended to include approximately 45 single family lots, which can be developed and owned individually. Specific standards with respect to lot size, lot coverage and elements of design (building materials and setbacks) are like those of the RC District unless specified below. This area is 12.87 acres, with a developable area of 8.00 acres. The finished lots in Area A are intended to be conveyed to the City of Bloomington for the purposes of providing workforce housing.

Impervious Surface Coverage: 3.44 acres (27\%)
Setbacks from outer property lines: $15^{\prime}$
Individual Lot Setbacks:
Front yard - 10'
Side yard - 5'
Rear yard - 5'


## Area B

Area $B$ is a townhome residential area. This area could be single family lots, paired homes, townhomes, zero lot line homes or condominiums as set forth in the standards of the Residential Multifamily (RM) of the Unified Development Ordinance. This area is intended to include approximately 156 townhome dwelling units, which could be individually owned in the future, but are currently planned as rental units. Specific standards with respect to lot size, lot coverage and elements of design (building materials and setbacks) are like those of the RM District unless specified below. This area is approximately 7.11 acres, with a developable area of 4.68 acres.

Impervious Surface Coverage: 3.27 acres (46\%)
Density: 156 units, 21.94/acre
Setback from outer property line - 15'
Permitted Uses - Single family detached, single family attached, rowhouses, townhomes (no more than 16 units in a building)


AREAB - TOXNHOUSES (92.75) DUE UNITS, (255) BEDS (13.05) DUE UNTTS PER ACRE (96) PARKING SPACES

AREA B UNIT MIX -

| 1 BED | 70 | $43.2 \%$ |
| :--- | :--- | :--- |
| 2BED | 70 | $43.2 \%$ |
| 3BED | 16 | $9.9 \%$ |
| 4BED | 6 | $3.7 \%$ |
| TOTAL | 162 | $100 \%$ |

## Area C

Area $C$ is a multi-family residential area which could include limited commercial on the first floor. This area can be apartment or condominiums as set forth in the standards for Residential High-Density (RH) District of the Unified Development Ordinance. Allowable use will include up to 113 dwelling units and up to 1,700 square feet of commercial space allowing for coffee/tea sales, food/snack sales and other retail sales. This Area will allow for up to 65 -feet in building height. Other specific standards with respect to lot size, lot coverage and elements of design (building materials and setbacks) are like those of the RH District unless specified below. This area is 8.18 acres, with a developable area of 2.50 acres.

Impervious Surface Coverage: 2.20 acres (27\%)
Density: 113 units, 13.81/acre
Setback from outer property line - 15'
Permitted Uses - Retail (less than 1, 700 square feet), restaurant, recreation center, multifamily dwellings



MULTISTORY BUILDING CLUBHOUSE LEVEL (LVL 1)


MULTISTORY BUILDING TYPICAL UPPER LEVEL (LVLS 2-4)

## Area D

Area $D$ is a cottage or duplex residential area. This area could be apartments or condominiums (1-6 units per building) as set forth in the standards of the Residential Multifamily (RM) District of the Unified Development Ordinance of the City of Bloomington. This area is intended to include approximately 118 dwelling units which could be under single or individually ownership but are currently planned as rental units. Specific standards with respect to lot size, lot coverage and elements of design (building materials and setbacks) are like those of the RM District unless specified below. This area is approximately 11.13 acres, with a developable area of 8.03 acres.

Impervious Surface Coverage: 6.82 acres (61.3\%)
Density: 118 units, 10.60/acre
Setback from outer property line - 15'
Permitted Uses - Single family attached dwelling

Exhibit A

$$
\begin{aligned}
& \text { SITE AREAS } \\
& \text { AREA A - SINGLE FAMILY } \\
& \\
& \\
& \text { (45) LOTS } \\
& \text { (0'X12O', } 11 \text { ACRE TYPICAL LOT } \\
& \text { (3.50) UNITS PER ACRE }
\end{aligned}
$$

WEST 17TH STREET
BLOOMINGTON, INDIANA
STUDIO M ARCHITECTURE AND PLANKIGG
PROJECT NUMBER- 19014

A总

SITE AREAS
STUDIO M ARCHITECTURE AND PLANMG
PROJECT NUMBER - 19014



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NEST 17TH STREET
BLOOMINGTON, INDIANA

STUDIO M ARCHITECTURE AND PLANKQIG
PROJECT NUMBER-19014
OCTOBER 30,2019







Complete Streets



## Kimberly Hansen

From:
Sent:
To:
Subject:

Jeffrey Kanable
Friday, November 1, 2019 10:06 AM
Kimberly Hansen
FW: Proposed Terms

This is the BT email

From: Lew May [mayl@bloomingtontransit.com](mailto:mayl@bloomingtontransit.com)
Sent: Wednesday, October 16, 2019 2:57 PM
To: Jeffrey Kanable [jkanable@trinitas.ventures](mailto:jkanable@trinitas.ventures)
Subject: Proposed Terms

Jeff,

Here's my initial thoughts on proposed terms for an agreement:

- Bus - Bloomington Transit (BT) will provide a 40-foot transit bus. Trinitas will have the non-exclusive right for its residents to access and ride the service at no charge with a means of rider identification for free passage to be mutually agreed upon between BT and Trinitas .
- Bus Route - The final route and bus stops along the route will be mutually agreed upon between BT and Trinitas preferably 12 months in advance of the startup of operations.
- Frequency, Span of Hours, Number of Buses Operated, and Days of Operation - The frequency, span of hours, number of buses operated, and days operated throughout the year will be mutually agreed upon between Trinitas and BT with the understanding that all of these variables will drive final cost. Any changes to what was originally proposed could increase or decrease the final cost.
- Cost - Operating costs for the service will be mutually agreed upon between Trinitas and BT. Trinitas would agree to pay such operational costs, which may be increased up to 3\% per year to recover increases in operating costs.
- Term - The initial term will be three (3) years, then Trinitas and BT will assess the status of the transit funding environment as well as any new surrounding development to determine future viability and funding of the route. Assuming no substantive changes to either, the agreement would automatically renew on an annual basis.

The remaining terms and final agreement will be executed no later than 12 months prior to project delivery, which is expected to be August 2021. The final agreement, including the terms and conditions contained in this agreement, is subject to the approval of the Bloomington Public Transportation Corporation Board of Directors.

Let me know if you have any questions or need more information. I'll be on vacation over the next 10 days or so but will be periodically checking my email and will respond to you as needed.

Thanks!
Lew

Lew May
General Manager

Bloomington Public Transportation Corporation
130 W. Grimes Lane
Bloomington, IN 47403
812.332.5688 office

Nov. 1, 2019

To Whom It May Concern,

As Trinitas submits their PUD application, the Crescent Bend Neighborhood Association would like to comment on this proposal. Trinitas has kept us abreast of their plan to develop 40 acres between W. $17^{\text {th }} \mathrm{St}$. And Arlington Rd by inviting us to informative meetings with visible renderings of the proposed development. Since we have met multiple times over the years, CBNA has come to appreciate that Trinitas has worked hard toward making this project one that will be attractive and that will house both Bloomington's workforce and student population.

We like the fact that there will be green space that could become a walking trail or simply be left in a natural state. Due to the size of this project, we would like to believe that our neighborhood might also have access to a clubhouse/common room such that should we need a meeting place for a neighborhood association meeting or even for a family gathering, the entire community would benefit.

We appreciate that there will be access to this property from both W. $17^{\text {th }}$ and Arlington Road to help reduce the eventual increased traffic on $\mathrm{W} .17^{\text {th }} \mathrm{St}$. However, there is some concern about the acreage that has been set aside for the City's discretion as to future use of this portion of land. We are unclear as to why the City would ask Trinitas to set aside any amount of property for the City's future use. Before this project proceeds, the neighborhood association feels that if the City requires this of Trinitas, the City should commit to its future use.

We appreciate Trinitas' efforts to make this project an attractive and functional part of our neighborhood.

Respectfully,
Carrie Winkel
Executive Chair Crescent Bend Neighborhood Association

## GLICK FAMILY HOUSING FOUNDATION

July 11, 2019

## VIA EMAIL

Trinitas

Attn: Jeff L. Kanable, Project Executive
201 Main Street, Suite 1000
Lafayette, IN 47901
jkanable@trinitas.ventures
Re: The Cottages at Chandler's Glen
Dear Mr. Kanable,
Thank you for allowing Gene B. Glick Family Housing Foundation, Inc. the opportunity to speak with you and your representatives and review materials related to Trinitas' proposed Cottages at Chandler's Glen development in Bloomington, including the revised Architectural Plan dated June 24, 2019. We appreciate the professional manner in which you've sought feedback from us and the community at large. Your effort is consistent with Trinitas' reputation as a sophisticated and respectable developer of quality multifamily projects.

As you know, the Foundation, an Indiana nonprofit corporation and 501(c)(3) charitable organization, acquired an adjacent affordable housing property historically referred to as Arlington Park in 2012. The Foundation has invested millions of dollars to acquire Arlington Park, rebrand it as "The Reserve at Chandler's Glen", invest in physical upgrades, and provide its residents valuable social services. The Foundation has vested interest in the continued improvement of the Reserve and its surrounding area.

With all that as background, the Foundation welcomes the Cottages of Chandler's Glen and believes it will continue to improve this area of Bloomington. By this letter, we also re-affirm Trintas' agreement, reached over email on September 4, 2018, to cause its project contractors to keep North Arlington Park Drive open during and after construction and, upon request, to use commercially reasonable good faith effort to reduce construction traffic through the Reserve.

Best of luck with the Cottages. Should you desire anything further, please let us know. Thanks again.


Gene B. Glick Family Housing Foundation, Inc.

Adam J. Richter, Esq. Vice President and General Counsel

## Kimberly Hansen

| From: | Clint Fish [cfish@1stamericantrust.com](mailto:cfish@1stamericantrust.com) |
| :--- | :--- |
| Sent: | Wednesday, October 30, 2019 7:27 PM |
| To: | Jeffrey Kanable |
| Cc: | Kimberly Hansen |
| Subject: | Project in Bloomington |

Hi Jeff and Kimberly,

I am looking forward to the Bloomington City Council approving your project on the NW side of Bloomington.

This mixed use housing project will make an excellent addition to the city in particular this area of town. I like the uses of green space areas and the connectivity to Arlington Road.

I would appreciate it very much if we can stay in contact as the project develops.
Good luck.

Clint

Clint Fish
President
First American Trust

Sent from my iPhone


Traffic Impact Study
Proposed Housing Development
$17^{\text {th }}$ Street and Arlington Road
Bloomington, IN

Prepared for
Bynum Fanyo and Associates

## By

AZTEC Engineering Group, Inc.
320 W. $8^{\text {th }}$ Street, Suite 100
Bloomington, Indiana 47404
(812) 717-2555


## INTRODUCTION

Two parcels totaling 34.48 acres have been acquired for a residential development known as "Arlington Road Development." The Arlington Road Development proposes a mixture of rental residential uses - 238 townhouses (duplexes) and 28 single-family homes. The single family rental homes are intended to be rentals but may also be owner-occupied. The development will be located north of $17^{\text {th }}$ Street between Crescent Road and Lindberg Drive. This Traffic Impact Study is being prepared at the request of Bynum Fanyo and Associates, the primary site civil engineering firm working for Trinitas Ventures LLC on this proposed development.

## PURPOSE \& NEED

The proposed development is located with the limits of the City of Bloomington. Based on the expected trips noted above in Table 1; a Category 1 Traffic Impact Study (TIS) is required. A Category 1 TIS is for developments which will generate from 100 or more peak hour vehicle trips but less 500 vehicle trips during the morning OR afternoon peak hours. A Category 1 TIS analyzes the opening year of the development. The Study Area includes the site access driveways and the adjacent signalized intersections and/or major unsignalized intersections within a $1 / 4 \mathrm{mile}$. In this case, the Study Area will include the following intersections:

- The existing $17^{\text {th }}$ Street/Arlington Park Drive intersection;
- The proposed $17^{\text {th }}$ Street/West Entrance Roadway intersection;
- The proposed Arlington Road/East Access Roadway intersection;
- The existing $17^{\text {th }}$ Street/Arlington Road roundabout intersection.

The specific study objectives are as follows:

- Determine the trips associated with this proposed Arlington Road Development;
- Evaluate the existing $17^{\text {th }}$ Street/Arlington Park Drive intersection;
- Evaluate the proposed $17^{\text {th }}$ Street/West Entrance Roadway intersection;
- Evaluate the proposed Arlington Road/East Access Roadway intersection;
- Evaluate the existing $17^{\text {th }}$ Street./Arlington Road roundabout intersection;
- Evaluate $17^{\text {th }}$ Street for right-turn lane and left-turn warrants;
- Provide a set of conclusions based on the HCS analysis;
- Make recommendations based on the results of the study.


## ZONING

One of the parcels in the development will be re-zoned from Business Park (BP) to a Planned Unit Development (PUD). As a PUD, the development will have its own development ordinance. The zoning change may trigger off-site improvements to publicly maintained streets and the developer is addressing these potential improvements proactively by preparing a TIS coinciding with a petition to the Planning Commission. The parcels of land surrounding the proposed site are currently a mixture vacant land and residential uses.

## SITE PLAN

Figure 1 - Site Plan (Page 4) provides a scaled drawing of the proposed development plan, which illustrates the location of the site access driveways, the lot layout, and other amenities. The proposed development will have two site access roadways along the north side of $17^{\text {th }}$ Street and one site access roadway along the west side of Arlington Road. The access roadways along the north side of $17^{\text {th }}$ Street include the existing $17^{\text {th }}$ Street/Arlington Park Drive intersection and a proposed site access roadway (referred to as the West Entrance Roadway) which is located

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approximately 350 feet west of Arlington Park Drive. $17^{\text {th }}$ Street is a two-lane east/west minor arterial roadway and Arlington Park Drive is a two-lane north/south neighborhood collector roadway. Arlington Park Drive is an existing privately-maintained road. The West Entrance Roadway will be a two-lane north/south roadway. The $17^{\text {th }}$ Street/Arlington Park Drive intersection and the proposed $17^{\text {th }}$ Street/West Entrance Roadway will be full access intersections; allowing left-in, right-in, left-out, and right-out.

Another proposed site access roadway referred to as the East Access Roadway will be located along the west side of Arlington Road. The East Access Roadway with be a full access intersection. Arlington Road is a two-lane north/south minor arterial roadway with a posted speed limit of 40 MPH . The East Access Roadway is located approximately 100 feet south of the $20^{\text {th }}$ Street/Arlington Road intersection.

## DEVELOPMENT PHASING AND TIMING

The Arlington Road Development will be built in two phases as a Planned Unit Development (PUD). The Phase 1 will be completed in 2020 and Phases 2 and 3 completed in 2021 depending upon agency approvals.

## STUDY AREA

The study area for the proposed development is confined to the City of Bloomington roadways. The area of significant traffic impacts and influence area have been established based on the size, density, and characteristics of the proposed development. The existing land uses surrounding the site, as well as the site's accessibility, have been considered in determining the site's study and influence areas.

## Area of Significant Traffic Impact

This development was determined to be a small development. The proposed development is expected to generate more than 100 peak hour vehicle trips but less than 500 peak hour vehicle trips. Therefore, the proposed development requires a Category I TIS. The area of significant traffic was determined to consist of the following intersections:

- The existing $17^{\text {th }}$ Street/Arlington Park Drive intersection;
- The proposed $17^{\text {th }}$ Street/West Entrance Roadway intersection;
- The proposed Arlington Road/East Access Roadway intersection;
- The existing $17^{\text {th }}$ Street/Arlington Road roundabout intersection.


## Influence Area

A development's influence area consists of the geographic area surrounding the development from which it is expected to draw the majority of its trips. In the case of the proposed development, the geographic area from which the majority of the expected site-generated trips will come from is the $17^{\text {th }}$ Street corridor and the Arlington Road corridor. Per the City of Bloomington requirements, the influence area would encompass the existing and proposed intersections referenced above.

## SITE ACCESSIBILITY

In most cases, the incoming trips will originate and terminate from areas outside the proposed development and will use $17^{\text {th }}$ Street to access Arlington Park Drive or the West Entrance Roadway and Arlington Road to access the East Access Roadway and vice-versa for the exiting site-generated traffic.

## TRAFFIC VOLUMES

$17^{\text {TH }}$ Street has an estimated 2018 average daily traffic (ADT) of 11,050 vehicles a day. The ADT values for $17^{\text {th }}$ street are based on projected traffic from the I-69 Section 5 Technical Provisions. The ADT on Arlington Road is 14,460 vehicles a day and is based on the same study. Traffic counts for the study were not taken due to the current detouring related to $\mathrm{I}-69$ at $2^{\text {nd }}$ Street and $3^{\text {rd }}$ Street and various City and County closures and traffic restrictions in Bloomington. As a result, $17^{\text {th }}$ Street is currently experiencing a high volume of traffic which would constitute an inaccurate portrayal of traffic on $17^{\text {th }}$ Street.

Arlington Road is estimated to have a 2021 ADT of 12,500 vehicles a day and 1,500 vehicles during the peak hours. The estimation is based on the roadway alignment, the existing development (primarily residential) along Arlington Road, and the connection points to other roadways.

## PHYSICAL CHARACTERISTICS

Figure 2 illustrates the existing street network and ADTs. Two roadways were identified to comprise the influence area. The following briefly describes these roadways:

- $17^{\text {th }}$ Street
$17^{\text {th }}$ Street is a two-lane east/west Neighborhood Collector Street. $17^{\text {th }}$ Street has a 30 MPH posted speed limit in the vicinity of Arlington Park Drive.
- Arlington Road

Arlington Road is a two-lane north/south Minor Arterial Street and the old State Route 46 from Bloomington to Ellettsville. Arlington Road has a 40 MPH posted speed limit in the vicinity of the proposed East Access Roadway.

## EXPECTED TRIPS

Based on the proposed land uses provided by the developer and noted above, the proposed Arlington Road Development is for 238 rental townhouses (duplexes) and 28 rental single-family detached houses. Based on the ITE data for rental townhouses and single-family homes, the proposed Arlington Road Development is expected to generate 1,650 daily vehicle trips, 195 AM Peak Hour vehicle trips, and 202 Peak Hour vehicles trips at full build-out. See Table 1 below trips to be generated by the proposed development.

| TABLE 1 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ARLINGTON ROAD DEVELOPMENT - SITE TRAFFIC GENERATION |  |  |  |  |  |  |  |  |  |
| LAND USE | $\begin{aligned} & \text { ITE } \\ & \text { CODE } \end{aligned}$ | No. of Dwelling Units | NUMBER OF VEHICLE TRIPS |  |  |  |  |  |  |
|  |  |  | AM PEAK HOUR |  |  | PM PEAK HOUR |  |  | DAILY |
|  |  |  | IN | OUT | TOTAL | IN | OUT | TOTAL | (TWO-WAY) |
| Single-Family Detached Housing | 210 | 28 | 5 | 16 | 21 | 18 | 10 | 28 | 267 |
| Rental Townhouse | 224 | 238 | 61 | 113 | 174 | 96 | 78 | 174 | 1,383 |
|  |  |  |  |  |  |  |  |  |  |
| TOTAL TRIPS |  |  | 66 | 129 | 195 | 114 | 88 | 202 | 1,650 |



## PASS-BY TRAFFIC

Pass-by traffic (traffic already on the adjacent roadway) will provide a zero percentage of the site-generated traffic for the Arlington Road Development. Available ITE data, as published in the ITE Trip Generation Manual, 9th Edition, Volume 1, Chapter 5 and in the ITE Trip Generation Handbook, 3rd Edition, August 2014, Appendix F suggests that pass-by trips are a non-issue for single-family houses and townhouses uses.

## DIRECTIONAL DISTRIBUTION

Based on the location of the proposed development, the expected directional distribution of the site-generated traffic from the proposed development will be $72 \%$ along $17^{\text {th }}$ Street and $28 \%$ along Arlington Road. The expected development traffic along $17^{\text {th }}$ Street will be split evenly (36\%) between Arlington Park Drive and the West Entrance Roadway. The expected development along Arlington Road will use the East Access Roadway.

## SITE TRAFFIC ASSIGNMENTS

The expected AM and PM Peak Hour trips and daily trips for the proposed development are assigned to the roadway network using the directional distributions referenced above. The traffic assignments are shown in Figure 2-2021Site Traffic Assignments.

## TOTAL TRAFFIC

For the Study Horizon Year 2021, the projected 2021 non-site traffic (the traffic volumes are determined by applying a $1.0 \%$ growth factor to the 2018 traffic volumes) is 11,385 vehicles/day. This volume will be combined with the expected AM and PM Peak Hour trips and daily trips from the proposed development to create the 2021 Total Traffic volumes. These volumes are illustrated on Figure 3-2021 Total Traffic Assignments.

## TRAFFIC AND IMPROVEMENT ANALYSIS

The effects of the project's total traffic on the existing $17^{\text {th }}$ Street/Arlington Park Drive intersection and the proposed $17^{\text {th }}$ Street/Entrance Roadway will be analyzed for the Study Horizon Year 2021.

## AUXILIARY LANES WARRANTS

EB Left-turn Lane at the West Entrance Roadway
Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes and the Left Turn Guidelines for TwoLane Roadways, and plotting the data points on the graph, an EB Left-turn lane is warranted along $17^{\text {th }}$ Street at the $17^{\text {th }}$ Street/West Entrance Roadway intersection during both the AM and PM Peak Hours.

## WB Right-turn Lane at the West Entrance Roadway

Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes, the Right-Turn Guidelines for TwoLane Roadways, and plotting the data points on the graph, a WB right-turn lane is not warranted along $17^{\text {th }}$ Street at the $17^{\text {th }}$ Street/West Entrance Roadway intersection for either the AM or PM Peak Hours.

## EB Left-turn Lane at Arlington Park Drive

Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes and the Left Turn Guidelines for TwoLane Roadways, and plotting the data points on the graph, an EB left-turn lane is warranted along $17^{\text {th }}$ Street at the $17^{\text {th }}$ Street/Arlington Park Drive intersection during both the AM and PM Peak Hours.

WB Right-turn Lane at Arlington Park Drive
Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes, the Right-Turn Guidelines for TwoLane Roadways, and plotting the data points on the graph, a WB right-turn lane is not warranted along $17^{\text {th }}$ Street at the $17^{\text {th }}$ Street/Arlington Park Drive intersection for either the AM or PM Peak Hours.

## NB Left-turn Lane at the East Access Roadway

Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes and the Left Turn Guidelines for TwoLane Roadways, and plotting the data points on the graph, an NB Left-turn lane is warranted along Arlington Road at the Arlington Road/East Access Roadway intersection for both AM and Peak Hours.

## SB Right-turn Lane at the East Access Roadway

Using the Study Horizon Year 2021 AM and PM Peak Hour Total Traffic volumes, the Right-Turn Guidelines for TwoLane Roadways, and plotting the data points on the graph, a SB right-turn lane is not warranted along Arlington Road at the Arlington Road/East Access Roadway intersection for either the AM or PM Peak Hours.

## LEVEL OF SERVICE - ROADWAY INTERSECTIONS FOR STUDY HORIZON YEAR 2021

$17^{\text {th }}$ Street/Arlington Park Drive intersection
The $17^{\text {th }}$ Street/Arlington Park Drive intersection will be analyzed as a two-way unsignalized intersection with one-way STOP control on Arlington Park Drive. The $17^{\text {th }}$ Street/Arlington Park Drive intersection is a full access intersection. The analysis included an EB Left-Turn Lane along $17^{\text {th }}$ Street at the intersection with Arlington Park Drive. The results are listed below in Table 2 and Appendix A.

TABLE 2
2021 PROPOSED LEVEL OF SERVICE

| UNSIGNALIZED INTERSECTION | 2021 APPROACH LEVEL OF SERVICE |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AM PEAK HOUR |  |  |  | PM PEAK HOUR |  |  |  |
|  | EB | WB | NB | SB | EB | WB | NB | SB |
|  | L |  |  | L-R | L |  |  | L-R |
| $17^{\text {th }}$ Street/Arlington Park Drive | A |  |  | E-B | A |  |  | E-B |

For the 2021 Total Traffic conditions, the results of the analysis indicate that the SB Approach will operate at LOS D during the AM Peak Hour with 28.9 seconds of delay. During the PM Peak Hour, the SB Approach will operate at LOS D with 27.6 seconds of delay.


FIGURE 2 - 2021 SITE TRAFFIC ASSIGNMENTS


FIGURE 3 - 2021 TOTAL TRAFFIC ASSIGNMENTS

## LEVEL OF SERVICE (CONT.) - ROADWAY INTERSECTIONS FOR STUDY HORIZON YEAR 2021

## $17^{\text {th }}$ Street/West Entrance Roadway intersection

The $17^{\text {th }}$ Street/West Entrance Roadway intersection will be analyzed as a two-way unsignalized intersection with oneway STOP control on the West Entrance Roadway. The $17^{\text {th }}$ Street/West Entrance Roadway intersection is a full access intersection. The analysis included an EB Left-Turn Lane along $17^{\text {th }}$ Street at the intersection with West Entrance Roadway. The results are listed below in Table 3 and Appendix A.

TABLE 3
2021 PROPOSED LEVEL OF SERVICE

| UNSIGNALIZED INTERSECTION | 2021 APPROACH LEVEL OF SERVICE |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AM PEAK HOUR |  |  |  | PM PEAK HOUR |  |  |  |
|  | EB | WB | NB | SB | EB | WB | NB | SB |
|  | L |  |  | L-R | L |  |  | L-R |
| $17^{\text {th }}$ Street/West Entrance Roadway | A |  |  | E-B | A |  |  | E-B |

For the 2021 Total Traffic conditions, the results of the analysis indicate that the SB Approach will operate at LOS D during the AM Peak Hour with 29.1 seconds of delay. During the PM Peak Hour, the SB Approach will operate at LOS D with 28.2 seconds of delay.

## Arlington Road/East Access Roadway intersection

The Arlington Road/East Access Roadway intersection will be analyzed as a two-way unsignalized intersection with one-way STOP control on East Access Roadway. The Arlington Road/East Access Roadway Drive intersection will be a full access intersection. The analysis included a NB Left-turn Lane along Arlington Road at the intersection with the East Access Roadway. The results are listed below in Table 4 and Appendix A

TABLE 4
2021 PROPOSED LEVEL OF SERVICE

| UNSIGNALIZED INTERSECTION | 2021 APPROACH LEVEL OF SERVICE |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | AM PEAK HOUR |  |  |  | PM PEAK HOUR |  |  |  |
|  | EB | WB | NB | SB | EB | WB | NB | SB |
|  | L-R |  |  |  | L-R |  |  |  |
| Arlington Road/East Access Roadway | E-C |  | A |  | E-C |  | A |  |

For the 2021 Total Traffic conditions, the results of the analysis indicate that the EB Approach will operate at LOS D during the AM Peak Hour with 31.5 seconds of delay. During the PM Peak Hour, the EB Approach will operate at LOS D with 30.5 seconds of delay.

## $17^{\text {th }}$ Street/Arlington Road Roundabout intersection

The $17^{\text {th }}$ Street/Arlington Road Roundabout intersection was not analyzed at this time because of the re-construction of I-69. Arlington Road serves as a secondary detour route therefore the current traffic volumes are artificially high at this point.

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## TRAFFIC SAFETY

The sight distance triangles at the West Entrance Roadway, at Arlington Park Drive, and at the East Access Roadway will be calculated and shown on the Improvement Plans. No vegetation is planned at the intersections or within the $17^{\text {th }}$ Street and Arlington Road right-of-way. Therefore, there should be no visual restrictions at the roadway intersections.

## PEDESTRIAN CONSIDERATIONS

A multiuse path will be constructed along the north side of $17^{\text {th }}$ Street as part of a City project to reconstruct $17^{\text {th }}$ Street from Lismore Drive to the roundabout. The project also includes sidewalk along the south side of $17^{\text {th }}$ Street. These facilities complete connections to Vernal Pike across I-69 to the City's network of sidewalk and multiuse path from the $17^{\text {th }} \&$ Arlington Roundabout to the east. Adjacent pedestrian network, while not fully complete today, will support and encourage pedestrian and bicycle traffic to and from the development.

## TRAFFIC CONTROL NEEDS

At the proposed West Entrance Roadway and the existing Arlington Park Drive intersections with $17^{\text {th }}$ Street, one-way STOP control is recommended with STOP signs installed on the West Entrance Roadway and Arlington Park Drive. Sufficient gaps in the $17^{\text {th }}$ Street traffic stream exist, allowing for entering and exiting right-turn and left-turn movements to and from $17^{\text {th }}$ Street. Therefore, lane movement restrictions for the roadways are not recommended.

At the proposed East Access Roadway intersection with Arlington Road, one-way STOP control is recommended with STOP signs installed on the East Access Roadway. Sufficient gaps in the Arlington Road traffic stream exist, allowing for entering and exiting right-turn and left-turn movements to and from Arlington Road. Therefore, lane movement restrictions for the roadways are not recommended.

## CONCLUSION \& RECOMMENDATIONS

In conclusion based on the HCS Analysis, the proposed development, "Arlington Road Development" will have impact on $17^{\text {th }}$ Street and Arlington Road. For the 2021 Total Traffic conditions at the $17^{\text {th }}$ Street/West Entrance Roadway intersection and at the $17^{\text {th }}$ Street/Arlington Park Drive intersection, the results of the HCS Analysis indicate that the SB approaches on the West Entrance Roadway and Arlington Park Drive will operate at LOS D for both the AM and PM Peak Hours.

For the 2021 Total Traffic conditions at the $17^{\text {th }}$ Street/East Access Roadway intersection, the results of the HCS Analysis indicate that the EB approach on the East Access Roadway will operate at LOS D for both the AM and PM Peak Hours.

## AUXILIARY LANES RECOMMENDATIONS

EB Left-turn Lane at the West Entrance Roadway
An EB Left-turn lane is warranted along $17^{\text {th }}$ Street at the $17^{\text {th }}$ Street/West Entrance Roadway intersection during both the $\boldsymbol{A M}$ and PM Peak Hours. An Eastbound left turn lane is recommended.

WB Right-turn Lane at the West Entrance Roadway
A WB right-turn lane is not warranted along $17^{\text {th }}$ Street at the $17^{\text {th }}$ Street/West Entrance Roadway intersection for either the AM or PM Peak Hours. A Westbound right turn lane is not recommended.

## EB Left-turn Lane at Arlington Park Drive

An EB left-turn lane is warranted along $17^{\text {th }}$ Street at the $17^{\text {th }}$ Street/Arlington Park Drive intersection during both the AM and PM Peak Hours. An Eastbound left turn lane is recommended.

WB Right-turn Lane at Arlington Park Drive
A WB right-turn lane is not warranted along $17^{\text {th }}$ Street at the $17^{\text {th }}$ Street/Arlington Park Drive intersection for either the AM or PM Peak Hours. A Westbound right turn lane is not recommended.

NB Left-turn Lane at the East Access Roadway
A NB Left-turn lane is warranted along Arlington Road at the Arlington Road/East Access Roadway intersection for both AM and Peak Hours. A Northbound left turn lane is recommended.

## SB Right-turn Lane at the East Access Roadway

A SB right-turn lane is not warranted along Arlington Road at the Arlington Road/East Access Roadway intersection for either the AM or PM Peak Hours. A Southbound right turn lane is not recommended.

## TRAFFIC SAFETY RECOMMENDATIONS

The sight distance triangles at the West Entrance Roadway, at Arlington Park Drive and at the East Access Roadway will be calculated and shown on the Improvement Plans. No vegetation is planned at the intersections or within the $17^{\text {th }}$ Street and Arlington Road right-of-way. Therefore, there should be no visual restrictions at the roadway intersections.

## TRAFFIC CONTROL RECOMMENDATIONS

At the proposed West Entrance Roadway and the existing Arlington Park Drive intersections with $17^{\text {th }}$ Street, one-way STOP control is recommended with STOP signs installed on the West Entrance Roadway and Arlington Park Drive. Sufficient gaps in the $17^{\text {th }}$ Street traffic stream exist, allowing for entering and exiting right-turn and left-turn movements to and from $17^{\text {th }}$ Street. Therefore, lane movement restrictions for the roadways are not recommended.

At the proposed East Access Roadway intersection with Arlington Road, one-way STOP control is recommended with STOP signs installed on the East Access Roadway. Sufficient gaps in the Arlington Road traffic stream exist, allowing for entering and exiting right-turn and left-turn movements to and from Arlington Road. Therefore, lane movement restrictions for the roadways are not recommended.

## APPENDIX A

Right Turn Lane Guidelines for Two-Lane Roadways
Left Turn Lane Guidelines
HCS Analysis

RIGHT TURN LANE GUIDELINES FOR TWO-LANE ROADS ${ }^{9}$


## LEFT TURN LANE GUIDELINES ${ }^{9}$



| General Information |  |  |  |
| :--- | :--- | :--- | :--- |
| Analyst | MEM | Site Information |  |
| Agency/Co. | AZTEC Eng. Corp | Intersection |  |
| Date Performed | $9 / 22 / 2018$ | Jurisdiction | Bloomington, IN |
| Analysis Year | 2021 | East/West Street | 17 th Street |
| Time Analyzed | AM Peak Hour | North/South Street | Arlington Park Drive |
| Intersection Orientation | East-West | Peak Hour Factor | 0.90 |
| Project Description | Arlington Road Development | Analysis Time Period (hrs) | 0.25 |
| Lanes |  |  |  |



Vehicle Volumes and Adjustments



## HCS 2010 Two-Way Stop Control Summary Report

General Information

| Analyst | MEM | intersection |  |
| :---: | :---: | :---: | :---: |
| Agency/Co. | AZTEC Eng. Corp | Jurisdiction | Bloomington, ${ }^{\text {N }}$ |
| Date Performed | 9/22/2018 | East/West Street | 17th Street |
| Analysis Year | 2021 | North/South Street | Arlington Park Drive |
| Time Analyzed | PM Peak Hour | Peak Hour Factor | 0.90 |
| Intersection Orientation | East-West | Analysis Time Period (hrs) | 0.25 |
| Project Description | Arlington Road Development |  |  |

Lanes


## Vehicle Volumes and Adjustments

| Approach | Eastbound |  |  |  | Westbound |  |  |  | Northbound |  |  |  | Southbound |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | U | L | T | R | $U$ | L | T | R | U | L | T | R | U | L | $T$ | R |
| Priority | 11 | 1 | 2 | 3 | 4. | 4 | 5 | 6 |  | 7 | 8 | 9 |  | 10 | 11 | 12 |
| Number of Lanes | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |  | 0 | 0 | 0 |  | 1 | 0 | 1 |
| Configuration |  | L | T |  |  |  |  | TR |  |  |  |  |  | L |  | R |
| Volume (veh/h) |  | 21 | 701 |  |  |  | 685 | 20 |  |  |  |  |  | 15 |  | 16 |
| Percent Heavy Vehicles |  | 0 |  |  |  |  |  |  |  |  |  |  |  | 0 |  | 0 |
| Proportion Time Blocked |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Right Turn Channelized | No |  |  |  | No |  |  |  | No |  |  |  | No |  |  |  |
| Median Type | Undivided |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Median Storage |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Delay, Queue Length, and Level of Service



# HCS 2010 Two-Way Stop Control Summary Report 

| General Information |  |  |  |
| :--- | :--- | :--- | :--- |
| Analyst | MEM | Site Information |  |
| Agency/Co. | AZTEC Eng. Corp. | intersection |  |
| Date Performed | $9 / 22 / 2018$ | Jurisdiction | Bloornington, IN. |
| Analysis Year | 2021 | East/West Street | 17th Street |
| Time Analyzed | AM Peak Hour | North/South Street | West Entrance Roadway |
| intersection Orientation | East-West | Peak Hour Factor | 0.90 |
| Project Description | Arlington Road Development | Analysis Time Period (hrs) | 0.25 |
| Lanes |  |  |  |



## Vehicle Volumes and Adjustments

| Approach | Eastbound |  |  |  | Westbound |  |  |  | Northbound |  |  |  | Southbound |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | $U$ | L | T. | R | $\cup$ | L | T | R | $u$ | 1 | T | R | U | L | T | $R$ |
| Priority | 1 U | 1 | 2 | 3 | 4 U | 4 | 5 | 5 |  | 7 | 8 | 9 |  | 10 | 11 | 12 |
| Number of Lanes | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |  | 0 | 0 | 0 |  | 1 | 0 | 1 |
| Configuration |  | L | T |  |  |  |  | TR |  |  |  |  |  | L |  | R |
| Volume (veh/h) |  | 12 | 685 |  |  |  | 708 | 12 |  |  |  |  |  | 23 |  | 23 |
| Percent Heavy Vehicles |  | 0 |  |  |  |  |  |  |  |  |  |  |  | 0 |  | 0 |
| Proportion Time Blocked |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Right Tum Channelized | No |  |  |  | No |  |  |  | No |  |  |  | No |  |  |  |
| Median Type | Undivided |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Median Storage |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Delay, Queue Length, and Level of Service



## HCS 2010 Iwo-Way Stop Control Summary Report

| General Information |  |  |  |
| :--- | :--- | :--- | :--- |
| Analyst | MEM | Site Information |  |
| Agency/Co. | AZTEC Eng. Corp | Intersection |  |
| Date Performed | $9 / 22 / 2018$ | Jurisdiction | Bloomington, $\mathbb{N}$ |
| Analysis Year | 2021 | East/West Street | 17 th Street |
| Time Analyzed | PM Peak Hour | North/South Street | West Entrance Roachway |
| intersection Orientation | East-West | Peak Hour Factor | 0.90 |
| Project Description | Arlington Road Development | Analysis Time Period (hrs) | 0.25 |
| Lanes |  |  |  |



## Vehicle Volumes and Adjustments

| Approach | Eastbound |  |  |  | Westbound |  |  |  | Northbound |  |  |  | Southbound |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | U | L | T | R | $\cup$ | L | T | R | $U$ | $t$ | T | R | U | L | T | R |
| Priority | 10 | 1 | 2 | 3 | 4 U | 4 | 5 | 6 |  | 7 | 8 | 9 |  | 10 | 11 | 12 |
| Number of Lanes | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |  | 0 | 0 | 0 |  | 1 | 0 | 1 |
| Configuration |  | L | T |  |  |  |  | TR |  |  |  |  |  | L |  | R |
| Volume (veh/h) |  | 20 | 685 |  |  |  | 701 | 21 |  |  |  |  |  | 16 |  | 16 |
| Percent Heary Vehicles |  | 0 |  |  |  |  |  |  |  |  |  |  |  | 0 |  | 0 |
| Proportion Time Blocked |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Right Turn Channelized | No |  |  |  | No |  |  |  | No |  |  |  | No |  |  |  |
| Median Type | Undivided |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Median Storage |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Delay, Queue Length, and Level of Service



[^2]HCS 2010 TM TWSC Version 6.80
Generated: 9/22/2018 12:10:43 PM

## HCS 2010 Two-Way Stop Control Summary Report

General Information

|  |  |  |  |
| :--- | :--- | :--- | :--- |
| Analyst | MEM | Intersection | City of Bloomington, IN. |
| Agency/Co. | AZTEC Eng. Corp. | Jurisdiction | East Access Roadway |
| Date Performed | $9 / 21 / 2018$ | East/West Street | Artington Road |
| Analysis Year | 2021 | Perth/South Street | 0.90 |
| Time Analyzed | AM Peak Hour | Analysis Time Period (hrs) | 0.25 |
| Intersection Orientation | North-South |  |  |
| Project Description | Arlington Road Development |  |  |
| Lanes |  |  |  |

## Vehicle Volumes and Adjustments

| Approach | Eastbound |  |  |  | Westbound |  |  |  | Northbound |  |  |  | Southbound |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | $u$ | L | T | R | $\cup$ | L | T | R | $u$ | 1 | T | R | $\cup$ | L | T | R |
| Priority |  | 10 | 11 | 12 |  | 7 | 8 | 9 | 10 | 1 | 2 | 3 | 4 U | 4 | 5 | 6 |
| Number of Lanes |  | 1 | 0 | 1 |  | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration |  | L |  | R |  |  |  |  |  | L | T |  |  |  |  | TR |
| Volume (veh/h) |  | 18 |  | 19 |  |  |  |  |  | 9 | 750 |  |  |  | 750 | 10 |
| Percent Heavy Vehicles |  | 0 |  | 0 |  |  |  |  |  | 0 |  |  |  |  |  |  |
| Proportion Time Blocked |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Right Turn Channelized | No |  |  |  | No |  |  |  | No |  |  |  | No |  |  |  |
| Median Type | Undivided |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Median Storage |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Delay, Queue Length, and Level of Service



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## HCS 2010 Two-Way Stop Control Summary Report

General Information

| Analyst | M |
| :--- | :---: |
| Agency/Co. | A |
| Date Performed | 9 |
| Analysis Year | 2 |
| Time Analyzed | P |
| Intersection Orientation | A |
| Project Description | A |

## Lanes



## Vehicle Volumes and Adjustments

| Approach | Eastbound |  |  |  | Westbound |  |  |  | Northbound |  |  |  | Southbound |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Movement | U | L | T | R | $U$ | L | T | R | $\cup$ | L | T | R | $u$ | 1 | T | R |
| Priority |  | 10 | 11 | 12 |  | 7 | 8 | 9 | 14 | 1 | 2 | 3 | 4 U | 4 | 5 | 6 |
| Number of Lanes |  | 1 | 0 | 1 |  | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| Configuration |  | L |  | R |  |  |  |  |  | L | T |  |  |  |  | TR |
| Volume (veh/h) |  | 12 |  | 13 |  |  |  |  |  | 16 | 750 |  |  |  | 750 | 16 |
| Percent Heavy Vehicles |  | 0 |  | 0 |  |  |  |  |  | 0 |  |  |  |  |  |  |
| Proportion Time Blocked |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Right Turn Channelized | No |  |  |  | No |  |  |  | No |  |  |  | No |  |  |  |
| Median Type | Undivided |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Median Storage |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Delay, Queue Length, and Level of Service |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Flow Rate (veh/h) |  | 13 |  | 14 |  |  |  |  |  | 18 |  |  |  |  |  |  |
| Capacity |  | 99 |  | 367 |  |  |  |  |  | 796 |  |  |  |  |  |  |
| v/c Ratio |  | 0.13 |  | 0.04 |  |  |  |  |  | 0.02 |  |  |  |  |  |  |
| 95\% Queue Length |  | 0.4 |  | 0.1 |  |  |  |  |  | 0.1 |  |  |  |  |  |  |
| Control Delay (s/veh) |  | 47.0 |  | 15.2 |  |  |  |  |  | 9.6 |  |  |  |  |  |  |
| Level of Service (LOS) |  | E |  | c |  |  |  |  |  | A |  |  |  |  |  |  |
| Approach Delay ( $s / \mathrm{veh}$ ) | 30.5 |  |  |  |  |  |  |  | 0.2 |  |  |  |  |  |  |  |
| Approach LOS | D |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

[^3]






[^0]:    cc: Eric Greulich
    Jeff Fanyo

[^1]:    STUDIO M ARCHITECTURE AND PLANNG
    PROJECT NUMBER - 19014

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