CITY OF BLOOMINGTON

BOARD OF ZONING APPEALS

September 18, 2025 @ 5:30 p.m.
City Hall, 401 N. Morton Street
Common Council Chambers, Room #115

https://bloomington.zoom.us/j/82448983657?pwd=enJxcnArK1pLVDlnWGROTU43dEpXdz09

Meeting ID: 824 4898 3657
Passcode: 319455

CITY OF BLOOMINGTON
BOARD OF ZONING APPEALS (Hybrid Meeting)
September 18, 2025 at 5:30 p.m.

City Hall, 401 N. Morton Street
Common Council Chambers, Room #115 and via Zoom

❖**Virtual Meeting: https://bton.in/Zoom**

Meeting ID: 824 4898 3657 **Passcode: 319455**

Petition Map: https://bton.in/G6BiA

ROLL CALL

APPROVAL OF MINUTES: August 21, 2025

PETITIONS CONTINUED TO: October 23, 2025

AA-17-22	**Joe Kemp Construction, LLC & Blackwell Construction, Inc.** Summit Woods (Sudbury Farm Parcel O) W. Ezekiel Dr. Parcel(s): 53-08-07-400-008.002-009, 53-08-07-400-008.004-009… Request: Administrative Appeal of the Notice of Violation (NOV) issued March 25, 2022. *Case Manager: Jackie Scanlan*
CU-32-25/ ZR2025-07-0086	**Springpoint Architects (Barre Klapper)** 312 S. Arbutus Drive Parcel: 53-08-03-202-053.000-009 Request: Conditional use approval to allow for construction of a new "Dwelling, Fourplex" in the Residential Urban (R4) zoning district. *Case Manager: David Brantez*
CU-33-24/ USE2024-11-0068	**Hat Rentals, LLC** 202 N. Walnut Street Parcel: 53-05-33-310-028.000-005 Request: Request for conditional use approval of "student housing or dormitory" to allow one four-bedroom unit in the Mixed-Use Downtown (MD) zoning district. *Case Manager: Jackie Scanlan*

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

The City is committed to providing equal access to information. However, despite our efforts, at times, portions of our board and commission packets are not accessible for some individuals. If you encounter difficulties accessing material in this packet, please contact Melissa Hirtzel at hirtzelm@bloomington.in.gov **and provide your name, contact information, and a link to or description of the document or web page you are having problems with.**

The City offers virtual options, including CATS public access television (live and tape delayed) found at https://catstv.net/. Comments and questions will be encouraged via Zoom or bloomington.in.gov rather than in person.

CU-33-25/ ZR2025-07-0087

Weihe Engineers (Saint Remy HOA)
3716 E. St Remy Drive
Parcel: 53-08-11-401-029.000-009
Request Variance from Environmental Standards to allow maintenance to a detention pond and wetlands within St. Remy in the Residential Small Lot (R3) zoning district. Also requested is Conditional Use approval to allow a driveway in the floodplain. *Case Manager: Eric Greulich*

V-39-25/ ZR2025-08-0094

Brownsmith Studios, LLC (Lucas Brown)
601 N. Morton Street
Parcel: 53-05-33-206-019.000-005
Request: Variance from Use Specific Standards requiring ground floor dwelling units within 20 feet of the front property line to be constructed a minimum of 3 feet above the adjacent sidewalk grade for the use "Dwelling, Multifamily" to allow the construction of a ground floor dwelling unit in the Mixed-Use Downtown within the Downtown Core Overlay (MD-DC) district. *Case Manager: Eric Greulich*

V-40-25/ ZR2025-08-0095

HR Green, Inc. (Don Cowden Foundation, Inc.)
2500 W. 3rd Street
Parcel(s): 53-05-31-301-019.000-005 & 53-05-31-301-008.000-005
Request: Variance from maximum impervious surface coverage and from minimum landscape area requirements to allow a "Restaurant" in the Mixed-Use Corridor (MC) zoning district. *Case Manager: Eric Greulich*

PETITIONS:

V-35-25/ ZR2025-08-0089

Griffy Properties (Ethan Michaelson)
2403 N. Headley Road
Parcel: 53-05-27-200-003.000-005
Request: Determinate Sidewalk Variance for a single-family dwelling (detached) located in the Residential Medium Lot (R2) zoning district. *Case Manager: Joe Patterson*

V-36-25/ ZR2025-08-0090

Mohsen Kianizadeh
2214 E. Maxwell Lane
Parcel: 53-08-03-100-037.000-009
Request: Variance from Driveway width standards for a single-family dwelling (detached) within a Medium Lot Residential (R2) zoning district. *Case Manager: Joe Patterson*

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CU-37-25/ ZR2025-08-0088

Built, LLC (Madeline Sanders)
1320 S. Rogers Street
Parcel: 53-08-05-400-026.000-009
Request: Conditional use approval to allow a driveway, parking, and structures within the floodplain to allow the construction of 5 buildings for the use "Contractor's Yard" within Parcel C of the Thomson Planned Unit Development (PUD) zoning district. *Case Manager: Eric Greulich*

CU/V-38-25
ZR2025-08-0092 / ZR2025-08-0093

Sacksteder Properties, LLC
111 S. Jefferson Street
Parcel: 53-05-34-424-013.000-005
Request: Conditional use approval to allow a "Dwelling, duplex" in the Residential Small Lot (R3) zoning district. Also requested is a variance from front building setback standards. *Case Manager: Eric Greulich*

Board of Zoning Appeals Members

Member	Appointed By	Term
Tim Ballard	Mayor	1/1/2022-13/31/2025
Flavia Burrell	Plan Commission	1/1/2023-12/31/2026
John Fernandez	Mayor	1/1/2023-12/31/2026
Leslie Kutsenkow	Mayor	1/1/2025-12/31/2028
Jo Throckmorton	Common Council	1/1/2022-12/31/2025

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BLOOMINGTON BOARD OF ZONING APPEALS CASE #: V-35-25/ ZR2025-08-0089
STAFF REPORT DATE: September 18, 2025

Location: 2403 N Headley Rd

APPLICANT:	Griffy Properties LLC (Ethan Michelson) 2415 N Headley Rd, Bloomington
OWNER:	Griffy Properties LLC 2415 N Headley Rd, Bloomington

REQUEST: Determinate sidewalk variance for a "Dwelling, single-family (detached)" use located in the Residential Medium Lot (R2) zoning district.

REPORT: This property is located at 2403 N Headley Road consisting of 0.79 acres. The property is zoned Residential Medium Lot (R2). Immediately surrounding properties are also Residential Medium Lot (R2) and have been developed with single-family residences. There are additional properties along the east side of Headley Road zoned Mixed-Use Institutional (MI) primarily owned by the Trustees of Indiana University. The future land use designation for this property is Neighborhood Residential.

The petitioner had previously entered contract and set up a delivery date for his modular designed single-family home and upon applying for the building permit, learned that Headley Road was designated within the Transportation Plan for a 12-foot wide multi-use path. Due to the strict timeline of his modular home delivery, the petitioner had concerns about integrating this additional feature and worked with Planning Staff to receive his Building Permit by including the required 12-foot wide multi-use path with his Site Plan with the understanding that he could later elect to seek a variance, if desired. Upon further consideration of the layout and topographpy of the property and the lack of any pedestrian facilities currently existing along Headley Road, the petitioner has elected to seek relief from the requirement to build the multi-use path at this time.

UDO Section 20.04.050(d)(4)(A) states:

All developments shall integrate an interior and exterior pedestrian network comprised of concrete sidewalks or asphalt paths for pedestrian transportation and recreation. This network shall include pedestrian facilities along street frontages, multiuse trails where indicated on the Transportation Plan, and pedestrian connector paths between developments and public destinations (e.g., schools, parks, hospitals), nearby trails, other developments, and vacant land.

The UDO contains guiding language for the Board of Zoning Appeals for Determinate Sidewalk Variance requests.

> ***Determinate Sidewalk Variance Approval Criteria:***
> *20.06.080(b)(3)(E)(i)(3): While not to be included as separate findings of fact, items to consider when determining the practical difficulties or peculiar conditions associated with a*

determinate sidewalk variance include, but are not limited to:

a) *That the topography of the lot or tract together with the topography of the adjacent lots or tract and the nature of the street right-of-way make it impractical for construction of a sidewalk; or*
b) *That the pedestrian traffic reasonably to be anticipated over and along the street adjoining such lot or tract upon which new construction is to be erected is not and will not be such as to require sidewalks to be provided for the safety of pedestrians; or*
c) *The adjacent lot or tracts are at present developed without sidewalks and there is no reasonable expectation of additional sidewalk connections on the block in the near future; or*
d) *The location of the lot or tract is such that a complete pedestrian network is present on the other of the street on the same block; or*
e) *Uniformity of development of the area would best be served by deferring sidewalk construction on the lot or tract until some future date.*

The petitioner is requesting a determinate sidewalk variance to not require the installation of the multi-use path along the property frontage along North Headley Road, as seen and described in the Petitioner's Statement.

CRITERIA AND FINDINGS FOR DEVELOPMENT STANDARDS VARIANCE
20.06.080(b)(3)(E) Standards for Granting Variances from Development Standards:

A variance from the development standards of the Unified Development Ordinance may be approved only upon determination in writing that each of the following criteria is met:

1) *The approval will not be injurious to the public health, safety, morals, and general welfare of the community.*

   PROPOSED FINDING: The granting of this variance will not be injurious to the public health, safety, morals, or general welfare of the community. While it would be beneficial to the public health and safety to have a multi-use path along this property's frontage, there are no pedestrian facilities to connect to on adjacent properties that not requiring the installation of the path along this property at this time would be benefiting.

2) *The use and value of the area adjacent to the property included in the Development Standards Variance will not be affected in a substantially adverse manner.*

   PROPOSED FINDING: The use and value of the area adjacent to the property will not be affected in a substantially adverse manner by the approval of this variance. There is no pedestrian facility currently provided in front of any properties along North Headley Road or Matlock Road to the south. While it would be beneficial to community welfare to have a multi-use path along the entire length of this property's frontage, the construction would be best forestalled until other development or projects necessitate the path's construction.

3) *The strict application of the terms of the Unified Development Ordinance will result in practical difficulties in the use of the property; that the practical difficulties are peculiar to the property in question; that the Development Standards Variance will relieve the practical difficulties.*

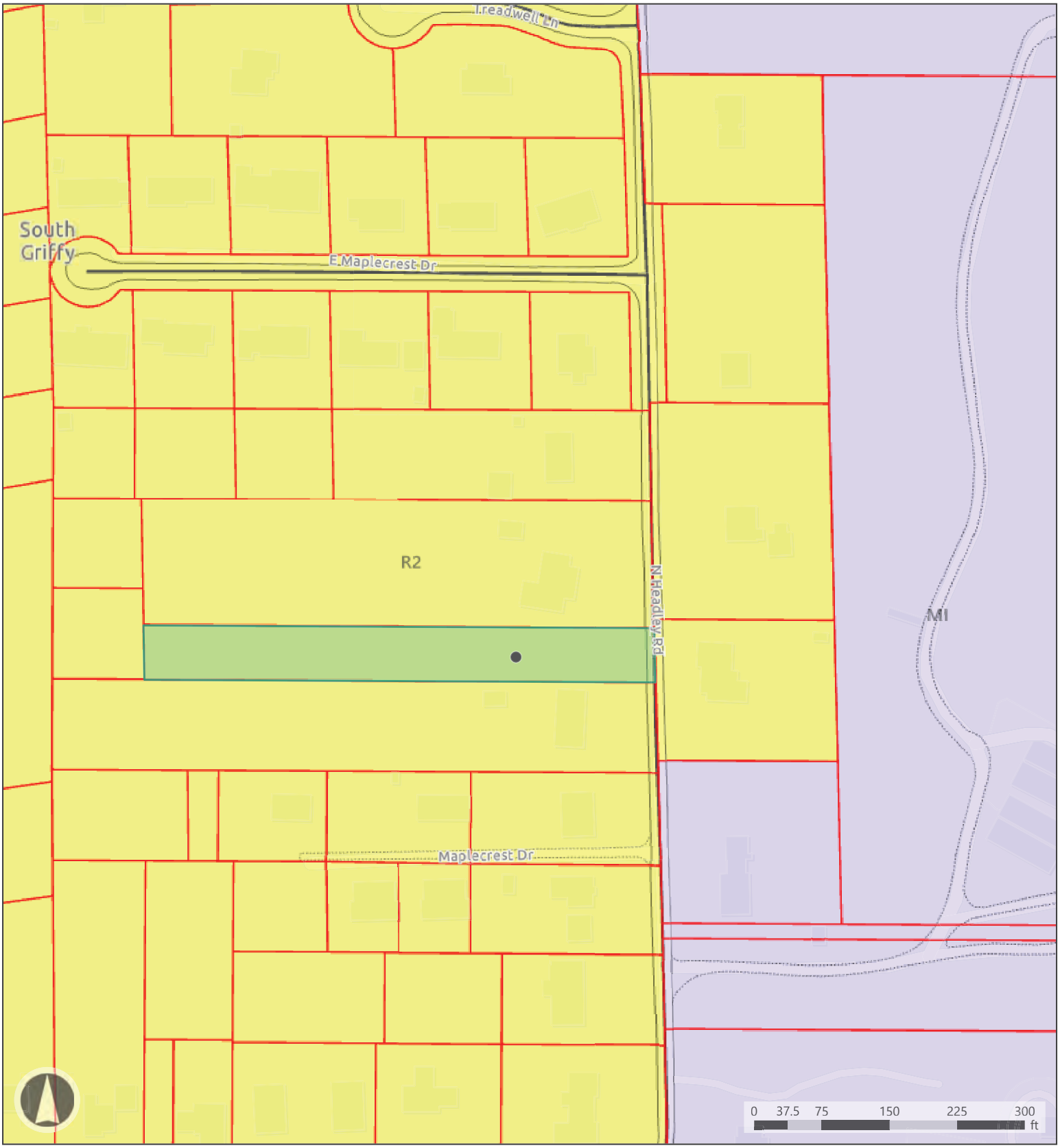
PROPOSED FINDING: The Department finds that the strict application of the terms of the UDO will result in practical difficulties in the use of the property in that requiring the multi-use path at this time would require the path in a location that may not be appropriate if a pedestrian network is installed along this corridor at a future time. This property and surrounding properties are peculiar in nature in that they are on the periphery of the City boundaries and are very rural in nature with a great degree of challenging topography along all of these properties with little right-of-way beyond the edge of pavement along a majority of Headley Road. Further peculiarity is found in that a majority of property along Headley Road is owned by Indiana University where redevelopment that would require future additional pedestrian improvements would not be triggered, further complicating the likelihood that pedestrian improvements would happen outside of a much larger plan for the area. Additionally, if the path were constructed, it would require removal of significantly large canopy trees to facilitate its installation in the required location per the Transportation Plan. These trees currently contribute to the streetscape and general character of the area and would be a significant change to the existing topography. This path will best be coordinated and installed when it can be connected to other properties with multi-use paths at a future date to better facilitate path cohesion and maintenance.

RECOMMENDATION: The Department recommends that the Board of Zoning Appeals adopt the proposed findings and approve case V-35-25/ ZR2025-08-0089 with the following condition**:**

1. A zoning commitment for the determinate sidewalk variance must be recorded within 60 days.

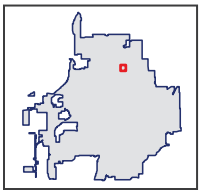
City of Bloomington

Planning and Transportation Department



Map Legend

- Board of Zoning Appeals
- Parcels
- Pavement
- Gravel
- Alley
- Current
- Bloomington Municipal Boundary
- Mixed-Use Institutional
- Residential Medium Lot



Created: 9/11/2025 *Map By:*

For use as map information only, information is NOT warranted.

City of Bloomington

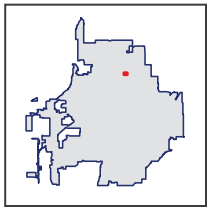
Aerial Context Map

Planning and Transportation Department

2403 N Headley Rd

Map Legend

- Board of Zoning Appeals
- Parcels
- Bloomington Municipal Boundary



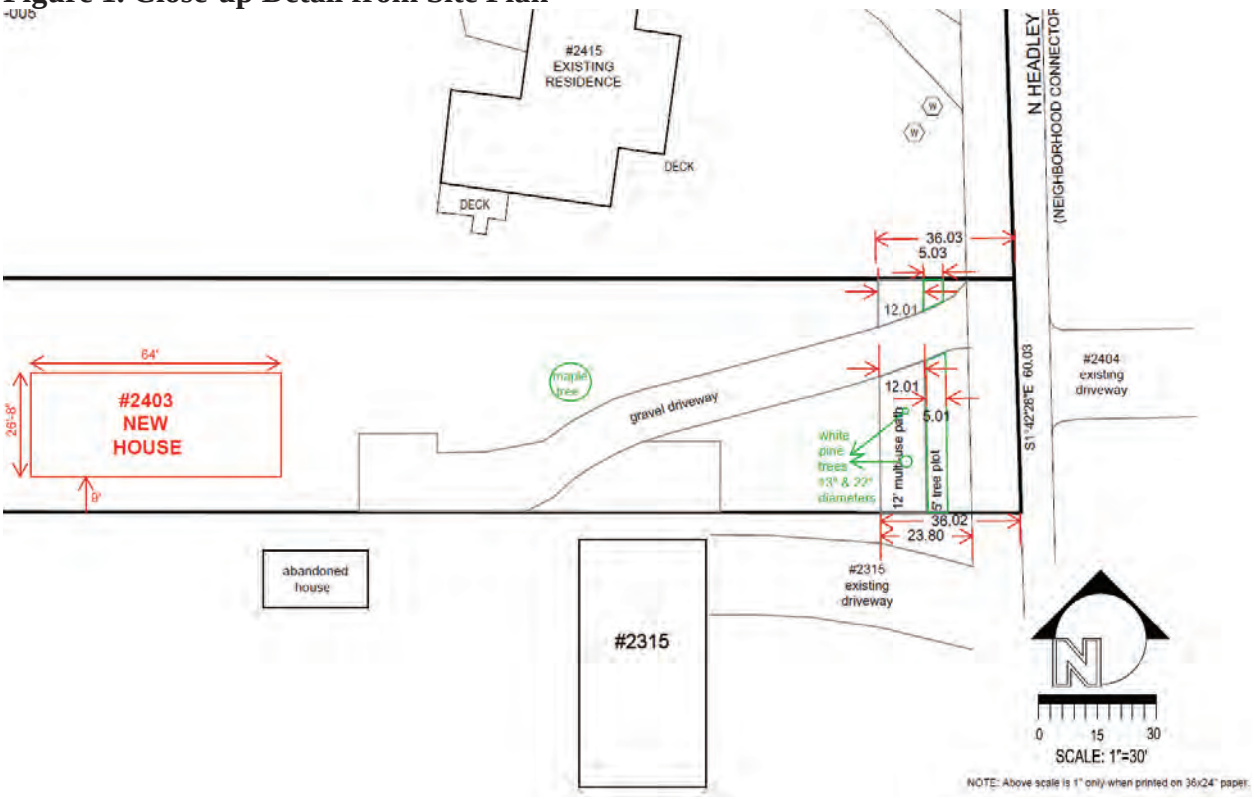
Created: 9/11/2025

To: Board of Zoning Appeals, City of Bloomington
From: Ethan Michelson
Re: Statement in Support of Determinate Sidewalk Variance Petition, 2403 N. Headley Rd., Building Permit R-25-41
On: September 4, 2025

Background

Building Permit R-25-41 for the construction of a single-family house at 2403 N. Headley Rd (hereafter "the property") stipulates the construction of a *12-foot multi-use path* (hereafter "the sidewalk") set back 24-36 feet from the middle of Headley Road (or 11.8-23.8 feet from the edge of Headley Road) and spanning the width of the property's 60-foot parcel path. Figure 1 depicts a close-up detail from the site plan showing the required location of the multi-use path.

Figure 1. Close-up Detail from Site Plan



I am requesting a Determinate Sidewalk Variance, which is a type of Development Standards Variance, according to 20.06.080(b)(3)(E)(i)(3) of the City of Bloomington's July 2025 Unified Development Ordinance (UDO).

Criteria for Development Standards Variance

The three *general criteria* are:

(a) The approval will not be injurious to the public health, safety, morals, and general welfare of the community; and

(b) The use and value of the area adjacent to the property included in the development standards variance will not be affected in a substantially adverse manner; and
(c) The strict application of the terms of this UDO will result in practical difficulties in the use of the property; that the practical difficulties are peculiar to the property in question; that the development standards variance will relieve the practical difficulties. (UDO, p.371)

Specific criteria for a Determinate Sidewalk Variance include:

(a) That the topography of the lot or tract together with the topography of the adjacent lots or tract and the nature of the street right-of-way make it impractical for construction of a sidewalk; or
(b) That the pedestrian traffic reasonably to be anticipated over and along the street adjoining such lot or tract upon which new construction is to be erected is not and will not be such as to require sidewalks to be provided for the safety of pedestrians; or
(c) The adjacent lot or tracts are at present developed without sidewalks and there is no reasonable expectation of additional sidewalk connections on the block in the near future; or
(d) The location of the lot or tract is such that a complete pedestrian network is present on the other side of the street on the same block; or
(e) Uniformity of development of the area would best be served by deferring sidewalk construction on the lot or tract until some future date. (UDO, pp.371-2)

Evaluating Variance Criteria with Respect to the Property

Let me first consider each of the *specific criteria* pertaining to Determinate Sidewalk Variances.

(a) Topography includes trees, the preservation of which is an important priority of the City of Bloomington. Indeed, approval of Building Permit R-25-41 was contingent upon the creation of a tree preservation easement of approximately one-third of an acre. Surely the City would prefer to preserve large white pine trees squarely in the middle of the sidewalk's required location (Figure 1). The pine trees in the middle of the sidewalk in Figure 1 are the two that are closest to Headley Road in Figure 2. The diameters of these two pine trees are approximately 13 and 22 inches. Figure 3 shows that these two pine trees are 16-17 feet from the edge of Headley Road (or 18.2-19.2 feet from the middle of Headley Road). We know that these two trees would be in the middle of the sidewalk given that, as per Figure 1, it would be 11.8-23.8 feet from the edge of Headley Road.
(b) Pedestrian traffic on Headley Road is minimal. I rarely see pedestrians—typically no more than one or two individuals per day.
(c) If this 60-foot sidewalk is installed, it would be the only sidewalk within a sizeable radius. The closest existing sidewalk is the multi-use path along the 45/46 Bypass, which is one-quarter of a mile away. There is not even one inch of sidewalk on Headley Road, Matlock Road, Browncliff Lane, East Maplecrest Dr., or East Treadwell Lane. I certainly have no expectation of additional sidewalk connections anywhere in the area anytime soon.

Figure 2. Large White Pine Trees in Location of Sidewalk Site

Figure 3. Tape Measure Showing Distance from Edge of Headley Road

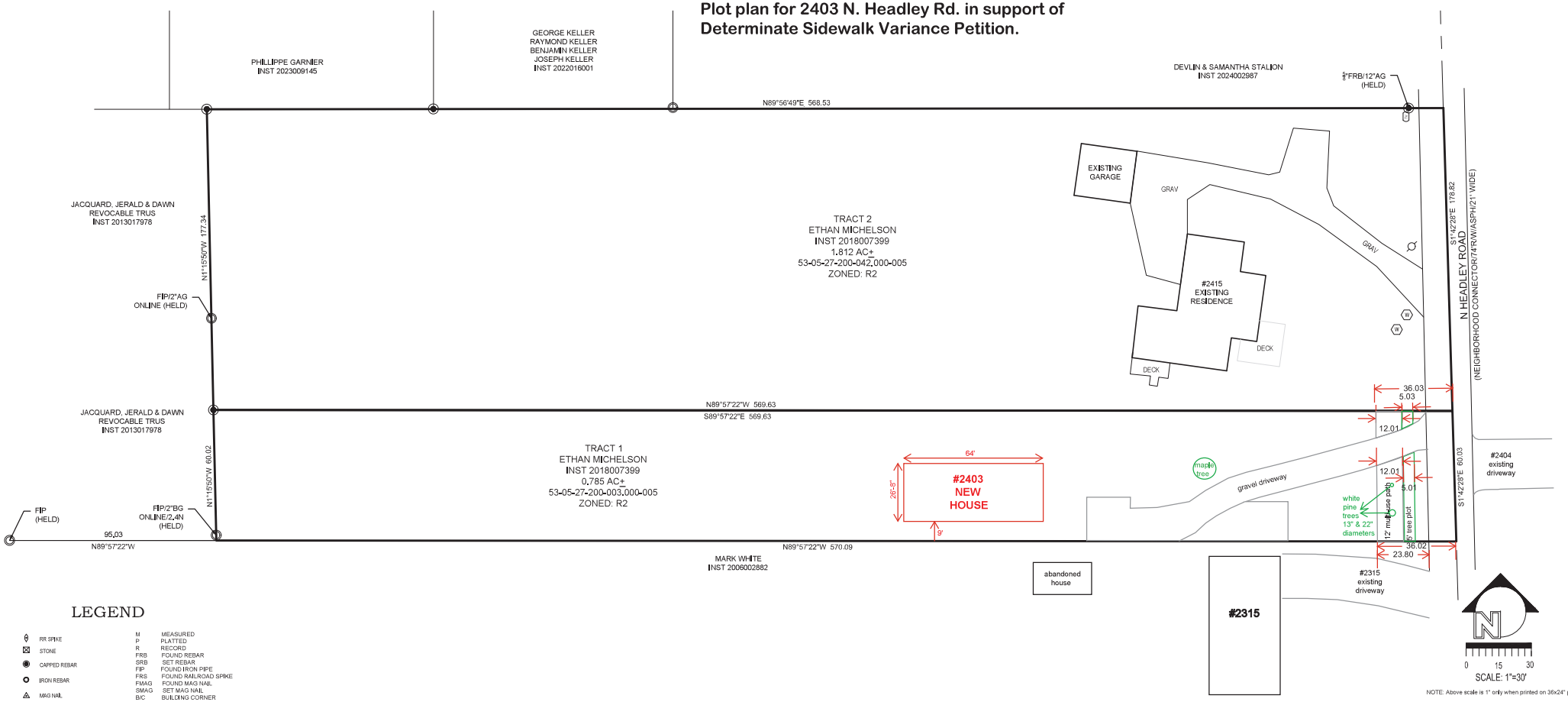
(d) This criterion does not apply because, as explained above, there is no sidewalk anywhere in the area, much less on the other side of Headley Road.
(e) According to the City of Bloomington's long-range transportation plans, a multi-use path is eventually intended for Headley Road. However, there is no clear timeline for its construction, and, when it does occur, the City — not individual property owners — will bear the cost. Requiring me to build an isolated segment now, at personal expense, would be premature, inequitable, and potentially wasteful if the final alignment differs from the current requirement. In other words, if, for the sake of "uniformity of development," the City decides to set the sidewalk further back or closer to Headley Road than the current requirement, it may need to tear up and rebuild the sidewalk I spent a considerable amount of money constructing, adding waste on top of inequity. This is precisely why Katie Gandhi, when she was a city planner, told me on the phone in June 2024 that she did not expect the City would require me to build a sidewalk.

Finally, let me consider *general criteria*.

(a) Since no sidewalk currently exists, preservation of the status quo is ipso facto not injurious to the public health, safety, morals, and general welfare of the community.
(b) However, construction of a sidewalk 24-36 feet from the middle of Headley Road could be injurious to the residents of the adjacent property, namely 2315 N. Headley Rd. Figure 4 shows that the entry point to the required sidewalk would be in the middle of the adjacent property's driveway. Not only would an entry point here adversely affect the residents of the adjacent property, but it could also adversely affect pedestrians using the sidewalk insofar as they would have to walk between cars and up a small hill.
(c) Owing to the topographical features discussed above, namely the large white pine trees in the middle of the sidewalk site, there are clear practical difficulties that are peculiar to the property in question.

Figure 4. View of the Entry Point to the Required Sidewalk from 2315 N. Headley Rd.

Plot plan for 2403 N. Headley Rd. in support of Determinate Sidewalk Variance Petition.



NOTE: Above scale is 1" only when printed on 36x24" paper.

LEGEND

RR SPIKE	
STONE	
CAPPED REBAR	
IRON REBAR	
MAG NAIL	
ALUMINUM MONUMENT	
FENCE POST	
SILT FENCE	

M	MEASURED
P	PLATTED
R	RECORD
FRB	FOUND REBAR
SRB	SET REBAR
FIP	FOUND IRON PIPE
FRS	FOUND RAILROAD SPIKE
FMAG	FOUND MAG NAIL
SMAG	SET MAG NAIL
B/C	BUILDING CORNER
FND	FOUND
PDO	POSSIBLE DEED OVERLAP
PDG	POSSIBLE DEED GAP
BG	BELOW GRADE
AG	ABOVE GRADE
ASPH	ASPHALT
GRAV	GRAVEL
CONC	CONCRETE

2025002626 EASE $25.00
3/12/2025 8:06:46 AM 15 3 PGS
Amy Swain
Monroe County Recorder IN
Recorded as Presented

Cross references: **Instr. No. 2024010596**

GRANT OF PERMANENT TREE PRESERVATION EASEMENT

THIS INDENTURE WITNESSETH that Ethan Michelson, of legal age, hereinafter called GRANTOR, for and in consideration of One Dollar ($1.00) and other valuable consideration, the receipt of which is hereby acknowledged, do hereby grant to CITY OF BLOOMINGTON, INDIANA, hereinafter called GRANTEE, a permanent Tree Preservation Easement across Grantor's property described in a deed, recorded October 2, 2024, as **Instrument Number 2024010596** in the office of the Recorder of Monroe County, Indiana. The easement granted herein is described and depicted in **Exhibit "A",** which is attached hereto and incorporated herein by reference.

This Tree Preservation Easement is dedicated for the purpose of preserving the existing conditions through implementation of below items within its bounds as shown on Exhibit "A".

Tree Preservation Easement:

(A) Prohibits the removal of any tree over six inches dbh within the easement area.

(B) Allows the removal of dead or diseased trees that pose a safety risk as well as allowing the removal of exotic or invasive species, only after first obtaining written approval from the Planning and Transportation Department.

(C) All tree preservation easements shall be identified with public signs located along the boundary of the easement. Public signs shall be placed at intervals of no more than 200 feet, and each public sign shall be a maximum of one- and one-half square feet in area. A minimum of one public sign is required, regardless of easement size. The property owner shall be responsible for installing and maintaining required signage.

(D) Allows, in cases where removal of exotic or invasive species is proposed, the restoration of disturbed areas with native plant material. Written approval from the Planning and Transportation Department is required prior to any proposed restoration.

GRANTOR intends this easement to run with the land and shall be binding upon Grantor and its successors, grantees and assigns.

The undersigned person executing this GRANT on behalf of GRANTOR represents and certifies that he has been fully empowered to execute and deliver this grant; that GRANTOR has full corporate capacity to convey the interest in the real estate described herein; and that all necessary corporate action for the making of this conveyance has been taken and done.

IN WITNESS WHEROF, the Grantor has hereunto set his hand and seal this 11th day of March, 2025.

Ethan Michelson

STATE OF INDIANA)

) SS:

COUNTY OF MONROE)

Before me, a Notary Public in and for said County and State, personally appeared Ethan Michelson who acknowledged the execution of the foregoing affidavit and who, having been duly sworn, stated that any representations therein contained are true.

Witness my hand and Notarial Seal this 11th day of March, 2025.

My Commission Expires:

2-16-33

Notary Public

A resident of Monroe County, Indiana

Instrument prepared by Daniel C. Stewart, Attorney at Law

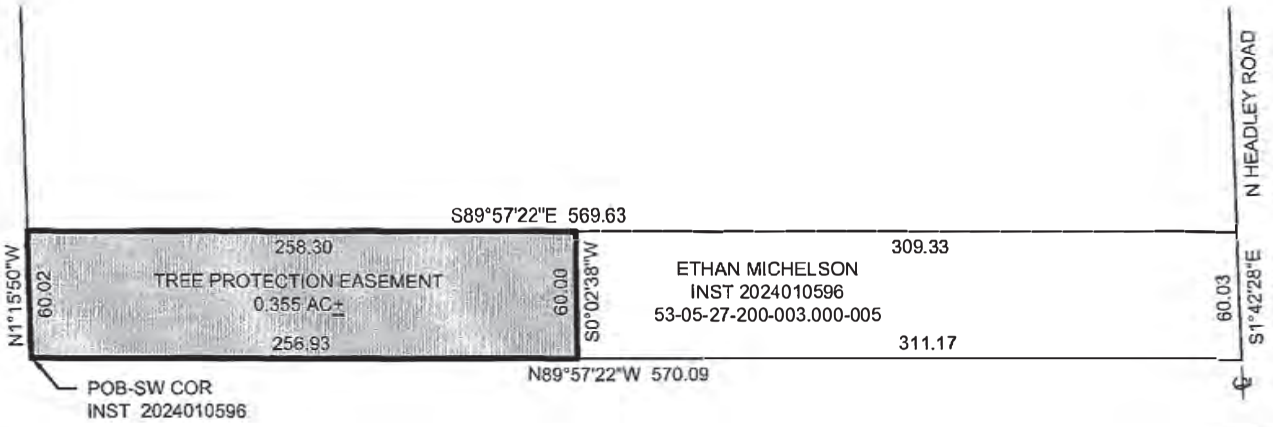
I affirm under the penalties of perjury that I have taken reasonable care to redact each social security number herein unless required by law. *Daniel C. Stewart*

53-06917

LEGAL DESCRIPTION - TREE PROTECTION EASEMENT

A PART OF THE NORTHWEST QUARTER OF SECTION 27, TOWNSHIP 9 NORTH, RANGE 1 WEST AND A PART OF LAND CONTAINED IN INSTRUMENT 2024010596, MONROE COUNTY, INDIANA, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF SAID INSTRUMENT, THENCE NORTH 01 DEGREES 15 MINUTES 50 SECONDS WEST ALONG THE WEST LINE THEREOF 60.02 FEET TO THE NORTHWEST CORNER THEREOF; THENCE SOUTH 89 DEGREES 57 MINUTES 22 SECONDS EAST ALONG THE NORTH LINE THEREOF 258.30 FEET; THENCE SOUTH 00 DEGREES 02 MINUTES 38 SECONDS WEST 60.00 FEET TO THE SOUTH LINE OF SAID INSTRUMENT; THENCE NORTH 89 DEGREES 57 MINUTES 22 SECONDS WEST ALONG SAID SOUTH LINE 256.93 FEET TO THE POINT OF BEGINNING, CONTAINING 0.355 ACRES, MORE OR LESS.



0 40 80
SCALE: 1"=80'

NOTE

THIS EXHIBIT WAS PREPARED BASED UPON DOCUMENTS OBTAINED FROM THE OFFICE OF THE RECORDER OF MONROE COUNTY, AND OTHER SOURCES AND IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

Smith Design Group, Inc.
1467 W Arlington Rd
Bloomington, Indiana, 47404
P: 812-336-6536
W: smithdginc.com
Job: 6935
Date: 3/10/25 Page: 1/1

BLOOMINGTON BOARD OF ZONING APPEALS CASE #: V-36-25/ ZR2025-08-0090
STAFF REPORT DATE: September 18, 2025

Location: 2214 E Maxwell Ln (Parcel #53-08-03-100-037.000-009)

PETITIONER: Mohsen Kianizadeh
106 E 2nd St, Bloomington, IN

OWNER: Mohsen Kianizadeh & Sara Noorihoseini
106 E 2nd St, Bloomington, IN

REQUEST: Variance from driveway width standards for a "Dwelling, single-family (detached)" use within a Medium Lot Residential (R2) zoning district.

REPORT: This 0.61 acre property is located at 2214 E Maxwell Lane and is zoned Residential Medium Lot (R2). All surrounding properties are designated Residential Medium Lot (R2). Surrounding land use consists primarily of single-family residential units. Rogers/Binford Elementary Schools are located approximately one block north of this property. Future Land Use for this area is designated as Neighborhood Residential.

The property has been developed with a single family residence and driveway that were approved under CZC-2024-0784. The approved site plan that was submitted with the permit showed a compliant 18' wide driveway. The owners now desire to place a 24-foot wide driveway on the property as they have encountered difficulty with parking and maneuvering their vehicles on-site and occasionally utilize on-street parking to meet their parking needs. Section 20.04.050(c)(3)(B) states that "The width of a driveway between the required front building setback and the street shall not exceed 18 feet."

It is important to note that there was a cognitive change to the driveway width standards in the UDO updates that were done in 2020 for single family residences and the language within the UDO was purposefully changed from the previous width allowance of 22' to a more narrow 18' width to provide a safer street design throughout the City that reduces conflict areas for pedestrians and for vehicles.

The petitioner is requesting a variance from driveway width standards in the Residential Medium Lot (R2) zoning district to allow for a 24-foot wide driveway forward of the dwelling unit's front setback.

CRITERIA AND FINDINGS FOR DEVELOPMENT STANDARDS VARIANCE
20.06.080(b)(3)(E) Standards for Granting Variances from Development Standards:

A variance from the development standards of the Unified Development Ordinance may be approved only upon determination in writing that each of the following criteria is met:

1) *The approval will not be injurious to the public health, safety, morals, and general welfare of the community.*

   PROPOSED FINDING: The granting of this variance would be injurious to the public health, safety, morals, or general welfare of the community as wider drivecuts create greater dangers for pedestrians crossing driveways and create larger conflict areas for vehicles entering and exiting properties into public streets. Allowing a 24' wide drivecut increases dangers to pedestrians and to vehicles.

2) *The use and value of the area adjacent to the property included in the Development Standards Variance will not be affected in a substantially adverse manner.*

   PROPOSED FINDING: No adverse impacts to the use and value of surrounding properties as a result of the requested variance are found. Several properties along Maxwell Lane have lawful, nonconforming driveways that exceed the current 18-foot driveway width standard that were installed prior to the current UDO standards.

3) *The strict application of the terms of the Unified Development Ordinance will result in practical difficulties in the use of the property; that the practical difficulties are peculiar to the property in question; that the Development Standards Variance will relieve the practical difficulties.*

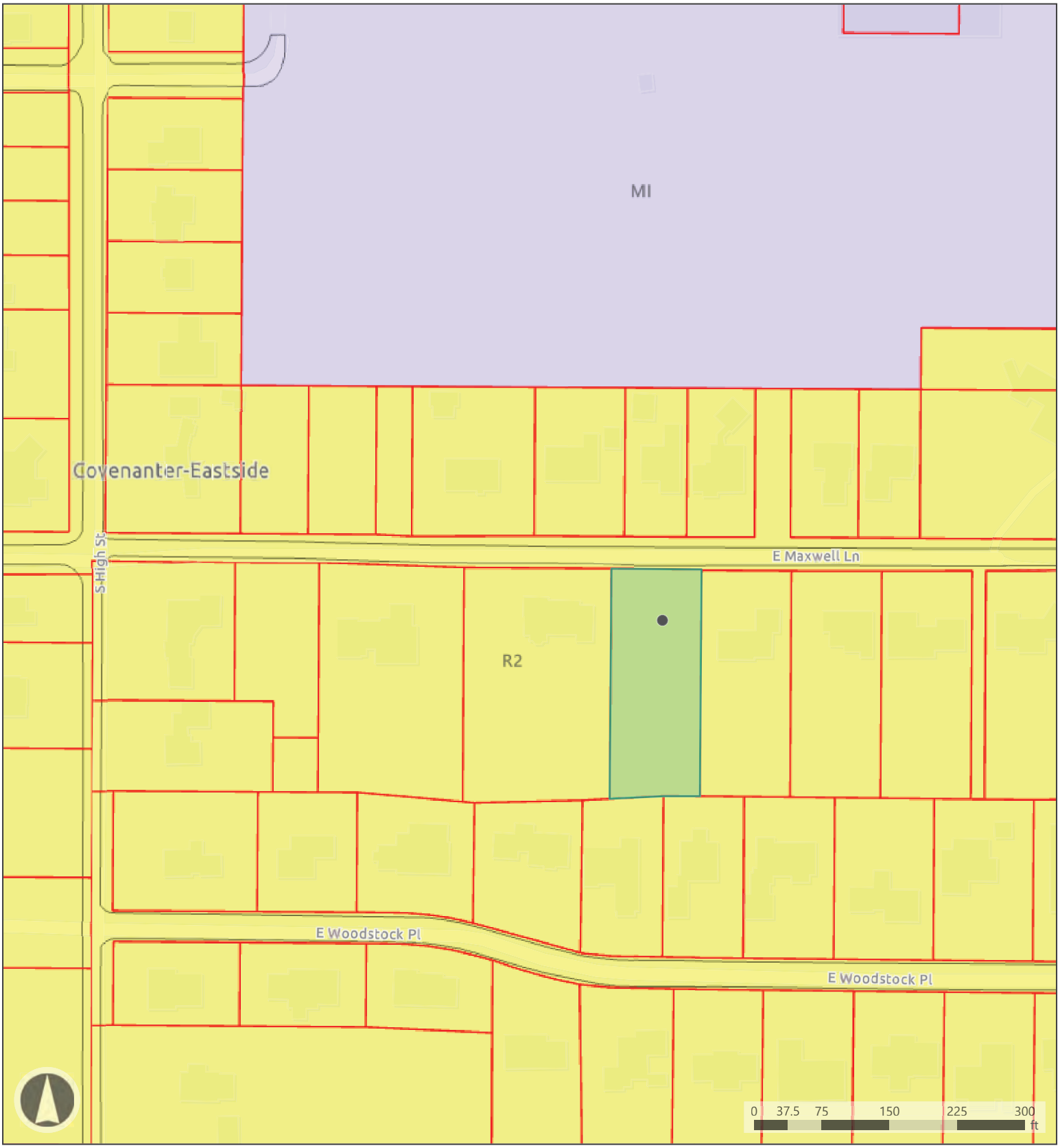
   PROPOSED FINDING: The Department does not find that the strict application of the terms of the Unified Development Ordinance will result in any practical difficulties in the use of the property that are a result of a condition that is peculiar to the property in question. While the petitioner states that this would resolve parking and access difficulties, the standard parking stall width for the City of Bloomington is 8.5 feet. An 18-foot wide driveway more than accommodates two vehicle parking spaces. In addition, as mentioned previously the restriction within the UDO for 18' wide driveways was an intentional change to increase safety throughout the City. While it is certainly acknowledged that there might be a desire to have wider driveways, there is no demonstrated peculiar condition for this property that places a unique hardship on this property specifically.

RECOMMENDATION: The Department recommends that the Board of Zoning Appeals adopt the proposed findings and deny case V-36-25/ ZR2025-08-0090.

City of Bloomington
GIS Context Map

Planning and Transportation Department

2214 E Maxwell Ln



Map Legend

- Board of Zoning Appeals
- Parcels
- Pavement
- Bloomington Municipal Boundary
- Mixed-Use Institutional
- Residential Medium Lot

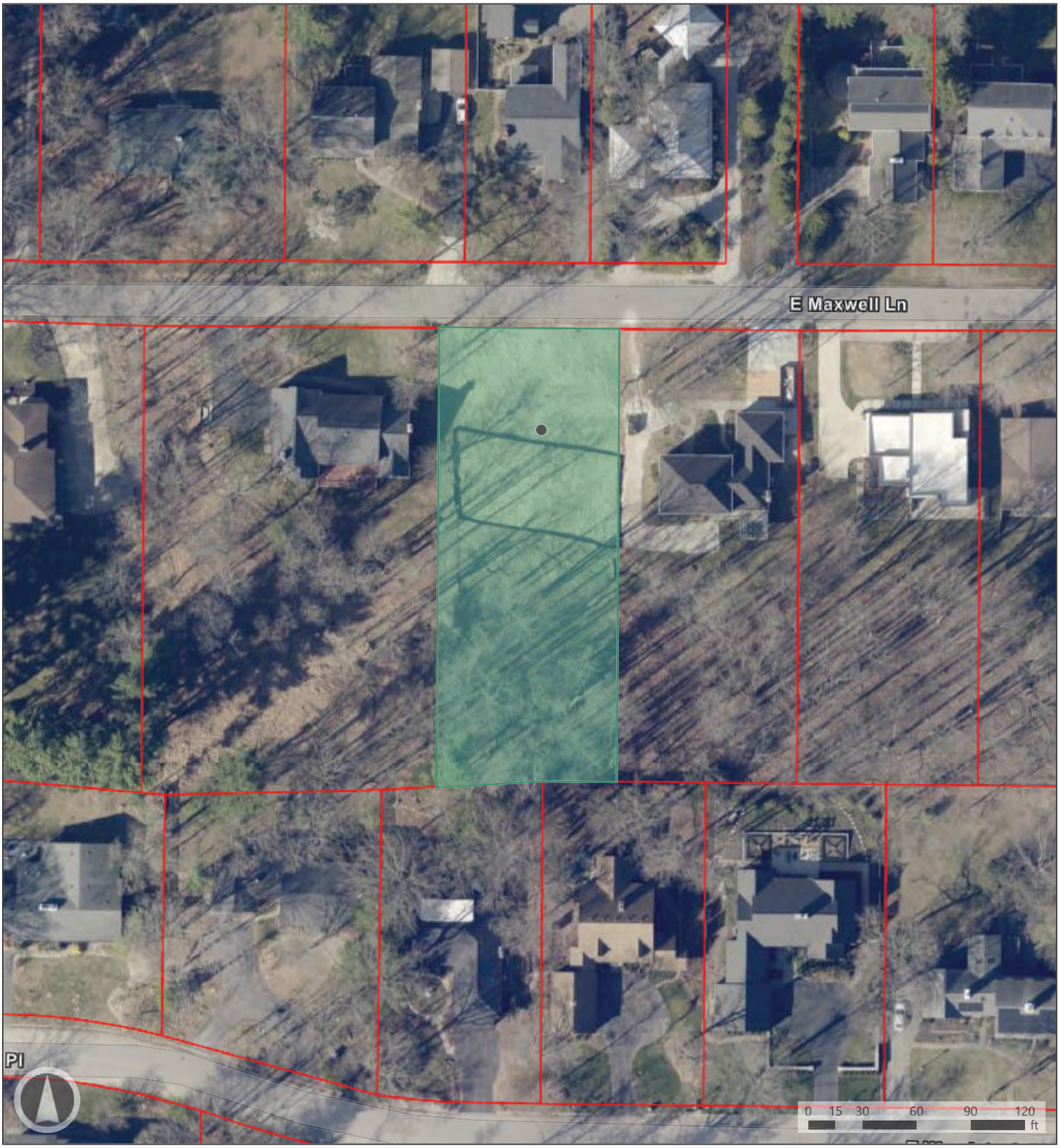
Created: 9/11/2025

For use as map information only, information is NOT warranted.

City of Bloomington
Aerial Map

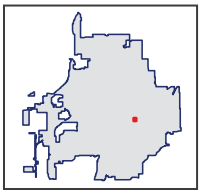
Planning and Transportation Department

2214 E Maxwell Ln



Map Legend

- Board of Zoning Appeals
- Parcels
- Bloomington Municipal Boundary



Created: 9/11/2025

For use as map information only, information is NOT warranted.

Variance Request – Wider Driveway

Property Address: 2214 E Maxwell Lane, Bloomington, IN 47401
Zoning District: R2 – Low-Density Residential
Requested Variance: Driveway width of **24 feet** (UDO maximum is 18 feet)

Petitioner's Statement

Dear Board of Zoning Appeals,

We respectfully petition the Board of Zoning Appeals to grant a variance allowing a wider driveway than the 18-foot maximum permitted under the UDO for properties zoned R2. The 18-foot limit creates a **practical difficulty** for our property. An 18-foot driveway is very tight for two cars to park side by side, and there is almost no room to maneuver if trash bins need to be taken to the curb, bicycles or strollers to pass through just to name a few examples. This restriction would regularly force us to park in the street.

As you can see in the attached photos (**See PG 3**:**Photo 1 A,B,C – street views**), Maxwell Lane is a **narrow street**. Parking is allowed on both sides, which already limits visibility and space for moving vehicles. At night, parked cars make it especially dangerous for pedestrians walking along the street.

Maxwell Lane also has **two pedestrian pathways** that are unique to this block:

- One path leads directly to **Rogers Binford Elementary School**, which creates heavy traffic during daily school drop-off and pickup **(See PG 3: Photo 2 – overview of area**).
- The other path connects to a nearby neighborhood and the **City bus stop**, so commuters and students often park on the street (**Photo 2 – overview of area**).

This unusual combination results in traffic volumes and parking pressures not typical of R2-zoned neighborhoods.

By allowing a **24-foot driveway**, we will:

- Keep our vehicles off the street, reducing congestion.
- Improve pedestrian safety, especially at night when visibility is low.
- Ensure emergency vehicles can pass safely without obstruction.

- Support the overall public interest by lessening reliance on scarce on-street parking.

This variance will **not harm adjacent properties**. In fact, it benefits neighbors by keeping more cars in the driveway and fewer on the street. The request is consistent with the **spirit of the UDO** and the **Comprehensive Plan**, which both emphasize safety, accessibility, and neighborhood compatibility.

For the reasons stated above, we respectfully request approval of this variance. This adjustment will reduce street congestion, improve safety and better align with the practical realities of this unique property location.

Respectfully submitted,

Sara Noorihoseini & Mohsen Kianizadeh

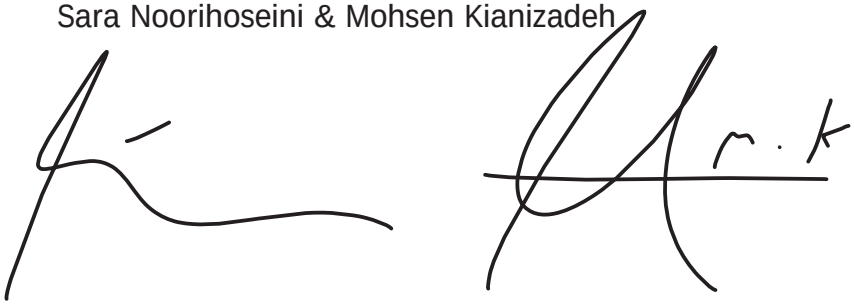
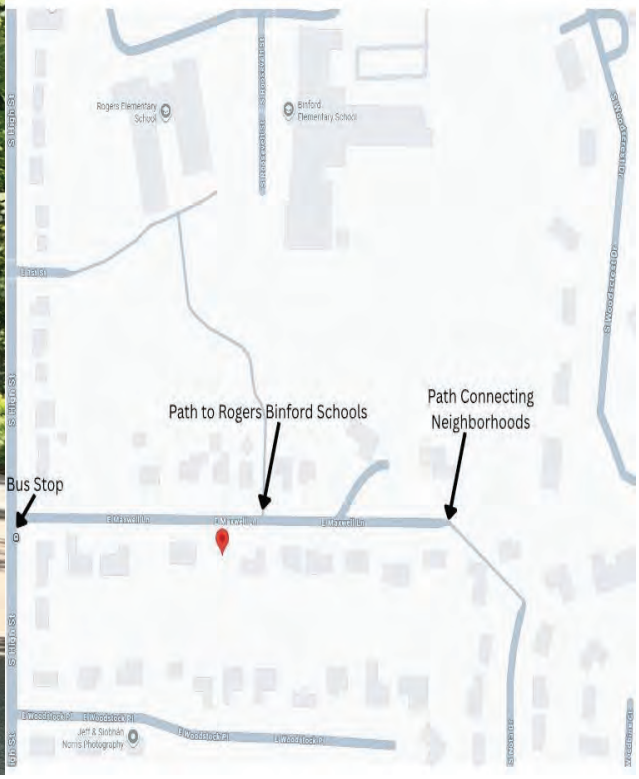
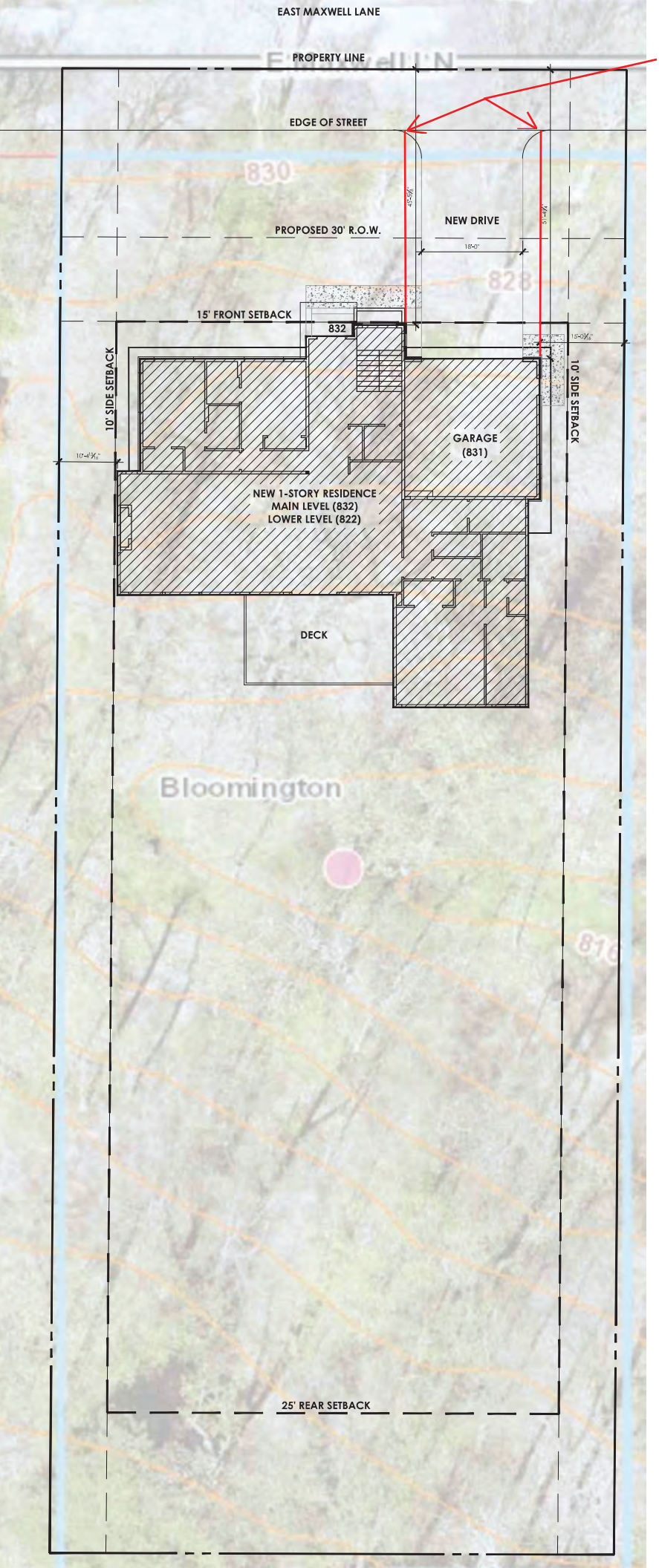


Photo 2: Overview of Area




EAST MAXWELL LANE
PROPERTY LINE
EDGE OF STREET
Proposed New Driveway
NEW DRIVE
PROPOSED 30' R.O.W.
15' FRONT SETBACK
832
10' SIDE SETBACK
10' SIDE SETBACK
GARAGE
(831)
NEW 1-STORY RESIDENCE
MAIN LEVEL (832)
LOWER LEVEL (822)
DECK
25' REAR SETBACK
Bloomington

BLOOMINGTON BOARD OF ZONING APPEALS **CASE#: CU-37-25**
STAFF REPORT **ZR2025-08-0088**
LOCATION: 1320 S. Rogers Street **DATE: September 18, 2025**

PETITIONER: Built, LLC
10650 N. Bennel Parkway
Zionsville, IN 46077

CONSULTANT: Spaceco
3850 Priority Way South, Suite #110
Indianapolis, IN 46240

REQUEST: Conditional use approval to allow a driveway, parking, and structures within the floodplain to allow the construction of 5 buildings for the use "Contractor's Yard" within Parcel C of the Thomson Planned Unit Development (PUD) zoning district

---

REPORT: This 6.42 acre property is located at the northwest corner of S. Rogers Street and W. Hillside Drive. This site is located on Parcel C of the Thomson Planned Unit Development and is currently undeveloped. Adjacent uses include offices to the north, office and manufacturing associated with Novo Nordisk to the west, trucking and distribution to the south, and single family residences in the McDoel Neighborhood to the east. Surrounding zoning includes Planned Unit Development (Thomson PUD) to the north and west, Mixed Use Employment (ME) to the south and Residential Multifamily (RM) to the east. The property is bordered by Clear Creek along the west side of the property that has a regulated riparian buffer as well as 100-year floodplain. There are no other known regulated environmental features.

This property received subdivision and PUD final plan approval in 2008 (PUD-31-08, PUD-22-09, and PUD-06-10) to develop the overall site into an office park. However only one office building and parking area were constructed and the overall property has remained undeveloped. The petitioner is proposing to develop the site with 5 buildings that will be used for storage and use as a “Contractor’s Yard”. There will be individual bays within each building that will be rented and used for storage and flex space by the tenants. An interior system of driveways provides access to the buildings from a drive that connects to Hillside Drive. There are no access drives proposed or allowed on Rogers Street. There is an 8’ wide multiuse path along Rogers Street that will be replaced with a compliant 12’ wide multiuse path and tree plot with street trees.

Approximately 50% of the property is encumbered with the floodway and floodway fringe of Clear Creek. The petitioner has designed the site plan to avoid any disturbance within the floodway and located all of the improvements to the east side of the property to minimize disturbance within the floodway fringe. The petitioner will be placing fill within a portion of the floodway fringe to elevate the proposed buildings to meet flood protection requirements so that the lowest finished floor is 2’ above the 100-year base flood elevation. The 100-year base flood elevation is 727.5’ on the upstream side of the site and 725.9’ on the downstream side of the site. The proposed buildings will therefore have a lowest finished floor of 729.5’ on the upstream side of the site and 727.9’ on the downstream side of the site. No work is proposed within the floodway. To create compensatory storage area to offset the proposed fill, the petitioner is showing two detention areas for floodplain

compensatory storage and one detention area for site detention and water quality requirements. No permits are needed from the Indiana Department of Natural Resources (IDNR) for this project since there will not be any work within the floodway. Compliance with Federal Emergency Management Agency (FEMA) requirements will be submitted to FEMA once the project is completed and the petitioner expects that a Letter of Map Revision (LOMR) will be required from FEMA once the project is completed. A Floodplain Development Permit is also required by the UDO. The petitioner has submitted all of the information required by the UDO for the Floodplain Development Permit. Approval of the permit is contingent on the granting of the Conditional Use approval for the proposed construction.

This petition was presented to the McDoel Neighborhood Association on September 4, 2025. At that meeting neighbors had questions regarding the overall layout of the buildings, possible uses within the buildings, possible storage of outdoor materials, and questions about impacts to the floodplain.

Section 20.04.040(e)(1) of the UDO states that transportation facilities, including but not limited to bridges, streets, and drives and buildings/structures are allowed within the floodway and floodway fringe subject to approval under the Conditional Use process. The petitioner is requesting Conditional Use approval to all the construction of the proposed drives and buildings.

CRITERIA AND FINDINGS FOR CONDITIONAL USE PERMIT

20.06.040(d)(6)(B) General Compliance Criteria: All petitions shall be subject to review and pursuant to the following criteria and shall only be approved if they comply with these criteria.

i. Compliance with this UDO
ii. Compliance with Other Applicable Regulations
iii. Compliance with Utility, Service, and Improvement Standards
iv. Compliance with Prior Approvals

PROPOSED FINDING: The proposed buildings need modification to meet architectural requirements, however the overall site plan meets all of the UDO requirements. Final review and approval of the site plan is required by the Plan Commission and an application has been submitted for major site plan approval (SP-28-25/SP2025-08-0084). As mentioned, approval from the Indiana Department of Natural Resources (IDNR) is not required since there is no proposed work within the floodway, however final review by FEMA will be required once the project is complete. The petitioner has designed the site plan to meet all of the requirements of FEMA. Final compliance with all state and federal requirements is required prior to recommendation of final occupancy. Drainage and grading plans have also been submitted to City of Bloomington Utilities (CBU) for review and an initial review letter from CBU has been issued. There are water and sewer lines that access this site and no conflicts with connecting to those services have been identified. Final acceptance and approval from CBU is required prior to the issuance of any permits. There were several previous subdivision plats and site plan approvals that were approved for this parcel under PUD-31-08, PUD-22-09, and PUD-06-10. The petitioner has filed a revised plat for this property to amend the location of some of the existing easements and will be reviewed by the Plan Commission.

20.06.040(d)(6)(C) ADDITIONAL CRITERIA APPLICABLE TO CONDITIONAL USES

i. Consistency with Comprehensive Plan and Other Applicable Plans

The proposed use and development shall be consistent with and shall not interfere with the achievement of the goals and objectives of the Comprehensive Plan and any other applicable adopted plans and policies.

PROPOSED FINDING: This proposal is in line with many of the goals of the Comprehensive Plan. The Comprehensive Plan identifies this area with the "Employment Center" land use category. The Comprehensive Plan states that the Employment Center district includes professional and business offices, light assembly plants, **flex-tenant facilities**, and research and development centers. This use incorporates a flex space design that allows contractors to utilize the facilities for storage of work equipment and light flex space useage for their businesses. The Thomson PUD also encourages supportive uses of adjacent manufacturing uses. While this specific use does not have any on-site employees, it does directly support local contractors and businesses with the provision of storage space to work from. This location is also well served by existing services and utilities. The Comprehensive Plan states that this district may produce a great amount of truck traffic and this location immediately adjacent to Rogers Street and manufacturing uses is not out of character with this area and the PUD.

ii. Provides Adequate Public Services and Facilities

Adequate public service and facility capacity shall exist to accommodate uses permitted under the proposed development at the time the needs or demands arise, while maintaining adequate levels of service to existing development. Public services and facilities include, but are not limited to, streets, potable water, sewer, stormwater management structures, schools, public safety, fire protection, libraries, and vehicle/pedestrian connections and access within the site and to adjacent properties.

PROPOSED FINDING: The site has existing utility connection and no issues have been identified with the proposed connections. Installation of a new multi-use path along the property frontage is required by code and has been shown with the required tree plot.

iii. Minimizes or Mitigates Adverse Impacts

1. *The proposed use and development will not result in the excessive destruction, loss or damage of any natural, scenic, or historic feature of significant importance.*
2. *The proposed development shall not cause significant adverse impacts on surrounding properties nor create a nuisance by reason of noise, smoke, odors, vibrations, or objectionable lights.*
3. *The hours of operation, outside lighting, and trash and waste collection must not pose a hazard, hardship, or nuisance to the neighborhood.*
4. *The petitioner shall make a good-faith effort to address concerns of the adjoining property owners in the immediate neighborhood as defined in the pre-submittal neighborhood meeting for the specific proposal, if such a meeting is required.*

PROPOSED FINDING: There is a portion of the site that lies within the riparian buffer of Clear Creek and the proposed site plan shows the required riparian buffer plantings within the riparian buffer. As mentioned previously compensatory storage has been included to offset the proposed

fill, therefore reducing impacts to the floodplain. There are no other known regulated natural, scenic, or historic features that will be impacted. Although adjacent to the McDoel Historic District, this property is not located within a historic district. With the provision of the compensatory storage area, no adverse impacts are expected from the placement of the buildings and drives in the floodway fringe. No changes to trash and waste collection service are expected. This property and use are separated from the adjacent neighborhood to the east by Rogers Street, which provides a spatial separation to help minimize impacts on the adjacent neighborhood. As mentioned previously, this petition was presented to the McDoel Neighborhood Association and the questions regarding the overall layout of the buildings, possible uses within the buildings, possible storage of outdoor materials, and questions about impacts to the floodplain appeared to be adequately addressed by the petitioner.

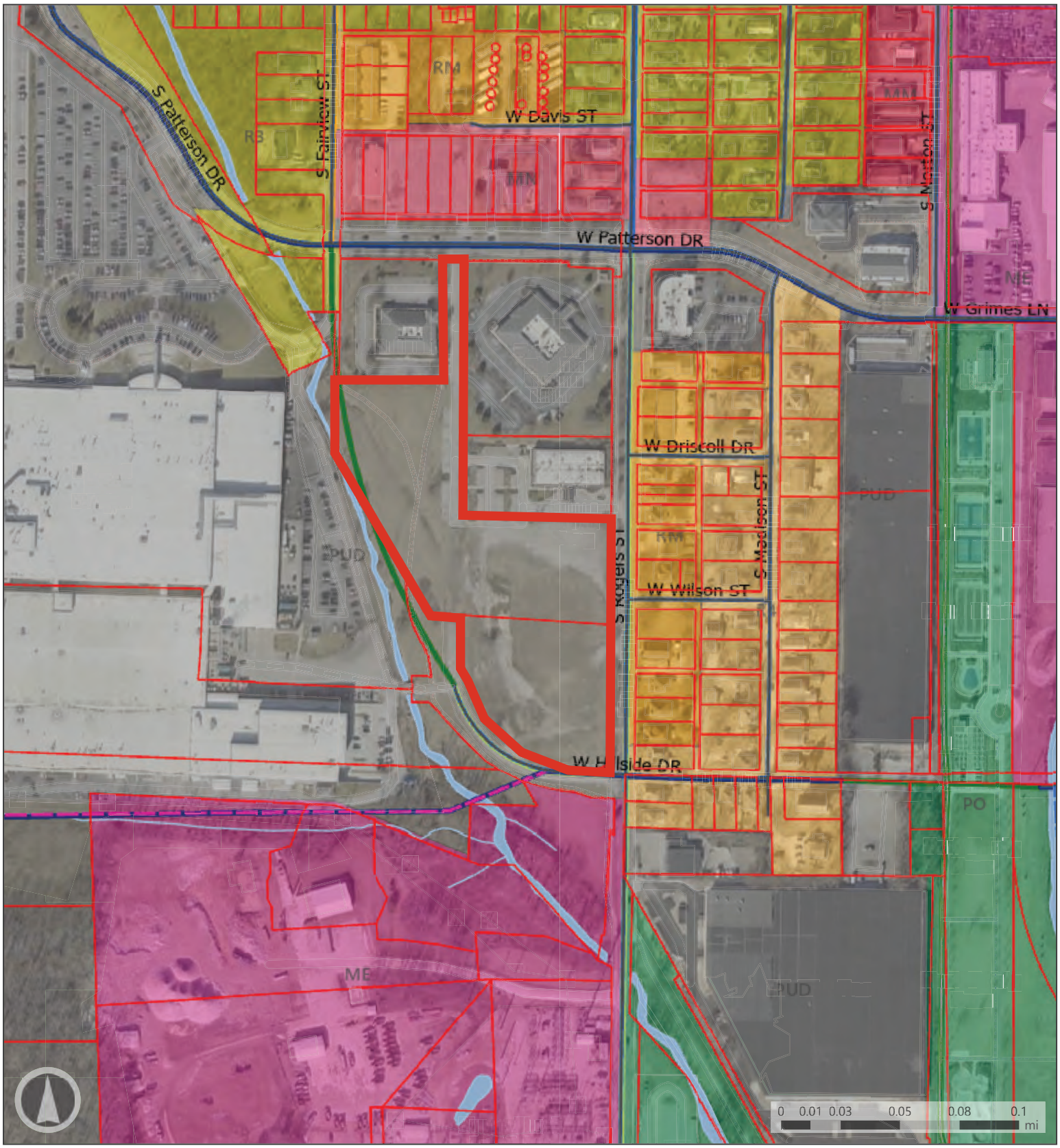
iv. Rational Phasing Plan

If the petition involves phases, each phase of the proposed development shall contain all of the required streets, utilities, landscaping, open space, and other improvements that are required to comply with the project's cumulative development to date and shall not depend upon subsequent phases for those improvements.

PROPOSED FINDING: No phasing is proposed with this plan.

RECOMMENDATION: The Department recommends that the Board of Zoning Appeals adopt the proposed findings and approve CU-37-25/ZR2025-08-0088 with the following conditions:

1. Compliance with all State and Federal requirements is required prior to recommendation of final occupancy.
2. A Floodplain Development permit is required prior to any site disturbance.



Map Legend

- Parcels
- Current
- City Maintained Streets
- General Urban
- Neighborhood Connector
- Neighborhood Residential
- Secondary Arterial
- Waterlines
- Waterbodies
- Bloomington Municipal
- Mixed-Use Employment

Created: 7/19/2025 *Map By:*

For use as map information only, information is NOT warranted.

Map Legend

- Parcels
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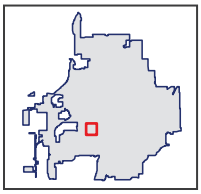

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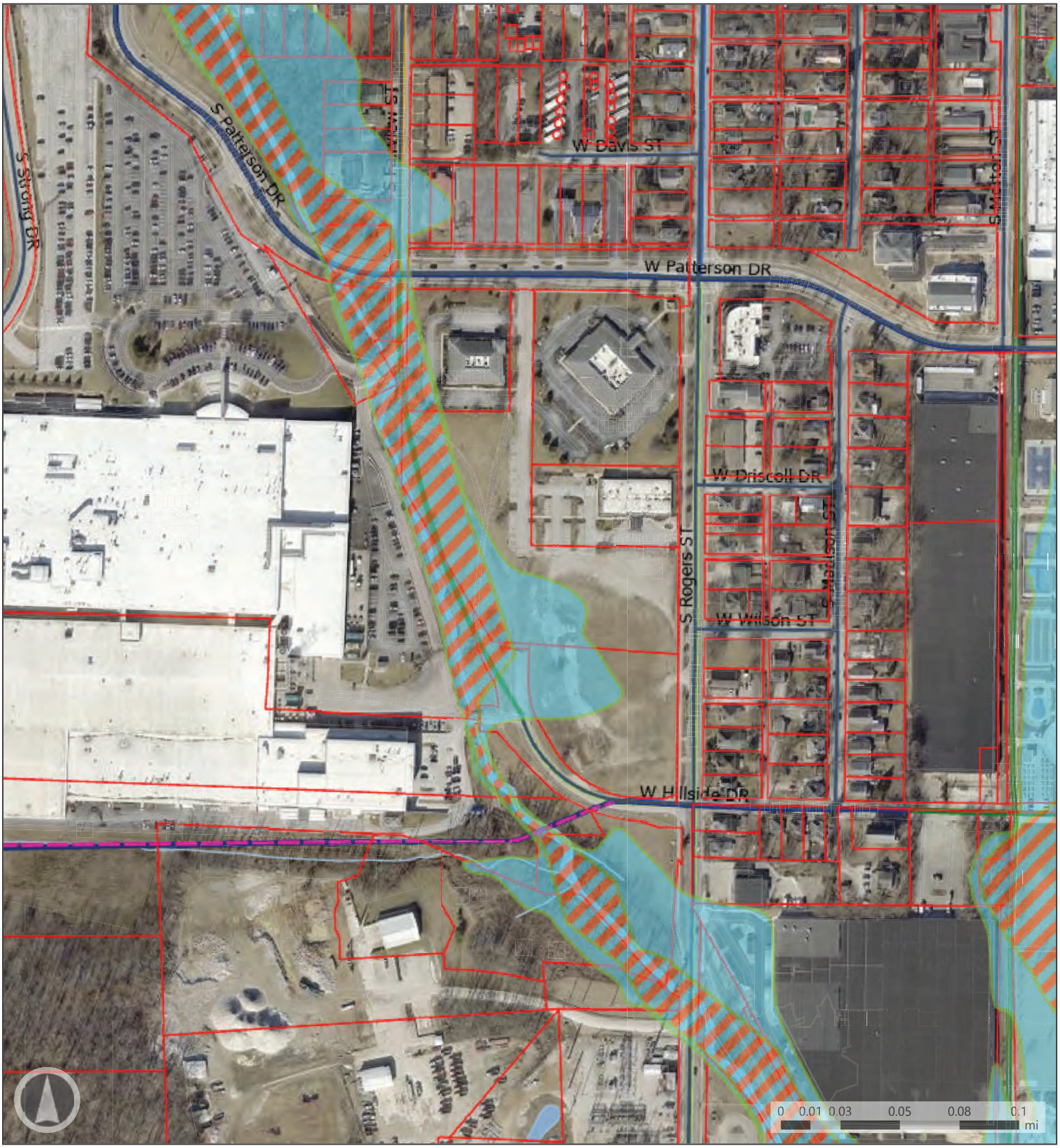
City of Bloomington

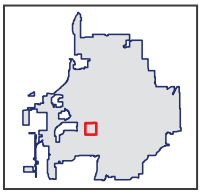
Planning and Transportation Department



Map Legend

FLD_ZONE, SOURCE_DNR, ZONE_SUBTY

- FEMA Zone AE Floodway; FEMA Administrative Floodway
- FEMA Zone AE ; AE,NFHL,<Null>
- Not Mapped
- Parcels
- Current
- City Maintained
- General Urban
- Neighborhood



Created: 7/19/2025 *Map By:*

For use as map information only, information is NOT warranted.

Spaceco
Civil Engineering & Surveying
3850 Priority Way S. Dr., Suite 110, Indianapolis, IN 46240 | spacecoinc.com

City of Bloomington Planning and Transportation
City of Bloomington Board of Zoning Appeals
ATTN: Eric Greulich

401 N Morton Street
Suite 130
Bloomington, Indiana
47404

Petitioner Statement – BZA Filing

Project Narrative

The proposed project, BUILT Bloomington, is a proposed commercial development located at 1320 S Rogers Street in Bloomington, Indiana. The project consists of five (5) new buildings, ranging in size from approximately 6,750 square feet to 13,800 square feet. The proposed use for the site will be small-bay flex industrial spaces intended for storage and light trade operations, limited to uses compliant with S-1 occupancy codes regarding hazardous materials and consistent with Thomson PUD zoning parameters for industrial use. Client visits may occur by private appointment; however, storefront retail is not permitted. The site will be accessed via a new drive off of Hillside Drive and will include associated improvements such as parking, stormwater management, and utilities.

Proposed stormwater management features include three (3) dry ponds: Ponds 1 and 2 will provide compensatory storage for the floodplain fill required for the project, and Pond 3 will provide detention and attenuation of site runoff prior to discharge. All site runoff will ultimately discharge to West Branch Clear Creek.

Additional improvements include an underground stormwater conveyance system, proposed water, sanitary, and gas utility infrastructure, landscaping improvements, and the creation of a new plat to rearrange and establish easements. The total disturbed area for this development is approximately 3.94 acres.

This submittal is accompanied by a preliminary civil plan set with revisions that reflect feedback received from the Development Review Committee (DRC).

Site Description

The subject site is approximately 6.42 acres and currently consists of undeveloped ground with grassy vegetation, along with areas of asphalt and gravel. The northern portion of the site which is not slated for any hardscape improvements or buildings, contains an existing pedestrian walkway and parking. The site is within the Thomson Planned Unit Development (PUD) zoning district.

A portion of the site lies within a regulated flood zone area, including both Zone AE Floodplain and Zone AE Floodway. The proposed development has been carefully designed to avoid encroachment into the floodway, and any proposed fill within the floodplain will be offset through the use of compensatory storage provided by Ponds 1 and 2. The development is therefore intended to comply with all local, state, and federal floodplain management regulations.

Regulations require the finished floor elevations of all buildings located in a floodplain to be 2 feet above the Base Flood Elevation (BFE). The BFE at Buildings 1 and 4 which are in the flood

plain was determined to be 727.50 and 725.90, respectively, through interpolation between known BFE's from the Flood Insurance Rate Map included in Tab 2 of the drainage report included with this submittal. In the proposed development, Building 1's finished floor elevation will be 729.50 and Building 2 will be at 727.90 to comply with the 2 foot rule.

In addition to the building elevations, the site will also be graded in such a way to provide storage to compensate for fill in the floodplain. Tab 5 of the drainage report details the compensatory storage calculations and demonstrates satisfactory compensatory storage. Proposed dry ponds 1 and 2 create 2,107 cubic yards of cut which compensates for the 1,853 cubic yards of fill in the floodplain.

Request

Conditional Use approval is requested from the Board of Zoning Appeals (BZA) for development activity within the floodplain.

Please reach out to me with any questions or concerns.

Madeline Sanders, P.E.
Project Engineer
Spaceco, Inc.
317-719-3596
msanders@spacecoinc.com

Floodplain Development Permit Application Checklist

Apply at https://bloomington.in.gov/planning/permits

- ☒ Sealed site plans: Sealed drawings showing existing and proposed features may be required including:
  - ☒ Location of the floodplain and all proposed structures and/or alterations proposed within the floodplain.
  - ☒ Land grades
  - ☒ Elevation of the top of the planned lowest floor (including basement) of all proposed buildings. Elevation should be in NAVD 88 or NGVD
- NA ○ Elevation (in NAVD 88 or NGVD) to which any non-residential structure will be flood proofed
- NA ○ Description of the extent to which any watercourse will be altered or relocated as a result of proposed development. A hydrologic and hydraulic engineering study is required, and any watercourse changes submitted to DNR for approval and then to FEMA as a Letter of Map Revision
  - ☒ Buildings and structures
  - ☒ Entrances and drives
  - ☒ Parking layout
  - ☒ Right-of-way
    - ☒ Right-of-way width
    - ☒ Pavement width
    - ☒ Street name(s)
    - ☒ Sidewalks
  - NA ○ Dedications including streets and other major improvements planned by the public for future construction on or adjacent to the tract as indicated by the City of Bloomington Transportation Plan
  - ☒ Landscaping
  - ☒ Storage of materials
- NA ○ No Rise Certification – if in floodway

NA O Approval from federal and state agencies including:

NA O IDNR Construction in a Floodway Permit

☒ Other local permits (such as site development, stormwater management, right-of-way, etc)

Local permits underway

FINAL STORMWATER MANAGEMENT REPORT

FOR

BUILT BLOOMINGTON

1320 S ROGERS STREET

BLOOMINGTON, INDIANA

Prepared For:

ALT CONSTRUCTION

ZIONSVILLE, INDIANA

Prepared By:
Spaceco, Inc.
9575 W. Higgins Road, Suite 700
Rosemont, IL 60018
PH: 847-696-4060
Contact: Madeline Romeo Sanders, P.E.

SPACECO PROJ #: 13341
ORIGINAL DATE: 5/21/2025
LAST REVISED: 8/15/2025

Spaceco
Civil Engineering & Surveying

Spaceco
Civil Engineering & Surveying

3850 Priority Way South Drive, Suite 110
Indianapolis, IN 46240
(317) 779-2194

TABLE OF CONTENTS

TAB 1
STORMWATER NARRATIVE

STORMWATER NARRATIVE

INTRODUCTION

This report summarizes the stormwater management calculations for the proposed BUILT Bloomington development located at 1320 S Rogers Street in Bloomington, Indiana. The total site area is about ±6.42 acres with about ±3.94 acres of land disturbance. The stormwater analysis was performed based on the requirements of the City of Bloomington Utilities Stormwater Design Manual (June 26, 2024).

SOILS

Per the USDA NRCS Web Soil Survey, the primary soil types inside the project limits are Crider-Urban land complex, 2 to 6 percent slopes (CtB, HSG B) and Udorthents, loamy, (Ua, HSG none). A soils map is included in Tab 2.

FLOODPLAIN

Per the Flood Insurance Rate Map (FIRM) 18105C0143D, the site is partially located in a flood hazard area Zone AE and a floodway Zone AE. The development does not encroach on the regulatory floodway. A floodplain map is located in Tab 2 and floodplain compensatory storage details are below. Floodplain calculations are included in Tab 5.

EXISTING CONDITIONS

The existing site is approximately 6.42 acres and consists of undeveloped grassy ground cover as well as some asphalt and gravel. The site generally drains from east to west and is partially captured by an existing underground storm system that discharges on the south side of the site to West Branch Clear Creek.

Refer to Tab 3 for an exhibit showing the site's existing conditions and the portion of the site's property that will be disturbed by the proposed project. Table 1 below lists basin information for the site's disturbed area in the existing conditions.

Table 1. Disturbed Area/Existing Basin Information

Area	Composite Curve Number	Time of Concentration	10-year Runoff	100-year Runoff
3.94 acres	75	6 min	13.62 cfs	26.74 cfs

PROPOSED CONDITIONS

The proposed development consists of five proposed buildings including a ±6,750 sf building, two ±13,800 sf buildings, a ±9,900 sf building, and a ±7,200 sf building. Site improvements also include asphalt pavement, drainage infrastructure, and associated utility improvements. Table 2 shows the proposed basin information.

Table 2. Proposed Basin Information

Area	Composite Curve Number	Time of Concentration	10-year Runoff	100-year Runoff
2.52 acres	94	8 min	14.08 cfs	22.20 cfs

Much of the developed site will drain to a proposed storm sewer system and discharge into Proposed Dry Pond 3. Along with its water quality function, the purpose of this pond is to reduce the runoff from the proposed development to meet the allowable release rates using an outlet control structure. The allowable release rates were calculated using the site's disturbed area of 3.94 acres multiplied by the peak discharge limits from the City of Bloomington Utilities Stormwater Design Manual (0.5 cfs/acre for the 10-year and 0.9 cfs/acre for the 100-year). Table 3 below shows a comparison of the site's allowable release rates to the pond's discharge rates.

Table 3. Allowable Release Rates vs. Pond Discharge Rates

	10-year	100-year
Allowable Release Rate	1.97 cfs	3.54 cfs
Pond Discharge Rate	1.84 cfs	2.02 cfs

Part of the proposed development involves removing existing underground storm infrastructure while preserving the original drainage pattern.

Two existing storm pipes (24" CPP and 15" CPP) at the northwest corner of the site which carry runoff from the developed area to the north and originally continued west to West Branch Clear Creek will be rerouted to Proposed Dry Pond 1. The purpose of this pond is to convey the runoff from these two existing pipes back to West Branch Clear Creek and also provide compensatory storage in the floodplain which is explained more in depth in the floodplain section below.

Two additional existing storm pipes (12" CMP and 24" clay) just east of the two pipes described above which also convey runoff from the development to the north will be intercepted by a proposed 30" RCP which will circumvent the proposed development and carry the runoff from these two existing pipes to their original discharge point at the south side of the site. The 30" RCP will also pick up any floodwater or rainfall that may accumulate in Proposed Dry Pond 2.

STORMWATER DETENTION

Although there are three dry ponds proposed for this development, only Proposed Dry Pond 3 will receive runoff from the site and serve to reduce the increased runoff. This pond's outlet structure is designed with an orifice to control the discharge rate to below the allowable release rates as shown in Table 3 above. Refer to Tab 4 for outlet structure design information and pond storage calculations.

STORM SEWER SUMMARY

Proposed storm sewers for the project were designed using the Rational Method and input values as described by the City of Bloomington Utilities Stormwater Design Manual (June 26, 2024) for a 10-year peak storm event. Calculations are included in Tab 4 of this report.

FLOODPLAIN COMPENSATION

Part of the proposed development is located in the floodplain of West Branch Clear Creek as shown on the Flood Insurance Rate Map in Tab 2. As a result, design decisions were made considering the regulations for construction in a floodplain including the finished floor elevations of the buildings that encroach on the floodplain as well as the compensatory storage requirements for fill in a floodplain.

Regulations require building finished floor elevations to be 2 feet above the Base Flood Elevation (BFE) which was determined through interpolation to be approximately 727.50 at Proposed Building 1's northwest corner and 725.90 at Proposed Building 4's northwest corner. The finished floor elevations of these building and adjacent buildings were set at 729.50 and 727.90 to meet the 2-foot requirement.

Special consideration was also given to the site's grading. The total fill within the limits of the floodplain up to the BFE was determined to be 1,853 cubic yards. This volume or greater is the required volume of cut within the floodplain to meet the compensatory storage requirements. Proposed Dry Ponds 1 and 2 create 2,107 cubic yards of cut which is more than enough to compensate for the fill in the floodplain. Detailed calculations for compensatory storage are included in Tab 5.

STORMWATER QUALITY

Per the City of Bloomington Utilities Stormwater Design Manual (June 26, 2024), a treatment train is provided including a hydrodynamic separator and a dry pond in series. The water quality flowrate (Qwq) used to size the hydrodynamic separators was calculated as outlined in Chapter 6.9. Water quality flowrate (Qwq) calculations are included in Tab 6 of this report. The hydrodynamic separator will be installed offline just upstream of the outlet to the pond.

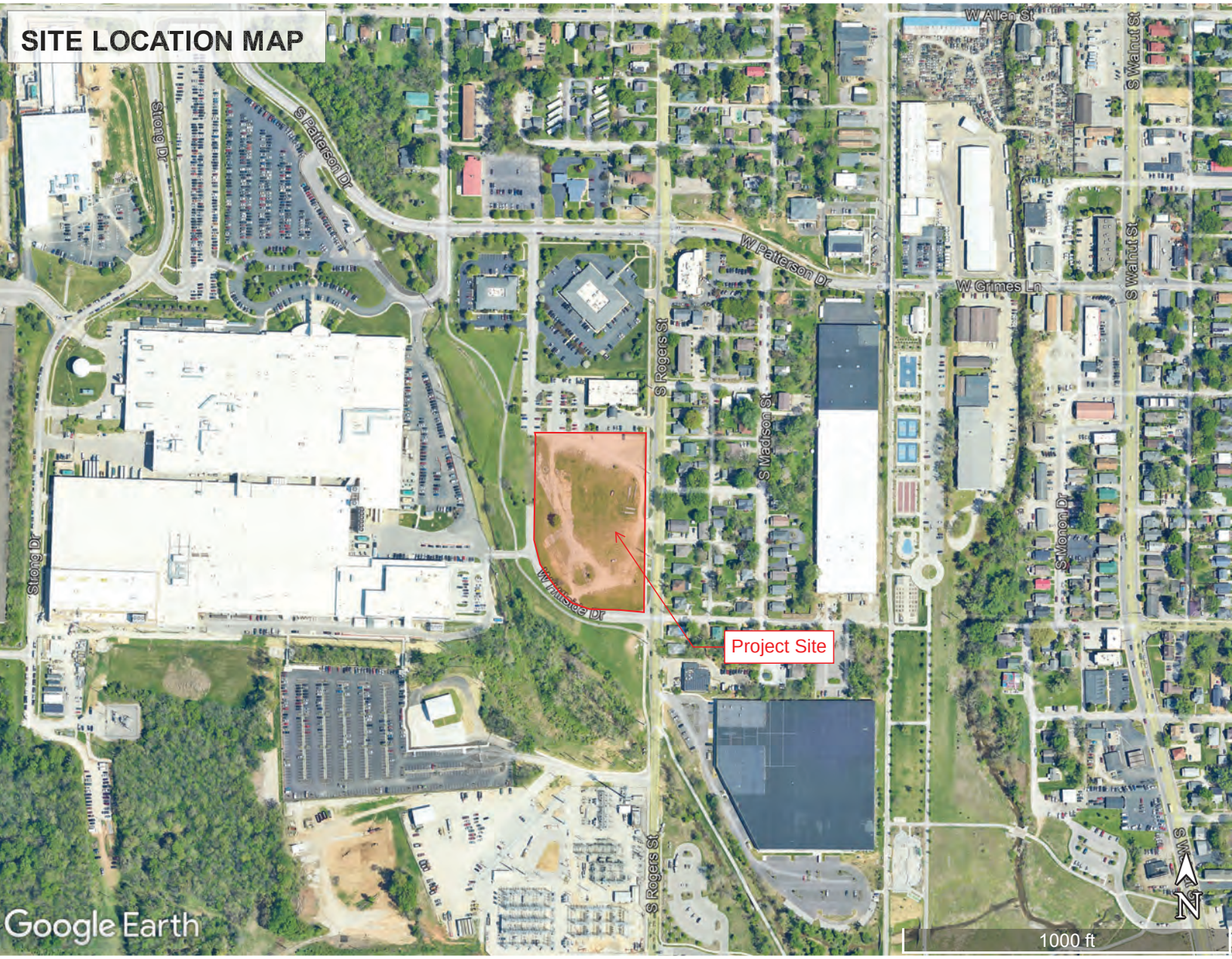
SUMMARY

Design and calculations were performed according to the City of Bloomington Utilities Stormwater Design Manual; therefore, no adverse impacts are anticipated from this design.

If you have any questions, feel free to contact me.

Madeline Romeo Sanders, P.E.
msanders@spacecoinc.com
317-719-3596

TAB 2
EXHIBITS


SITE LOCATION MAP
W Allen St
S Walnut St
Strong Dr
S Patterson Dr
W Patterson Dr
W Grimes Ln
S Rogers St
S Madison St
S Monroe Dr
Strong Dr
W Riverside Dr
Project Site
S Rogers St
Google Earth
1000 ft
N

U.S. Fish and Wildlife Service
National Wetlands Inventory

WETLANDS MAP

April 29, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

National Flood Hazard Layer FIRMette

FEMA

86°32'41"W 39°9'19"N

86°32'4"W 39°8'51"N

Feet

0 250 500 1,000 1,500 2,000

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/22/2024 at 10:06 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR DRAFT FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
- Future Conditions 1% Annual Chance Flood Hazard Zone X
- Area with Reduced Flood Risk due to Levee See Notes Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at https://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by USDA, Farm Service Agency (FSA). This information was derived from NAIP, dated April 11, 2018.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **10/22/2024 10:07 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at https://www.fema.gov/media-library/assets/documents/118418

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

SCALE

Map Projection:
GCS: Geodetic Reference System 1980;
Vertical Datum: NAVD88
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at https://msc.fema.gov

1 inch = 500 feet 1:6,000

0 250 500 1,000 1,500 2,000 Feet

N

0 50 100 200 300 400 Meters

National Flood Insurance Program

FEMA

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

PANEL 143 OF 355

Panel Contains:

COMMUNITY	NUMBER	PANEL
MONROE COUNTY	180444	0143
BLOOMINGTON	180169	0143

MAP NUMBER
18105C0143D
EFFECTIVE DATE
December 17, 20

Map Scale: 1:957 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 10 20 40 60

Feet
0 45 90 180 270

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

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Monroe County, Indiana
Survey Area Data: Version 31, Aug 26, 2024

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

Date(s) aerial images were photographed: Jun 15, 2022—Jun 21, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CtB	Crider-Urban land complex, 2 to 6 percent slopes	0.2	4.7%
Ua	Udorthents, loamy	3.8	95.3%
Totals for Area of Interest		**4.0**	**100.0%**

Map Unit Descriptions

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

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

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

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

TAB 3
EXISTING CONDITIONS


WEST BRANCH CLEAR CREEK
ROGERS STREET
(PUBLIC - R/W VARIES)
HILLSIDE DRIVE
(PUBLIC -R/W VARIES)
N89° 30' 49"W 400.93'(C)
S89° 30' 49"E 383.39'(M)
DISTURBED AREA/
EXISTING BASIN
AREA: 3.94 AC
CN: 75
TC: 6 MIN
FLOWPATH
ZONE X
ZONE AE
NO. DATE REMARKS
NOT FOR CONSTRUCTION
DISTURBED AREA/EXISTING BASIN
BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA
Spaceco
Civil Engineering & Surveying
Rosemont, IL ~ Morris, IL ~ Indianapolis, IN
spacecoinc.com
FILENAME:
BASIN_EX
DATE:
04/14/2025
JOB NO.
13341
SHEET
EX
SCALE 1" = 30'
0 30 60
N

Spaceco
Civil Engineering & Surveying

9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
(847) 696-4060

PROJECT: BUILT BLOOMINGTON
LOCATION: 1320 S ROGERS STREET

PROJECT #: 13341
DATE: 4/29/2025
LAST REVISED:

CALCULATION TITLE: CURVE NUMBER CALCULATION
DESCRIPTION: EXISTING BASIN
SITE CONDITION: EXISTING CONDITIONS

Soil Name and Hydrologic Group (Appendix A)	Cover Description (Cover Type, Treatment, and hydrologic conditions; percent Impervious; unconnected/connected impervious area ratio	Curve Number Table 5-7	Area X Acres / Sq. M. / %	Product of Curve Number and Area
B	IMPERVIOUS	98	0.35	34.08627181
B	PERVIOUS (Gravel)	85	0.85	71.94754362
B	PERVIOUS (Open Space, Fair Condition)	69	2.74	189.3745868
		TOTALS =	3.94	295
			0.0062 sq. mi	

CN (weighted) = Total Product / Total Area = 295.41 / 3.94 = 75.00

Total Pervious	0.85
Total Impervious	0.35
% Impervious	8.8%

USE CN = 75

Spaceco
Civil Engineering & Surveying

9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
(847) 696-4060

PROJECT:	**BUILT BLOOMINGTON**	**PROJECT #:**	13341
LOCATION:	**1320 S ROGERS STREET**	**DATE:**	5/7/2025
		LAST REVISED:	

CALCULATION TITLE: TIME OF CONCENTRATION EXHIBIT
DESCRIPTION: DISTURBED AREA/EXISTING BASIN
SITE CONDITION: EXISTING CONDITIONS

SHEET FLOW	SEGMENT ID	**1**	
1. SUFACE DESCRIPTION (TABLE 3-1)		Gravel	
2. MANNING'S ROUGHNESS COEFF., n (TABLE 3-1)		0.03	
3. **FLOW LENGTH, L (TOTAL <= 100 FT)**		100	
4. TWO-YR 24-HR RAINFALL, P2		3.07	
5. LAND SLOPE, S		0.0644	
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,S^{0.4}}$		0.03	HR
		1.73	MIN
SHALLOW CONCENTRATED FLOW	SEGMENT ID	**2**	
7. SUFACE DESCRIPTION (TABLE 3-1)		UNPAVED	(TYPE PAVED OR PAVED)
8. FLOW LENGTH, L		236	FT
9. LAND SLOPE, S		0.0371	'/'
10. AVERAGE VELOCITY (FIGURE 3-1)		3.11	FT/S
11. $T_t = \frac{L}{3600\,V}$		0.02	HR
		1.3	**MIN**

	SEGMENT ID	**3**	**4**	**5**
CHANNEL FLOW		***12" PIPE***	***36" PIPE***	***48" PIPE***
12. CROSS SECTIONAL FLOW AREA		3.14	7.065	7.065
13. WETTED PERIMETER, P_W		6.28	6.28	6.28
14. HYDRAULIC RADIUS, $r = a/P_W$		0.50	1.13	1.13
15. CHANNEL SLOPE, s		#DIV/0!	0.0021	0.0011
16. MANNINGS ROUGHNESS COEFF., n		0.04	0.04	0.04
17. $V = \frac{1.49\,r^{2/3}\,s^{1/2}}{n}$		#DIV/0!	1.83	1.34
18. FLOW LENGTH, L		0	319	0
19. $T_t = \frac{L}{3600\,V}$	HR	#DIV/0!	0.048	0.000
	MIN	#DIV/0!	2.91	0.00
20. WATERSHED OR SUBAREA TC OR Tt TOTAL				0.10
				5.9
				USE 6 MIN

Summary for Subcatchment 4S: EX

Runoff = 26.74 cfs @ 11.97 hrs, Volume= 1.308 af, Depth= 3.98"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr, 24hr Rainfall=6.81"

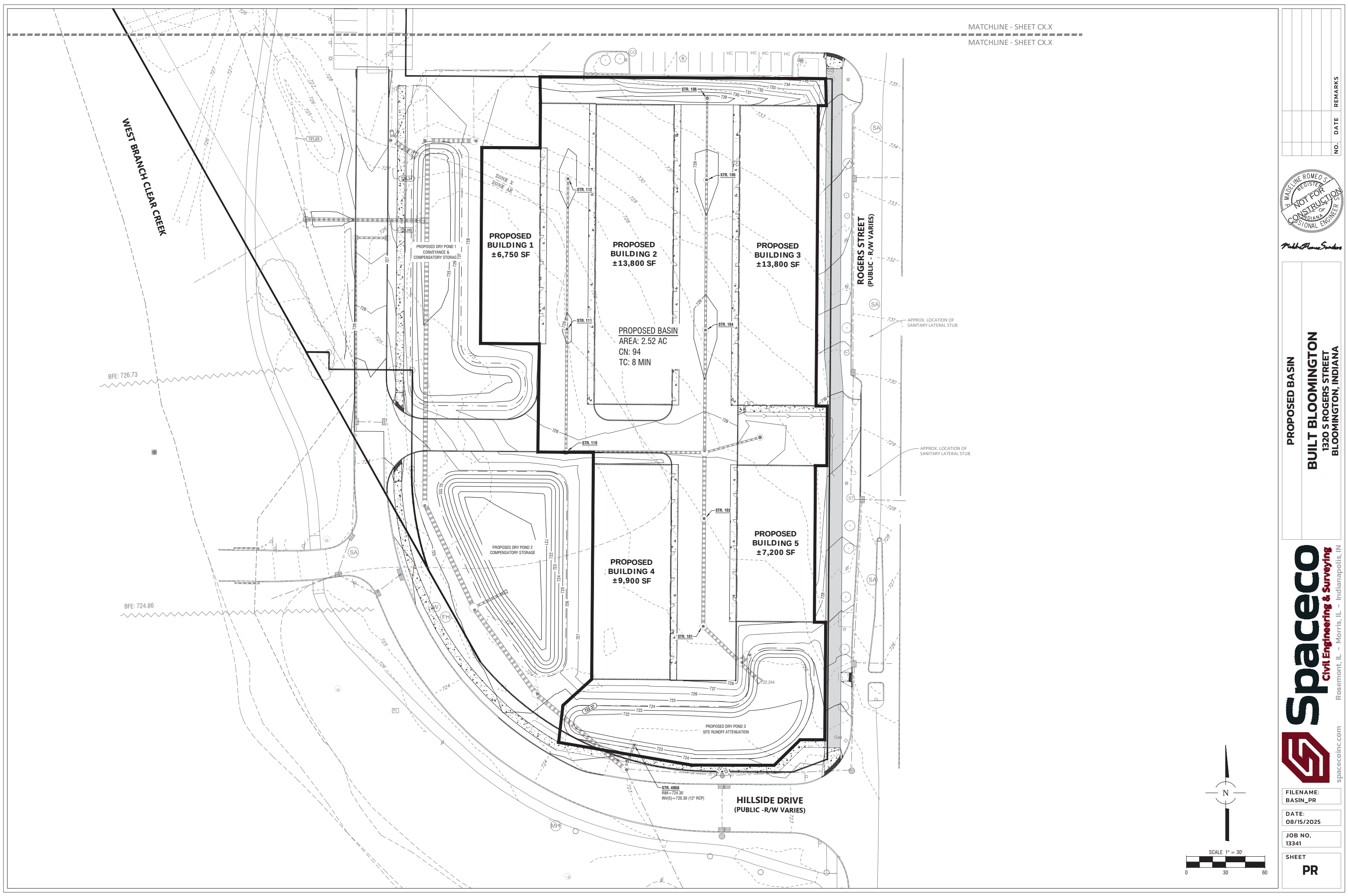
	Area (ac)	CN	Description
*	3.940	75	
	3.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Events for Subcatchment 4S: EX

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
010yr, 24hr	4.44	13.62	0.658	2.00
100yr, 24hr	**6.81**	**26.74**	**1.308**	**3.98**

TAB 4
PROPOSED CONDITIONS


MATCHLINE - SHEET CX.X
MATCHLINE - SHEET CX.X
WEST BRANCH CLEAR CREEK
BFE: 726.73
BFE: 724.86
PROPOSED DRY POND 1 CONVEYANCE & COMPENSATORY STORAGE
PROPOSED BUILDING 1 ±6,750 SF
PROPOSED BUILDING 2 ±13,800 SF
PROPOSED BUILDING 3 ±13,800 SF
PROPOSED BASIN
AREA: 2.52 AC
CN: 94
TC: 8 MIN
PROPOSED DRY POND 2 COMPENSATORY STORAGE
PROPOSED BUILDING 4 ±9,900 SF
PROPOSED BUILDING 5 ±7,200 SF
PROPOSED DRY POND 3 SITE RUNOFF ATTENUATION
ROGERS STREET
(PUBLIC - R/W VARIES)
APPROX. LOCATION OF SANITARY LATERAL STUB
APPROX. LOCATION OF SANITARY LATERAL STUB
HILLSIDE DRIVE
(PUBLIC -R/W VARIES)
STR. 106
STR. 105
STR. 112
STR. 111
STR. 104
STR. 118
STR. 102
STR. 101
STR. 400A
RIM=724.30
INV(S)=720.30 (12" RCP)
SCALE 1" = 30'
0
30
60
N
NO.
DATE
REMARKS
NOT FOR CONSTRUCTION
PROPOSED BASIN
BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA
Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com
FILENAME:
BASIN_PR
DATE:
08/15/2025
JOB NO.
13341
SHEET
PR

Spaceco
Civil Engineering & Surveying

9575 W. Higgins Road, Suite 700
Rosemont, Illinois 60018
(847) 696-4060

PROJECT: BUILT BLOOMINGTON
LOCATION: 1320 S ROGERS STREET

PROJECT #: 13341
DATE: 5/7/2025
LAST REVISED:

CALCULATION TITLE: CURVE NUMBER CALCULATION
DESCRIPTION: PROPOSED BASIN
SITE CONDITION: PROPOSED

Soil Name and Hydrologic Group (Appendix A)	Cover Description (Cover Type, Treatment, and hydrologic conditions; percent Impervious; unconnected/connected impervious area ratio)	Curve Number Table 5-7	Area X Acres / Sq. M. / %	Product of Curve Number and Area
D	IMPERVIOUS	98	1.98	193.932461
D	PERVIOUS (Open Space, Good Condition)	80	0.54	43.00642792
		TOTALS =	2.52	237
			0.0039 sq. mi	

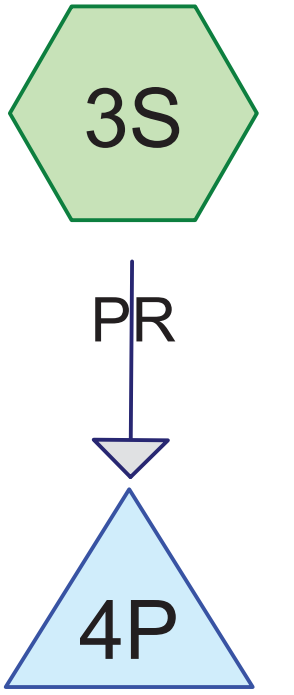
CN (weighted) = Total Product / Total Area = 236.94 / 2.52 = 94.15

Total Pervious #REF!
Total Impervious 1.98
% Impervious 78.6%

USE CN = 94

10yr allow (3.94ac x 0.5 cfs/ac) = 1.97 cfs

100yr allow (3.94ac x 0.9 cfs/ac) = 3.54 cfs



DRY POND

Subcat Reach Pond Link

Routing Diagram for 13341
Prepared by Spaceco, Printed 5/7/2025
HydroCAD® 10.10-6a s/n 11935 © 2020 HydroCAD Software Solutions LLC

Summary for Subcatchment 3S: PR

Runoff = 22.20 cfs @ 11.99 hrs, Volume= 1.281 af, Depth= 6.10"
Routed to Pond 4P : DRY POND

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr 100yr, 24hr Rainfall=6.81"

	Area (ac)	CN	Description
*	2.520	94	
	2.520		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					**Direct Entry,**

Events for Subcatchment 3S: PR

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
010yr, 24hr	4.44	14.08	0.789	3.76
100yr, 24hr	**6.81**	**22.20**	**1.281**	**6.10**

Summary for Pond 4P: DRY POND

Inflow Area = 2.520 ac, 0.00% Impervious, Inflow Depth = 6.10" for 100yr, 24hr event
Inflow = 22.20 cfs @ 11.99 hrs, Volume= 1.281 af
Outflow = 2.02 cfs @ 12.49 hrs, Volume= 1.281 af, Atten= 91%, Lag= 30.0 min
Primary = 2.02 cfs @ 12.49 hrs, Volume= 1.281 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 723.87' @ 12.49 hrs Surf.Area= 62,350 sf Storage= 22,679 cf

Plug-Flow detention time= 87.5 min calculated for 1.280 af (100% of inflow)
Center-of-Mass det. time= 87.5 min (850.9 - 763.4)

Volume	Invert	Avail.Storage	Storage Description
#1	720.30'	32,850 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

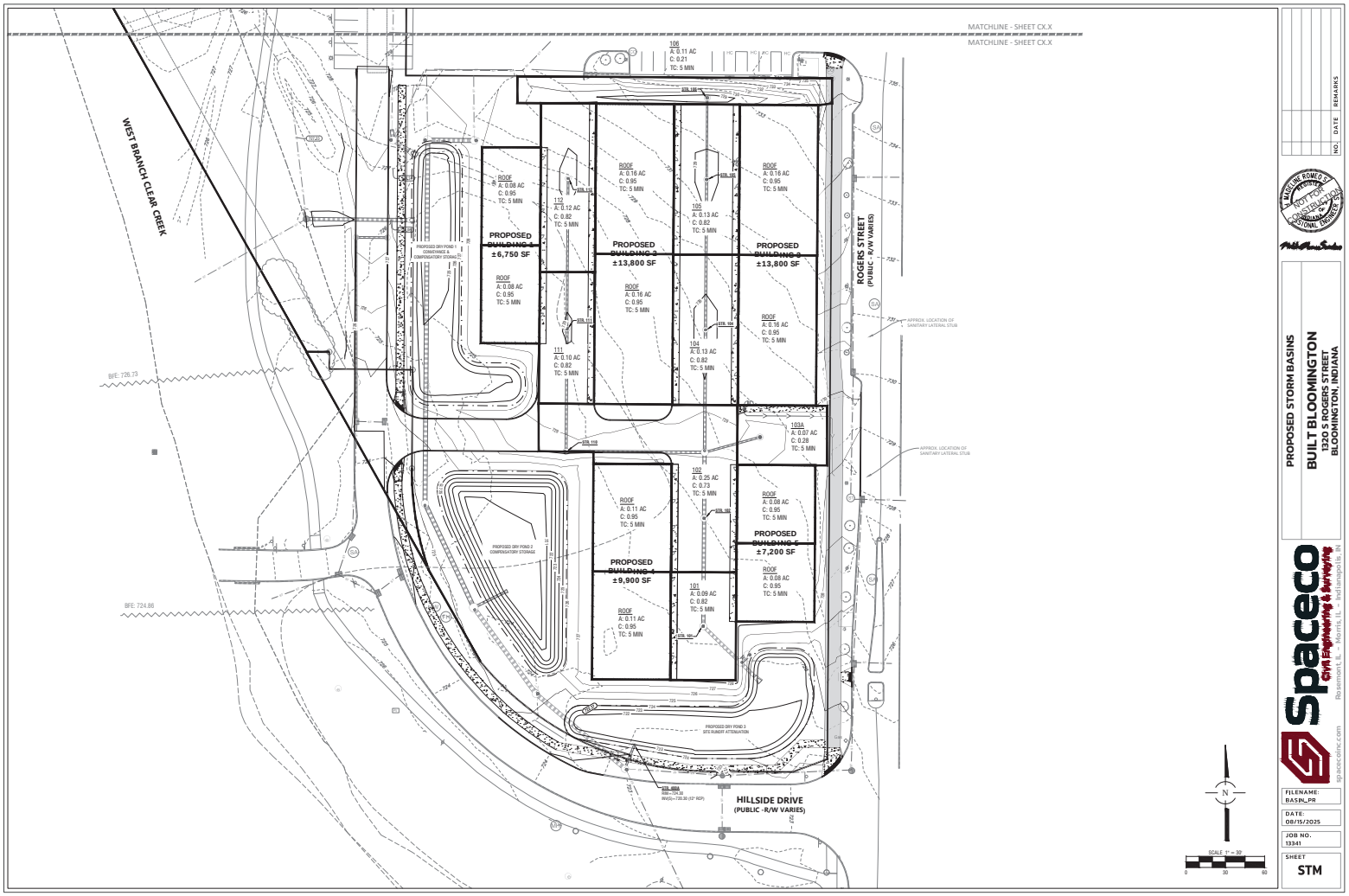
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
720.30	100	0	0
721.00	1,392	522	522
722.00	5,135	3,264	3,786
723.00	7,730	6,433	10,218
723.70	9,852	6,154	16,372
724.00	100,000	16,478	32,850

Device	Routing	Invert	Outlet Devices
#1	Primary	720.30'	**12.0" Round Culvert** L= 20.0' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 720.30' / 718.71' S= 0.0795 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	720.30'	**6.5" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.02 cfs @ 12.49 hrs HW=723.87' (Free Discharge)
└**1=Culvert** (Passes 2.02 cfs of 8.29 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 2.02 cfs @ 8.75 fps)

Events for Pond 4P: DRY POND

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)	Storage (cubic-feet)
010yr, 24hr	14.08	1.84	723.31	12,763
100yr, 24hr	**22.20**	**2.02**	**723.87**	**22,679**



NO.	DATE	REMARKS

PROPOSED STORM BASINS

BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

Spaceco
CIVIL Engineering & Surveying
Rosemont, IL - Morris, IL - Indianapolis, IN
spacecoinc.com

FILENAME: BASIN_PR
DATE: 08/15/2025
JOB NO. 13341
SHEET STM

Spaceco
Civil Engineering & Surveying

3850 Priority Way South Drive Suite 110
Indianapolis, Indiana 46240
(317) 779-2194

PROJECT: BUILT BLOOMINGTON
LOCATION: 1320 S ROGERS STREET

PROJECT #: 13341
DATE: 5/7/2025
LAST REVISED:

CALCULATION TITLE: STORM BASIN RATIONAL COMPOSITE C
DESCRIPTION:

Rational Method Runoff Coefficients

Roof	0.95
Asphalt	0.82
Lawn	0.21

101

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
0	4123	0	4123	0.09	0.82

101+ROOF

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
8550	4123	0	12673	0.29	0.91

102

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
0	7995	2690	10685	0.25	0.67

102+ROOF

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
8550	7995	2690	19235	0.44	0.79

103A

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
0	340	2786	3126	0.07	0.28

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(317) 779-2194

104

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
0	5750	0	5750	0.13	0.82

104+ROOF

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
13796	5750	0	19546	0.45	0.91

105

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
0	5750	0	5750	0.13	0.82

105+ROOF

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
13796	5750	0	19546	0.45	0.91

106

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
0	0	4916	4916	0.11	0.21

111

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
0	4243	0	4243	0.10	0.82

111+ROOF

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
3375	4243	0	7618	0.17	0.88

112

Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
0	5437	0	5437	0.12	0.82

112+ROOF

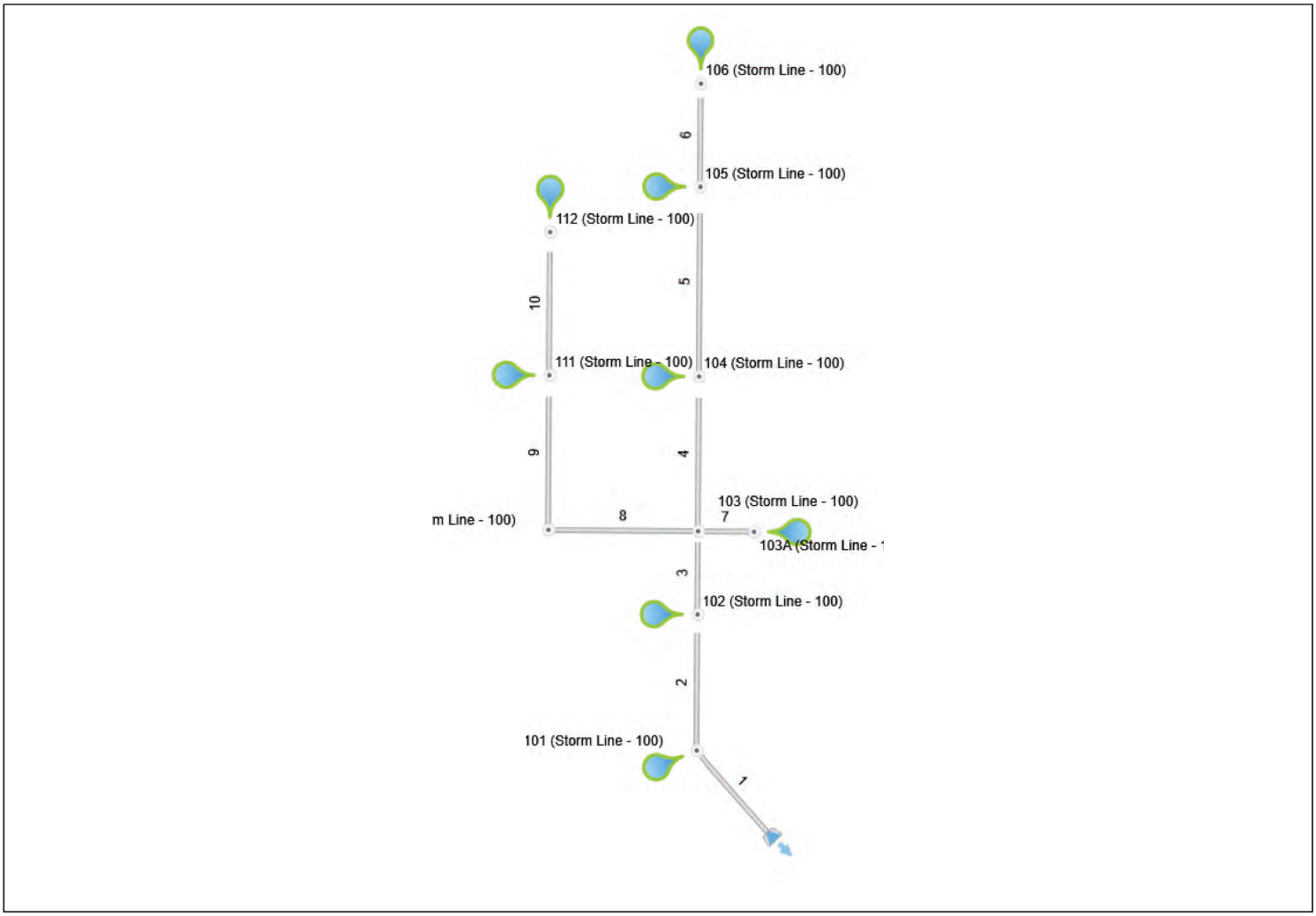
Roof (sf)	Asphalt (sf)	Lawn (sf)	Total (sf)	Total (acres)	Composite C
3375	5437	0	8812	0.20	0.87

Plan View

Stormwater Studio 2025 v 3.0.0.38

Project Name: BUILT Bloomington

08-14-2025



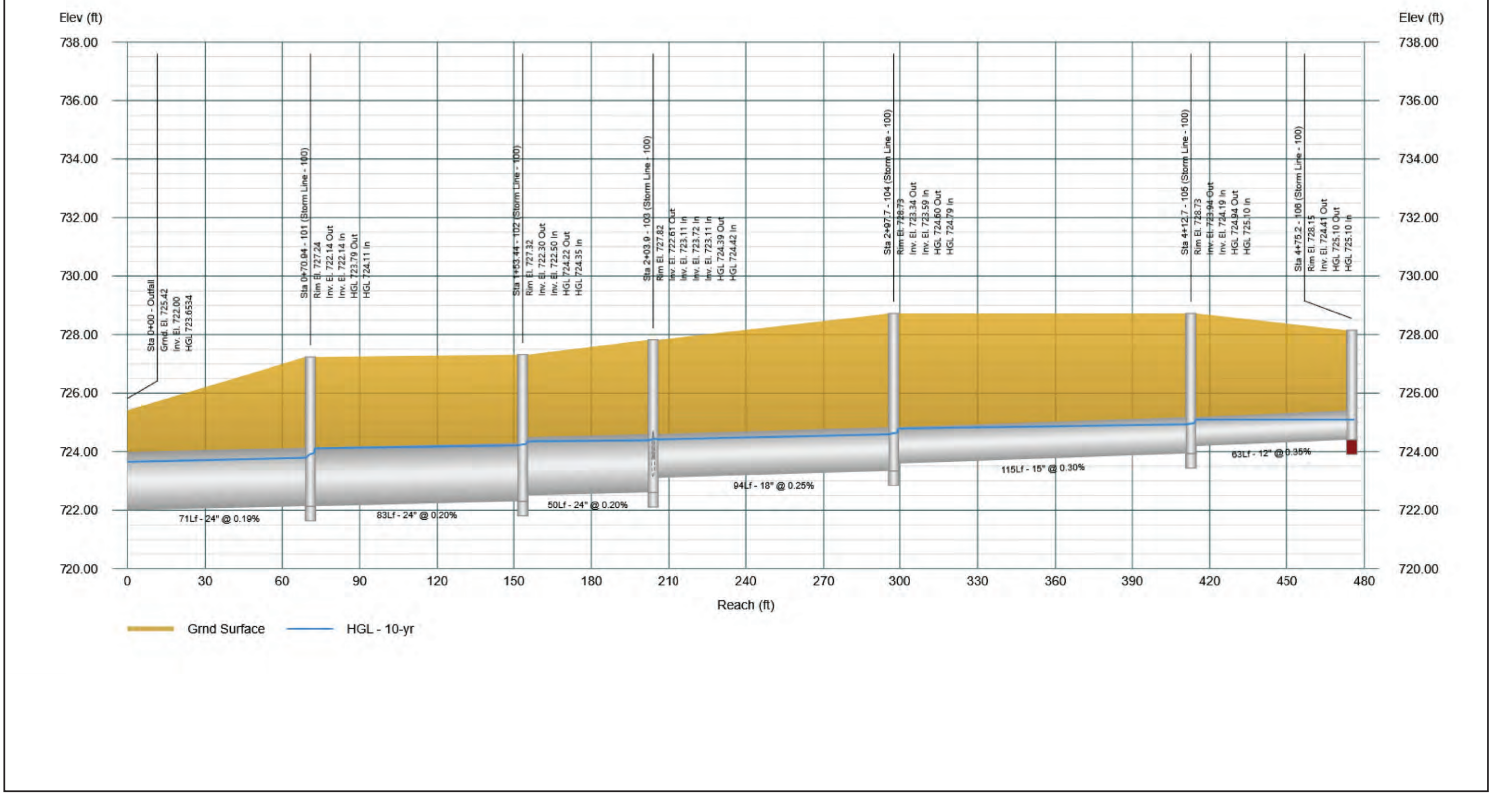
Project File: 13341.sws

Profile View

Stormwater Studio 2025 v 3.0.0.38

Project Name: BUILT Bloomington

08-14-2025



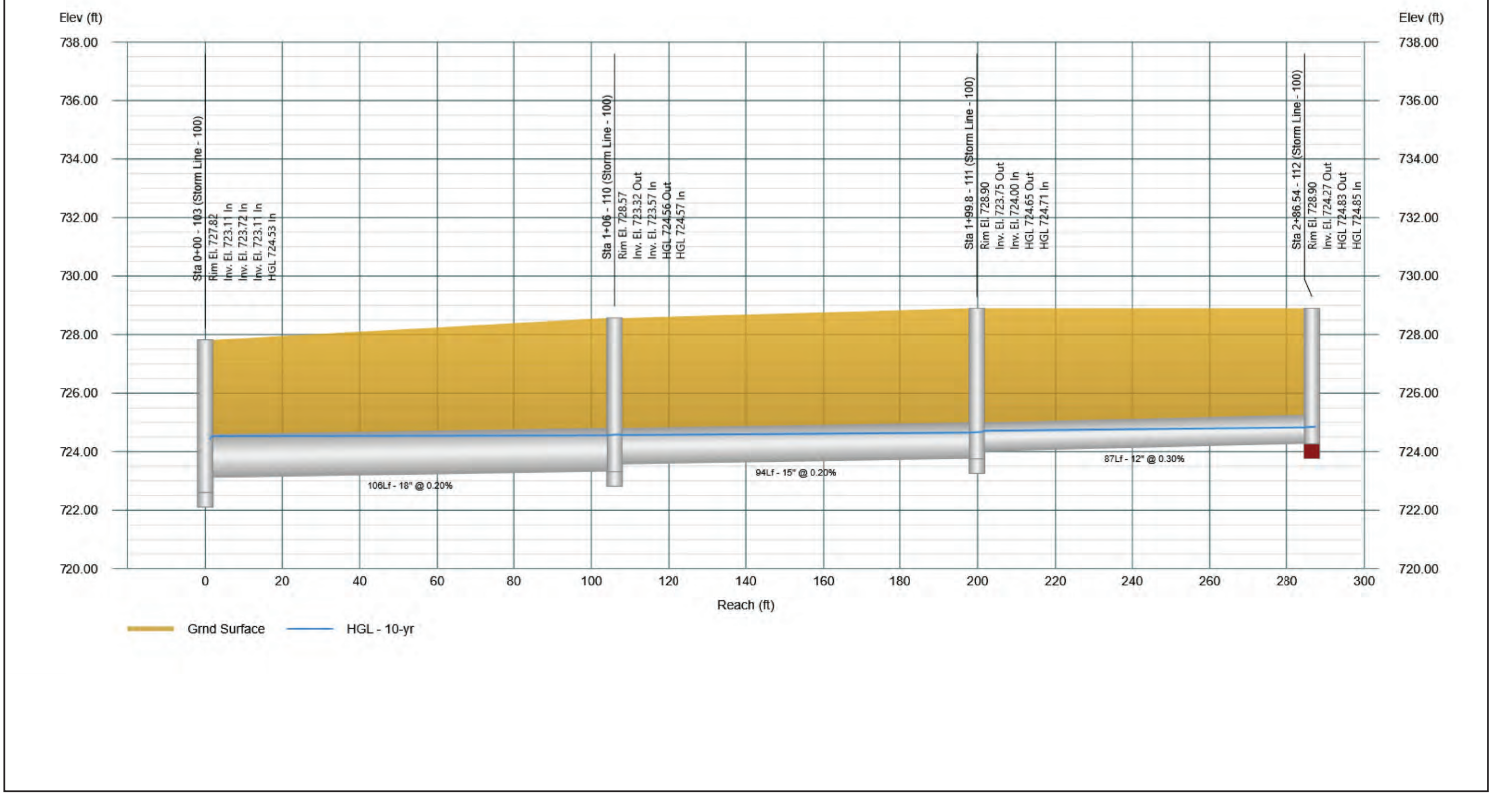
Project File: 13341.sws

Profile View

Project Name: BUILT Bloomington

Stormwater Studio 2025 v 3.0.0.38

08-14-2025



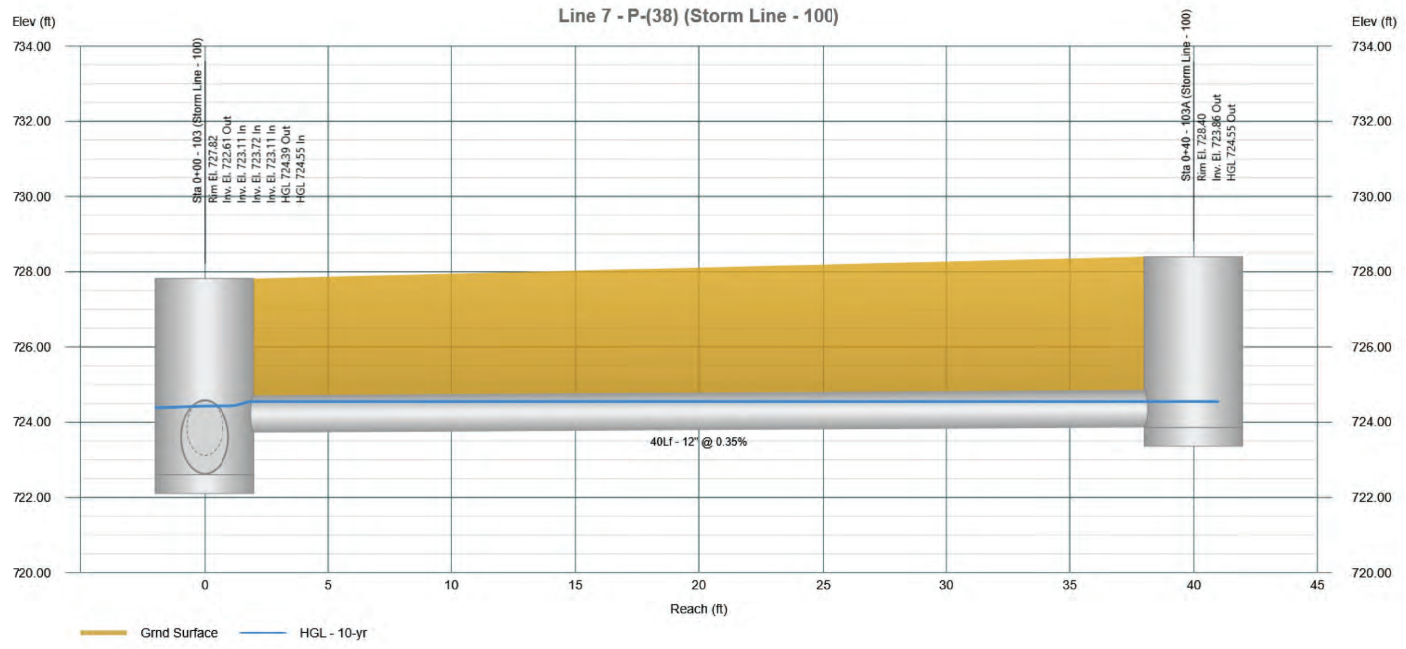
Project File: 13341.sws

Profile View

Stormwater Studio 2025 v 3.0.0.38

Project Name: BUILT Bloomington

08-14-2025



Project File: 13341.sws

Storm Sewer Tabulation

Project Name: BUILT Bloomington

08-14-2025

Stormwater Studio 2025 v 3.0.0.38

Line ID	Length	Drng Area		Rational	C x A		Tc		Intensity	Total Q	Capacity	Velocity	Line		Invert Elev		HGL Elev		Surface Elev		Line No
		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
	(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
P-(76) (Storm Line - 100)	70.94	0.290	2.180	0.91	0.26	1.80	5.0	7.12	6.57	11.81	11.72	4.25	24	0.19	722.14	722.00	723.79	723.65	727.24	725.42	1
P-(59) (Storm Line - 100)	82.50	0.440	1.890	0.79	0.35	1.53	5.0	6.80	6.68	10.24	12.05	3.29	24	0.20	722.30	722.14	724.22	724.11	727.32	727.24	2
P-(58) (Storm Line - 100)	50.45	0.000	1.450	0.00	0.00	1.19	0.0	6.60	6.75	8.00	12.01	2.67	24	0.20	722.61	722.50	724.39	724.35	727.82	727.32	3
P-(26) (Storm Line - 100)	93.80	0.450	1.010	0.91	0.41	0.84	5.0	6.09	6.93	5.84	6.26	3.64	18	0.25	723.34	723.11	724.60	724.42	728.73	727.82	4
P-(31) (Storm Line - 100)	115.00	0.450	0.560	0.91	0.41	0.43	5.0	5.58	7.13	3.08	4.17	2.75	15	0.30	723.94	723.59	724.94	724.79	728.73	728.73	5
P-(52) (Storm Line - 100)	62.50	0.110	0.110	0.21	0.02	0.02	5.0	5.00	7.37	0.17	2.49	0.26	12	0.35	724.41	724.19	725.10	725.10	728.15	728.73	6
P-(38) (Storm Line - 100)	40.00	0.070	0.070	0.28	0.02	0.02	5.0	5.00	7.37	0.14	2.49	0.23	12	0.35	723.86	723.72	724.55	724.55	728.40	727.82	7
P-(81) (Storm Line - 100)	106.00	0.000	0.370	0.00	0.00	0.32	5.0	6.00	6.97	2.25	5.52	1.37	18	0.20	723.32	723.11	724.56	724.53	728.57	727.82	8
P-(80) (Storm Line - 100)	93.80	0.170	0.370	0.88	0.15	0.32	5.0	5.48	7.17	2.32	3.43	2.33	15	0.20	723.75	723.57	724.65	724.57	728.90	728.57	9
P-(79) (Storm Line - 100)	86.74	0.200	0.200	0.87	0.17	0.17	5.0	5.00	7.37	1.28	2.31	2.49	12	0.30	724.27	724.00	724.83	724.71	728.90	728.90	10

Notes: IDF File = BloomingtonIDF.idf, Return Period = 10-yrs.

Project File: 13341.sws

Energy Grade Line Calculations

Project Name: BUILT Bloomington

08-14-2025

Stormwater Studio 2025 v 3.0.0.38

Line No	Line Size	Q	Downstream							Length	Upstream							Pipe		Junction		
			Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev		Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev	n Value	Enrgy Loss	HGLa Elev	EGLa Elev	Enrgy Loss
	(in)	(cfs)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
1	24	11.81	722.00	1.65[3]	2.78	723.65	4.25	0.28	723.93	70.94	722.14	1.65	2.78	723.79	4.25	0.28	724.07	0.011	0.137	723.93	724.21	0.14
2	24	10.24	722.14	1.98	3.14	724.11	3.27	0.17	724.28	82.50	722.30	1.91	3.09	724.22	3.31	0.17	724.39	0.011	0.107	724.25	724.42	0.03
3	24	8.00	722.50	1.85	3.03	724.35	2.64	0.11	724.46	50.45	722.61	1.78	2.96	724.39	2.71	0.11	724.50	0.011	0.040	724.43	724.55	0.05
4	18	5.84	723.11	1.31	1.64	724.42	3.56	0.20	724.61	93.80	723.34	1.25	1.57	724.60	3.71	0.21	724.81	0.011	0.195	724.64	724.85	0.04
5	15	3.08	723.59	1.19	1.21	724.79	2.55	0.10	724.89	115.00	723.94	1.00	1.05	724.94	2.94	0.13	725.07	0.011	0.180	724.96	725.10	0.03
6	12	0.17	724.19	0.91	0.75	725.10	0.23	0.00	725.10	62.50	724.41	0.69	0.58	725.10	0.29	0.00	725.10	0.011	0.002	725.10	725.10	0.00
7	12	0.14	723.72	0.83	0.70	724.55	0.21	0.00	724.55	40.00	723.86	0.69	0.58	724.55	0.25	0.00	724.55	0.011	0.001	724.55	724.55	0.00
8	18	2.25	723.11	1.43	1.73	724.53	1.30	0.03	724.56	106.00	723.32	1.24	1.57	724.56	1.44	0.03	724.59	0.011	0.032	724.59	724.62	0.03
9	15	2.32	723.57	1.00	1.05	724.57	2.20	0.08	724.64	93.80	723.75	0.90	0.94	724.65	2.46	0.09	724.75	0.011	0.103	724.67	724.77	0.02
10	12	1.28	724.00	0.71	0.60	724.71	2.15	0.07	724.79	86.74	724.27	0.56	0.45	724.83	2.83	0.12	724.95	0.011	0.166	724.85	724.98	0.02

Notes: Return Period = 10-yrs. [3] Normal depth.

Project File: 13341.sws

PROJECT: **BUILT BLOOMINGTON** **PROJECT #:** **13341**
LOCATION: **1320 S ROGERS STREET** **DATE:** **5/21/2025**

CALCULATION TITLE: **INLET CAPACITY CALCULATIONS**
DESCRIPTION: INLET BASINS
SITE CONDITION: PROPOSED

Curb Inlet (R-3287-10V)
A = Square Foot Open = 2.10 ft^2 = 1.05 ft^2 (50% clogged)
P = Weir Perimeter = 5.50 ft = 2.75 ft (50% clogged)

Curb Inlet (R-3287-SB10)
A = Square Foot Open = 1.50 ft^2 = 0.75 ft^2 (50% clogged)
P = Weir Perimeter = 5.50 ft = 2.75 ft (50% clogged)

Flat Grate Inlet (R-3405)
A = Square Foot Open = 1.50 ft^2 = 0.75 ft^2 (50% clogged)
P = Weir Perimeter = 7.90 ft = 3.95 ft (50% clogged)

Beehive Inlet (R-4342)
A = Square Foot Open = 2.00 ft^2 = 1.00 ft^2 (50% clogged)
P = Weir Perimeter = 6.00 ft = 3.00 ft (50% clogged)

Reference: Neenah
$Q = 3.0P(d)^{3/2}$ Weir Condition (d<0.3')
$Q = 4.89A(d)^{1/2}$ Orifice Condition (d>0.4')
Reference: HERPICC Stormwater Drainage Manual-Revised July 1994 (Equations 5.3.2 & 5.3.3)
(control depth is based on d(weir) if d(weir)<0.4, if d(weir)>0.4 then d(orifice))

STR. #	Type	Area	Weighted "C" Value	Intensity	Q	Depth (d weir)	Depth (d orifice)	Max Depth	Allowable Depth
		(ac)		(in/hr)	(cfs)	(ft)	(ft)	(ft)	6 inches
101	Flat Grate Inlet (R-3405)	0.09	0.82	7.46	0.58	0.13	0.04	0.13	OK
102	Flat Grate Inlet (R-3405)	0.25	0.67	7.46	1.22	0.22	0.09	0.22	OK
103A	Beehive Inlet (R-4342)	0.07	0.28	7.46	0.15	0.06	0.01	0.06	OK
104	Flat Grate Inlet (R-3405)	0.13	0.82	7.46	0.81	0.17	0.06	0.17	OK
105	Flat Grate Inlet (R-3405)	0.13	0.82	7.46	0.81	0.17	0.06	0.17	OK
106	Beehive Inlet (R-4342)	0.11	0.21	7.46	0.18	0.07	0.01	0.07	OK
111	Flat Grate Inlet (R-3405)	0.10	0.82	7.46	0.60	0.14	0.04	0.14	OK
112	Flat Grate Inlet (R-3405)	0.12	0.82	7.46	0.76	0.16	0.06	0.16	OK

TAB 5
FLOODPLAIN FILL/ COMPENSATION CALCULATIONS


WEST BRANCH CLEAR CREEK
PROPOSED BUILDING 1 ±6,750 SF
PROPOSED BUILDING 2 ±13,800 SF
PROPOSED BUILDING 3 ±13,800 SF
PROPOSED BUILDING 4 ±9,900 SF
PROPOSED BUILDING 5 ±7,200 SF
ROGERS STREET (PUBLIC - R/W VARIES)
HILLSIDE DRIVE (PUBLIC -R/W VARIES)
BFE: 726.73
BFE: 724.86
PROPOSED DRY POND 3 SITE RUNOFF ATTENUATION
GREEN AREA INDICATES FILL FROM EXISTING GRADE TO PROPOSED GRADE
EXISTING GRADE VS PROPOSED GRADE FILL MAP
BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA
NOT FOR CONSTRUCTION
Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com
NO.
DATE
REMARKS
FILENAME: BASIN_FLOOD
DATE: 08/15/2025
JOB NO. 13341
SHEET FILL1
N
SCALE 1" = 30'
0
30
60


WEST BRANCH CLEAR CREEK
BFE: 726.73
BFE: 724.86
PROPOSED BUILDING 1
PROPOSED BUILDING 2
±13,800 SF
PROPOSED BUILDING 3
±13,800 SF
PROPOSED BUILDING 4
±9,900 SF
PROPOSED BUILDING 5
±7,200 SF
ROGERS STREET
(PUBLIC - R/W VARIES)
HILLSIDE DRIVE
(PUBLIC -R/W VARIES)
GREEN AREA INDICATES FILL FROM
BASE FLOOD ELEVATION TO PROPOSED GRADE
NO. DATE REMARKS
NOT FOR CONSTRUCTION
PROPOSED GRADE VS BASE FLOOD ELEVATION
FILL MAP
BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA
Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com
FILENAME:
BASIN_FLOOD
DATE:
08/15/2025
JOB NO.
13341
SHEET
FILL2

Cut/Fill Report

Generated: 2025-08-15 09:03:26
By user: mromeo
Drawing: N:\Projects 13000-13999\13341 - INDY\EARTHWORK\N:\Projects 13000-13999\13341 - INDY\EARTHWORK\EARTHWORK.dwg

Volume Summary

Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
BFEvsPG_FloodOnly	full	1.000	1.000	59830.04	2107	2084	24<Cut>
EGvsPG_FloodOnly	full	1.000	1.000	59830.04	1314	3937	2622<Fill>

Totals

	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total	119660.07	3422	6020	2598<Fill>

* Value adjusted by cut or fill factor other than 1.0

Spaceco
Civil Engineering & Surveying

PROJECT:	**BUILT BLOOMINGTON**	**PROJECT #:**	13341
LOCATION:	**1320 S ROGERS STREET**	**DATE:**	8/15/2025
		LAST REVISED:	

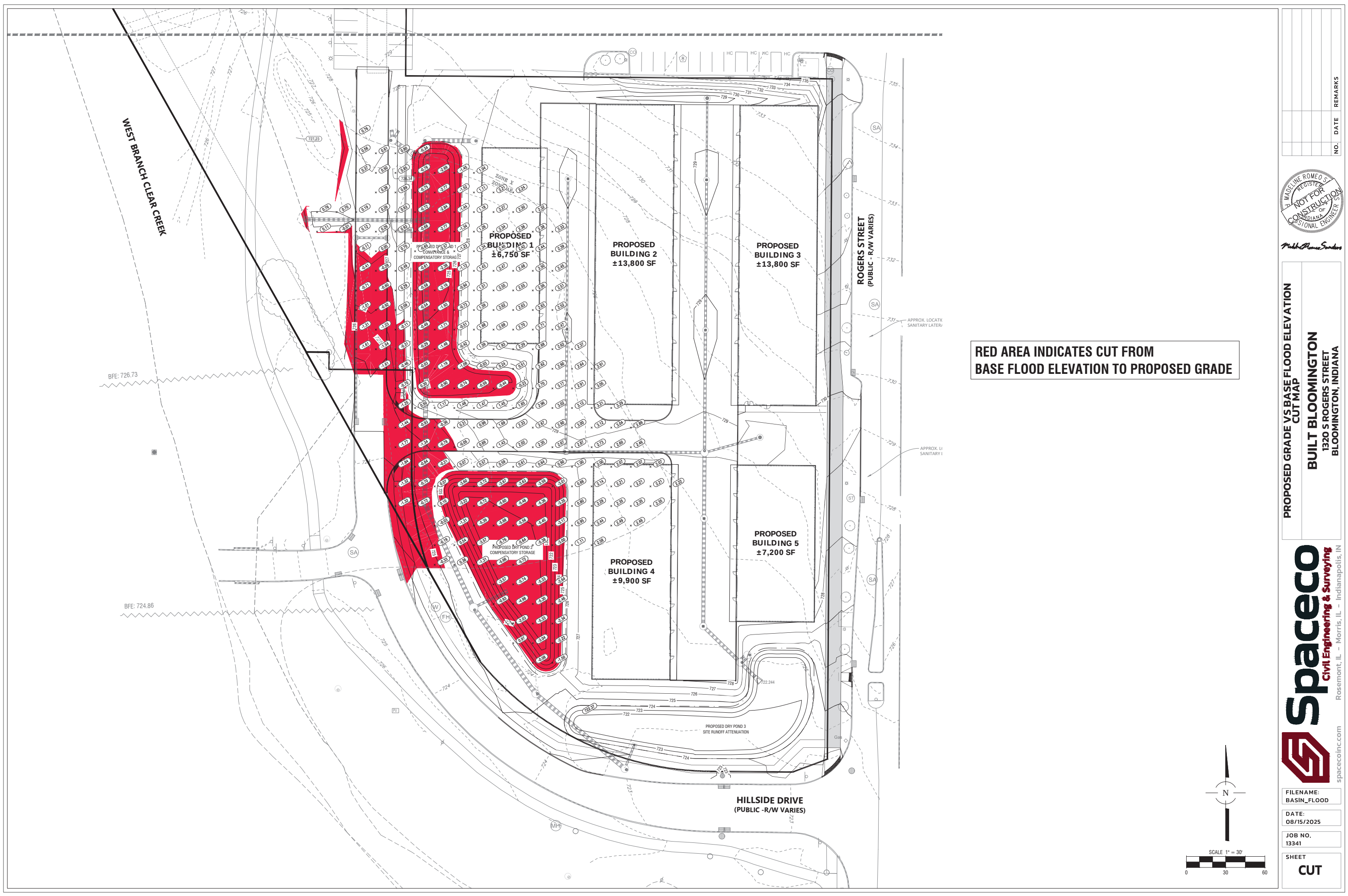
CALCULATION TITLE: **COMPENSATORY STORAGE**
DESCRIPTION: FILL CALCULATION
SITE CONDITION: PROPOSED

PROPOSED FILL IN FLOODPLAIN

1) FILL FROM EXISTING GRADE TO PROPOSED GRADE = 3,937 CY

2) FILL FROM BFE TO PROPOSED GRADE = 2,084 CY

3) **TOTAL FILL IN FLOODPLAIN (LINE 1 - LINE 2)** = **1,853 CY**


WEST BRANCH CLEAR CREEK
BFE: 726.73
BFE: 724.86
PROPOSED BUILDING 1 ±6,750 SF
PROPOSED BUILDING 2 ±13,800 SF
PROPOSED BUILDING 3 ±13,800 SF
PROPOSED BUILDING 4 ±9,900 SF
PROPOSED BUILDING 5 ±7,200 SF
ROGERS STREET
(PUBLIC - R/W VARIES)
HILLSIDE DRIVE
(PUBLIC -R/W VARIES)
PROPOSED DRY POND 3
SITE RUNOFF ATTENUATION
RED AREA INDICATES CUT FROM
BASE FLOOD ELEVATION TO PROPOSED GRADE
NO.
DATE
REMARKS
NOT FOR CONSTRUCTION
PROPOSED GRADE VS BASE FLOOD ELEVATION
CUT MAP
BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA
Spaceco
Civil Engineering & Surveying
Rosemont, IL ~ Morris, IL ~ Indianapolis, IN
spacecoinc.com
FILENAME:
BASIN_FLOOD
DATE:
08/15/2025
JOB NO.
13341
SHEET
CUT
N
SCALE: 1" = 30'
0
30
60

Cut/Fill Report

Generated: 2025-08-15 09:03:26
By user: mromeo
Drawing: N:\Projects 13000-13999\13341 - INDY\EARTHWORK\N:\Projects 13000-13999\13341 - INDY\EARTHWORK\EARTHWORK.dwg

Volume Summary

Name	Type	Cut Factor	Fill Factor	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
BFEvsPG_FloodOnly	full	1.000	1.000	59830.04	2107	2084	24<Cut>
EGvsPG_FloodOnly	full	1.000	1.000	59830.04	1314	3937	2622<Fill>

Totals

	2d Area (Sq. Ft.)	Cut (Cu. Yd.)	Fill (Cu. Yd.)	Net (Cu. Yd.)
Total	119660.07	3422	6020	2598<Fill>

* Value adjusted by cut or fill factor other than 1.0

Spaceco
Civil Engineering & Surveying

PROJECT:	**BUILT BLOOMINGTON**	**PROJECT #:**	13341
LOCATION:	**1320 S ROGERS STREET**	**DATE:**	8/15/2025
		LAST REVISED:	

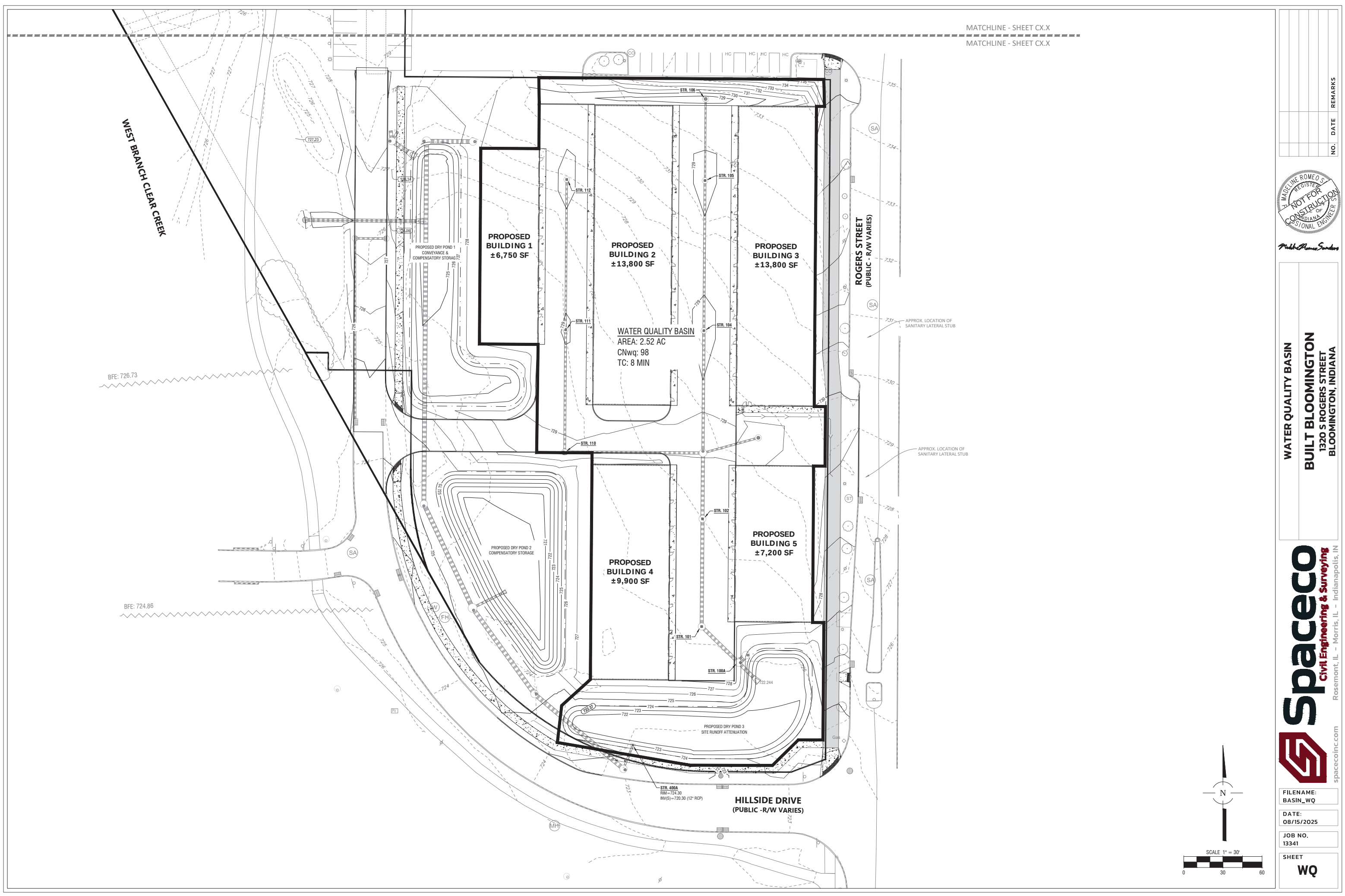
CALCULATION TITLE:	**COMPENSATORY STORAGE**
DESCRIPTION:	CUT CALCULATION
SITE CONDITION:	PROPOSED

PROPOSED CUT IN FLOODPLAIN

TOTAL CUT FROM BFE GRADE TO PROPOSED GRADE **(COMPENSATORY CUT)** = 2,107 CYD

COMPENSATORY CUT IS GREATER THAN TOTAL FILL IN FLOODPLAIN

TAB 6
WATER QUALITY


MATCHLINE - SHEET CX.X
WEST BRANCH CLEAR CREEK
PROPOSED BUILDING 1
±6,750 SF
PROPOSED BUILDING 2
±13,800 SF
PROPOSED BUILDING 3
±13,800 SF
PROPOSED BUILDING 4
±9,900 SF
PROPOSED BUILDING 5
±7,200 SF
WATER QUALITY BASIN
AREA: 2.52 AC
CNwq: 98
TC: 8 MIN
PROPOSED DRY POND 1 CONVEYANCE & COMPENSATORY STORAGE
PROPOSED DRY POND 2 COMPENSATORY STORAGE
PROPOSED DRY POND 3 SITE RUNOFF ATTENUATION
BFE: 726.73
BFE: 724.86
ROGERS STREET
(PUBLIC - R/W VARIES)
HILLSIDE DRIVE
(PUBLIC -R/W VARIES)
APPROX. LOCATION OF SANITARY LATERAL STUB
NOT FOR CONSTRUCTION
WATER QUALITY BASIN
BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA
Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com
NO. DATE REMARKS
FILENAME: BASIN_WQ
DATE: 08/15/2025
JOB NO. 13341
SHEET WQ
SCALE 1" = 30'
0 30 60

Spaceco
Civil Engineering & Surveying

3850 Priority Way South Drive, Suite 110
Indianapolis, Indiana 46240
(317) 779-2194

PROJECT:	**BUILT BLOOMINGTON**	**PROJECT #:**	13341
LOCATION:	**1320 S ROGERS STREET**	**DATE:**	8/15/2025
		LAST REVISED:	

CALCULATION TITLE: WATER QUALITY CURVE NUMBER CALCULATION

Storm Line - 1 STR 100A

I	=	79	percentage of impervious cover (%)
Rv	=	0.05 + 0.009I	
Rv	=	0.76	
WQvi	=	(1 inch)Rv	
WQvi	=	0.76	
CNwq	=	1000/(10+5P+10WQvi-10(Wqvi^2+1.25WQviP)^1/2)	
CNwq	=	98	
Tc	=	8.00	min

Summary for Subcatchment 3S: WQ

Runoff = 3.04 cfs @ 11.99 hrs, Volume= 0.166 af, Depth= 0.79"
Routed to nonexistent node 4P

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=1.00"

	Area (ac)	CN	Description
*	2.520	98	
	2.520		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.0					**Direct Entry,**

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATERSHED PROTECTION AND RESTORATION
BUREAU OF NJPDES STORMWATER PERMITTING
P.O. Box 420 Mail Code 501-02A
Trenton, New Jersey 08625-0420
609-633-7021 / Fax: 609-777-0432
https://dep.nj.gov/stormwater/

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

SHAWN M. LATOURETTE
Commissioner

May 15, 2025

Bo Liu, P.E., Ph.D.
Senior Engineer
Advanced Drainage Systems, Inc.
4640 Trueman Boulevard
Hilliard, OH 43206

Re: MTD Lab Certification
Arcadia Hydrodynamic Separator by ADS
Online Installation

TSS Removal Rate 50%

Dear Dr. Liu:

The Stormwater Management rules under N.J.A.C. 7:8-5.2(f) and 5.2(j) allow the use of manufactured treatment devices (MTDs) for compliance with the design and performance standards at N.J.A.C. 7:8-5 if the pollutant removal rates have been verified by the New Jersey Corporation for Advanced Technology (NJCAT) and have been certified by the New Jersey Department of Environmental Protection (NJDEP). Advanced Drainage Systems, Inc. (ADS) has requested a Laboratory Certification for the Arcadia Hydrodynamic Separator (Arcadia).

The project falls under the "Procedure for Obtaining Verification of a Stormwater Manufactured Treatment Device from New Jersey Corporation for Advanced Technology" dated August 4, 2021. The applicable protocol is the "New Jersey Laboratory Testing Protocol to Assess Total Suspended Solids Removal by a Hydrodynamic Sedimentation Manufactured Treatment Device" dated January 1, 2021, and last updated April 25, 2023.

NJCAT verification documents submitted to the NJDEP indicate that the requirements of the aforementioned protocol have been met or exceeded. The NJCAT letter also included a recommended certification TSS removal rate and the required maintenance plan. The NJCAT Verification Report with the Verification Appendix (dated May 2025) for this device is published online at http://www.njcat.org/verification-process/technology-verification-database.html.

The NJDEP certifies the use of the Arcadia Hydrodynamic Separator by Advanced Drainage Systems, Inc. at a TSS removal rate of 50% when designed, operated and maintained in accordance with the information provided in the Verification Appendix and the following conditions:

1. The maximum treatment flow rate (MTFR) for the manufactured treatment device is calculated using the New Jersey Water Quality Design Storm (1.25 inches in 2 hrs) in N.J.A.C. 7:8-5.5.

2. The Arcadia Hydrodynamic Separator shall be installed using the same configuration reviewed by NJCAT and shall be sized in accordance with the criteria specified in item 6 below.

3. This Arcadia Hydrodynamic Separator cannot be used in series with another MTD or a media filter (such as a sand filter) to achieve an enhanced removal rate for total suspended solids (TSS) removal under N.J.A.C. 7:8-5.5.

4. Additional design criteria for MTDs can be found in Chapter 11.3 of the New Jersey Stormwater Best Management Practices (NJ Stormwater BMP) Manual which can be found on-line at https://dep.nj.gov/stormwater/.

5. The maintenance plan for a site using this device shall incorporate, at a minimum, the maintenance requirements for the Arcadia Hydrodynamic Separator. A copy of the maintenance plan is attached to this certification. However, it is recommended to review the maintenance website at https://assets.adspipe.com/m/2b13451739fb2bfe/original/Arcadia-Separator-Maintenance-Guide.pdf?_gl=1*1y3snpz*_gcl_au*MjA0NDY0MjY3OS4xNzQzNjAwNzky*_ga*ODM4MDE3ODA2LjE3MzU1NzA5NzQ.*_ga_1TPLC9D3R7*czE3NDczMzQyODMkbzkkZzEkdDE3NDczMzQ0NDEkajYwJGwwJGgzMTIzMzMzNjY for any changes to the maintenance requirements.

6. Sizing Requirements:

   The example below demonstrates the sizing procedure for the Arcadia Hydrodynamic Separator:

   Example: A 0.25-acre impervious site with a slope of 5% is to be treated to 50% TSS removal using an Arcadia Hydrodynamic Separator. The hydraulically most distant point to the inlet of the Arcadia is 110 feet. The site is located in an area for which the projected 2-year storm rainfall depth was calculated to be 3.84 inches.

   Maximum Treatment Flow Rate (MTFR) Evaluation:

   The site runoff (Q) was based on the following:

   CN = 98 (Curve Number for impervious)
   Dimensionless Unit Hydrograph (DUH) = SCS Standard DUH (peak rate factor of 484)
   Time of concentration = 0.8 minutes
   Q = 0.77 cfs

   Given the site runoff is 0.77 cfs and based on Table 1 below, the Arcadia ARC3 model with an MTFR of 0.95 cfs would be the smallest model approved that could be used for this site that could remove 50% of the TSS from the impervious area without exceeding the MTFR.

   The sizing table corresponding to the available system models is noted below. Additional specifications regarding each model can be found in the Verification Appendix.

Table 1: Arcadia Hydrodynamic Separator Models and Associated MTFRs

Arcadia Hydrodynamic Separator Model	Diameter (ft)	Maximum Treatment Flow Rate (cfs)	Treatment Area (sq. ft.)	Hydraulic Loading Rate (gpm/sq. ft.)
Arcadia ARC3	3	0.95	7.07	60.0
Arcadia ARC4	4	1.68	12.57	60.0
Arcadia ARC5	5	2.63	19.63	60.0
Arcadia ARC6	6	3.78	28.27	60.0
Arcadia ARC8	8	6.72	50.27	60.0
Arcadia ARC10	10	10.5	78.54	60.0

Be advised a detailed maintenance plan is mandatory for any project with a Stormwater BMP subject to the Stormwater Management Rules, N.J.A.C. 7:8. The plan must include all the items identified in the Stormwater Management Rules, N.J.A.C. 7:8-5.8. Such items include, but are not limited to, the list of inspection and maintenance equipment and tools, specific corrective and preventative maintenance tasks, indication of problems in the system, and training of maintenance personnel. Additional information can be found in Chapter 8: Maintenance and Retrofit of Stormwater Management Measures.

If you have any questions regarding the above information, please contact Peter Plianthos of my office at Lisa.Schaefer@dep.nj.gov.

Sincerely,

Gabriel Mahon, Chief
Bureau of NJPDES Stormwater Permitting
Division of Watershed Protection and Restoration
New Jersey Department of Environmental Protection

Attachment: Maintenance Plan

c: Richard Magee, NJCAT

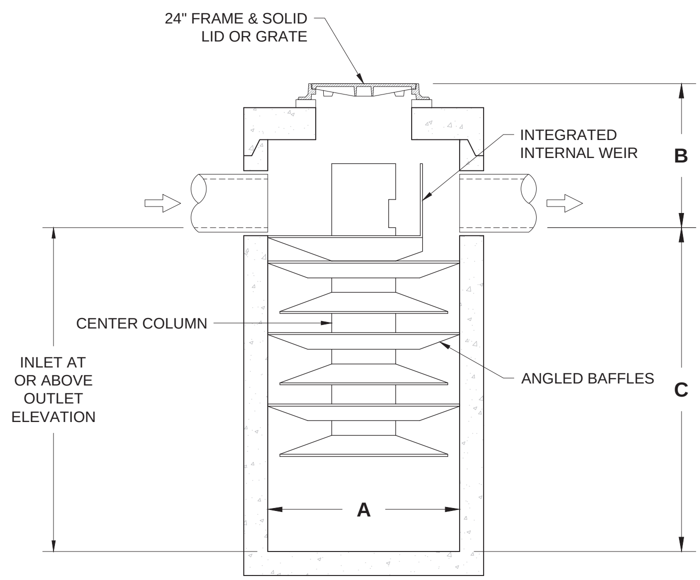
PRODUCT SPECIFICATIONS

- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.
- THE ARCADIA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.

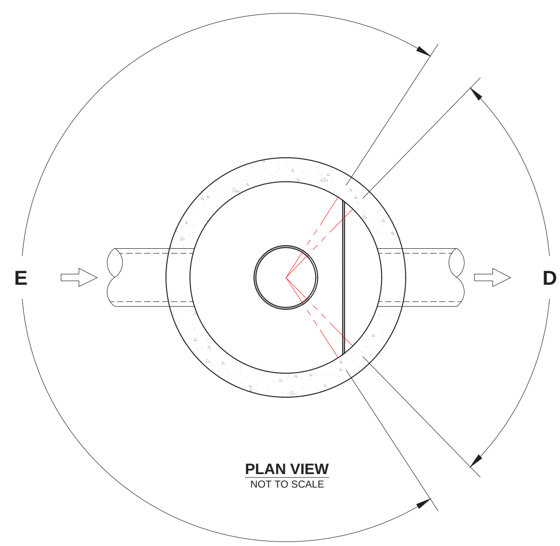
  -OR -

  THE ARCADIA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH d_{50}=75 MICRON AND 200 MG/L INFLUENT CONCENTRATION.

MODEL	DESIGN TREATMENT RATE (CFS)		STRUCTURE DIAMETER "A"	MIN. RIM TO OUTLET DEPTH "B"	SUMP DEPTH "C"	ALLOWABLE PIPE ANGLE		MAXIMUM PIPE DIAMETER	
	NJCAT	OK-110				OUTLET "D"	INLET "E"	OUTLET "F"	INLET "G"
ARC3	0.95	-	36"	36"	55"	100.0°	241.5°	18"	18"
ARC4	1.68	-	48"	36"	81"	99.5°	247.0°	24"	30"
ARC5	2.63	-	60"	36"	81"	108.5°	240.5°	36"	36"
ARC6	3.78	-	72"	36"	81"	103.0°	246.5°	42"	48"
ARC8	6.72	-	96"	39"	132"	105.5°	246.5°	60"	60"
ARC10	10.50	-	120"	48"	162"	98.0°	256.5°	72"	84"



PROFILE VIEW
NOT TO SCALE



PLAN VIEW
NOT TO SCALE

NOTES:

- ENGINEER / CONTRACTOR TO CONFIRM PIPE MATERIALS AND APPLICABLE ADAPTERS
- CONTRACTOR IS RESPONSIBLE FOR MATERIAL AND LABOR TO BRING CASTINGS TO FINISHED GRADE
- CONTRATOR TO MEASURE HEIGHT OF STRUCTURE TO ENSURE THAT DEPTH OF EXCAVATION IS CORRECT.
- UNIT SHALL CONFORM TO HS20-44 LOAD RATINGS.

ARCADIA
GENERAL CONFIGURATION
CONCRETE MANHOLE

DATE: 03/06/25
DRAWN: CJD
DRAWING #: 530-010
CHECKED: JLM

DATE | DRWN | CHKD | DESCRIPTION

ARCADIA
Stormwater Separator

ADS
4640 TRUEMAN BLVD
HILLIARD, OH 43026

SHEET 1 OF 1

SITE IMPROVEMENT PLANS
for

BUILT BLOOMINGTON

1320 S ROGERS STREET
BLOOMINGTON, INDIANA 47403

PROJECT NO: 13341

ENGINEER

SPACECO
3850 PRIORITY WAY SOUTH DRIVE, SUITE 110
INDIANAPOLIS, INDIANA
317-719-3596

DEVELOPER

ALT CONSTRUCTION
10650 N BENNETT PARKWAY SUITE 200
ZIONSVILLE, IN 46077
317-253-1251

NOTE

SPACECO, INC. IS TO BE NOTIFIED AT LEAST THREE (3) DAYS PRIOR TO STARTING CONSTRUCTION AND SHALL BE INCLUDED IN THE PRECONSTRUCTION MEETINGS

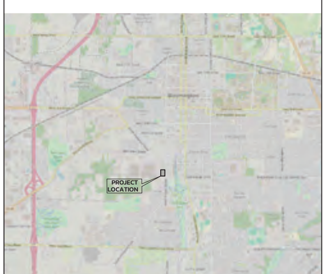
REVISIONS

ORIGINAL PLAN DATE: 05/19/2025

#	SHEET #	REMARKS	DATE

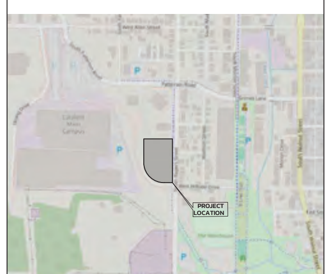
INDEX

VICINITY MAP



N.T.S.

LOCATION MAP



N.T.S.

CONTACT INFORMATION

STORM SEWER
CITY OF BLOOMINGTON UTILITIES (CBU)
600 E MILLER DRIVE
BLOOMINGTON, IN 47401
PH: 812-339-1444

SANITARY SEWER
CITY OF BLOOMINGTON UTILITIES (CBU)
600 E MILLER DRIVE
BLOOMINGTON, IN 47401
PH: 812-339-1444

WATER
CITY OF BLOOMINGTON UTILITIES (CBU)
600 E MILLER DRIVE
BLOOMINGTON, IN 47401
PH: 812-339-1444

GAS
CENTERPOINT ENERGY
205 S MADISON STREET
BLOOMINGTON, IN 47408
PH: 800-227-1376

ELECTRIC
DUKE ENERGY
PH: 800-774-1202

811
Know what's below. Call before you dig.

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-382-5544
CALL TOLL FREE

PER INDIANA STATE LAW IC8-1-26. IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

NO.	DATE	REMARKS

MADELINE ROMEO S... REGISTERED ... INDIANA ... PROFESSIONAL ENGINEER — NOT FOR CONSTRUCTION

COVER SHEET

BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

Spaceco
Civil Engineering & Surveying
Rosemont, IL - Morris, IL - Indianapolis, IN
spacecoinc.com

FILENAME: 13341_C1.0_COV
DATE: 09/04/2025
JOB NO. 13341
SHEET C1.0

GENERAL NOTES

1. REFERENCED CODES

A. ALL PAVEMENT CONSTRUCTION SHALL CONFORM TO THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARDS; AND IN ACCORDANCE WITH THE LATEST EDITION OF THE CODE OF THE CITY OF BLOOMINGTON; EXCEPT AS MODIFIED HEREIN. IN CASE OF CONFLICT, MUNICIPAL CODE SHALL TAKE PRECEDENCE.

B. ALL SANITARY SEWER AND WATERMAIN CONSTRUCTION SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR THE RESPECTIVE UTILITY COMPANIES, THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (IDEM), AND TEN STATES STANDARDS FOR SEWAGE WORKS, LATEST EDITION.

C. ALL SIDEWALK AND PUBLIC AREAS MUST BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ADA STANDARDS.

D. THE CITED STANDARD SPECIFICATIONS, CODES AND PERMITS, WITH THESE CONSTRUCTION PLANS AND DETAILS, ARE ALL TO BE CONSIDERED PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE CONSIDERED A PART OF THIS CONTRACT.

2. UTILITY LOCATIONS

A. THE UTILITY COMPANIES HAVE BEEN CONTACTED IN REFERENCE TO UTILITIES THEY OWN AND OPERATE WITHIN THE LIMITS FOR THIS PROJECT. DATA FROM THESE AGENCIES HAS BEEN INCORPORATED INTO THE PLANS. IT IS, HOWEVER, THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM OR ESTABLISH THE EXISTENCE OF ALL UTILITY FACILITIES AND THEIR EXACT LOCATIONS, AND TO SAFELY SCHEDULE ALL UTILITY RELOCATIONS. FOR ADDITIONAL INFORMATION, THE AGENCIES LISTED ON THIS SHEET MAY BE CONTACTED.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE UTILITY COMPANIES LOCATE THEIR FACILITIES IN THE FIELD PRIOR TO CONSTRUCTION AND SHALL ALSO BE RESPONSIBLE FOR THE MAINTENANCE AND PRESERVATION OF THESE FACILITIES. THE ENGINEER DOES NOT WARRANT THE LOCATION OF ANY EXISTING UTILITIES SHOWN ON THE PLAN. THE CONTRACTOR SHALL CALL 811 OR 1-800-382-5544 AND THE MUNICIPALITY, FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND THE MUNICIPALITY FORTY-EIGHT (48) HOURS PRIOR TO STARTING ANY CONSTRUCTION.

C. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT WITH LOCATIONS OF THE NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.

3. UTILITY COORDINATION

A. OWNER SHALL OBTAIN EASEMENTS AND PERMITS NECESSARY TO FACILITATE CONSTRUCTION OF THE PROPOSED UTILITIES. THE CONTRACTOR, HOWEVER, SHALL FURNISH ALL REQUIRED BONDS AND EVIDENCE OF INSURANCE NECESSARY TO SECURE THESE PERMITS.

B. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE NATURE AND STATUS OF ALL UTILITY RELOCATION WORK PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ENSURE THAT CONSTRUCTION OPERATIONS DO NOT INTERFERE WITH UTILITY FACILITIES AND RELOCATION WORK. THE SCHEDULE SHOULD REFLECT CONSTRUCTION SEQUENCING WHICH COORDINATES WITH ALL UTILITY RELOCATION WORK. THE CONTRACTOR SHALL BE REQUIRED TO ADJUST THE ORDER OF ITS WORK FROM TIME TO TIME, TO COORDINATE SAME WITH UTILITY RELOCATION WORK, AND SHALL PREPARE REVISED SCHEDULE(S) IN COMPLIANCE THEREWITH AS DIRECTED BY THE OWNER.

C. THE OWNER AND THE ENGINEER SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO THE START OF ANY OPERATION REQUIRING COOPERATION WITH OTHERS. AT&T SHALL BE CONTACTED ONE MONTH PRIOR TO START OF CONSTRUCTION IN ITS UTILITY AREAS. ALL OTHER AGENCIES, UNLESS OTHERWISE NOTED, SHALL BE NOTIFIED IN WRITING BY THE CONTRACTOR TEN (10) DAYS PRIOR TO THE START OF ANY SUCH OPERATION.

4. NO PLAN SHALL BE USED FOR CONSTRUCTION UNLESS SPECIFICALLY MARKED "FOR CONSTRUCTION". PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AFFECTING THE WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE ENGINEER'S LINE AND GRADE STAKES. IF THERE ARE ANY DISCREPANCIES WITH WHAT IS SHOWN ON THE CONSTRUCTION PLANS, HE MUST IMMEDIATELY REPORT SAME TO ENGINEER BEFORE DOING ANY WORK, OTHERWISE THE CONTRACTOR ASSUMES FULL RESPONSIBILITY. IN THE EVENT OF DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, SPECIFICATIONS AND/OR SPECIAL DETAILS, THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSIONS OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION, THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTIONS ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

5. ALL PROPOSED ELEVATIONS SHOWN ON THE PLANS ARE FINISHED SURFACE ELEVATIONS, UNLESS OTHERWISE SPECIFIED.

6. UPON AWARDING OF THE CONTRACT, AND WHEN REQUIRED BY THE MUNICIPALITY OR OWNER, THE CONTRACTOR SHALL FURNISH A LABOR, MATERIAL AND PERFORMANCE BOND IN THE AMOUNT REQUIRED GUARANTEEING COMPLETION OF THE WORK. THE UNDERWRITER SHALL BE ACCEPTABLE TO THE MUNICIPALITY OR OWNER, AS APPROPRIATE.

7. THE CONTRACTORS SHALL PLAN THEIR WORK BASED ON THEIR OWN BORINGS, EXPLORATIONS AND OBSERVATIONS TO DETERMINE SOIL CONDITIONS AT THE LOCATION OF THE PROPOSED WORK. HOWEVER, IF THE OWNER HAS A SOILS REPORT, THE RESULTS WILL BE AVAILABLE FROM THE OWNER UPON WRITTEN REQUEST.

8. CONTRACTOR SHALL VIDEO TAPE WORK AREA PRIOR TO CONSTRUCTION FOR THE PURPOSE OF DOCUMENTING EXISTING CONDITIONS.

9. COMMENCING CONSTRUCTION

A. THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR HIS REPRESENTATIVE AND THE AFFECTED GOVERNMENTAL AGENCIES IN WRITING AT LEAST THREE FULL WORKING DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IN ADDITION, THE CONTRACTOR SHALL NOTIFY AS NECESSARY, ALL TESTING AGENCIES, EITHER MUNICIPALITY'S OR THE OWNER'S, SUFFICIENTLY IN ADVANCE OF CONSTRUCTION. ALL MATERIAL TESTING SHALL BE THE RESPONSIBILITY AND EXPENSE OF THE CONTRACTOR. THE TESTING AGENCY SHALL MEET THE APPROVAL OF THE OWNER.

B. FAILURE OF CONTRACTOR TO ALLOW PROPER NOTIFICATION TIME WHICH RESULTS IN TESTING COMPANIES TO BE UNABLE TO VISIT SITE AND PERFORM TESTING WILL CAUSE CONTRACTOR TO SUSPEND OPERATION (PERTAINING TO TESTING) UNTIL TESTING AGENCY CAN SCHEDULE TESTING OPERATIONS. COST OF SUSPENSION OF WORK TO BE BORNE BY CONTRACTOR.

10. ALL CONTRACTORS SHALL KEEP ACCESS AVAILABLE AT ALL TIMES FOR ALL TYPES OF TRAFFIC. AT NO TIME SHALL ACCESS BE DENIED TO ADJACENT PROPERTIES.

11. THE CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES UNTIL THEY ARE NO LONGER NEEDED. ANY STAKES DESTROYED OR DISTURBED BY THE CONTRACTOR PRIOR TO THEIR USE SHALL BE RESET BY THE DEVELOPER'S ENGINEER AT CONTRACTOR'S COST.

12. ANY EXISTING SIGNS, LIGHT STANDARDS AND UTILITY POLES WHICH INTERFERE WITH CONSTRUCTION OPERATIONS AND NOT NOTED FOR DISPOSAL SHALL BE REMOVED AND RESET BY THE CONTRACTOR AT HIS OWN EXPENSE AS SHOWN ON THE ENGINEERING PLANS OR AS DIRECTED BY THE DEVELOPER. ANY DAMAGE TO THESE ITEMS SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE TO THE SATISFACTION OF THE OWNER. ANY SIGNS NOT REQUIRED TO BE RESET, SHALL BE DELIVERED TO THE RESPECTIVE OWNERS.

13. REMOVAL OF SPECIFIED ITEMS, INCLUDING BUT NOT LIMITED TO, PAVEMENT, SIDEWALK, CURB, CURB AND GUTTER, CULVERTS, ETC. SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR ANY PERMIT REQUIRED FOR SUCH DISPOSAL.

14. ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION OPERATIONS SHALL BE CONNECTED TO THE PROPOSED STORM SEWER SYSTEM OR SHALL BE RESTORED TO PROPER OPERATING CONDITION. A RECORD OF THE LOCATION OF ALL FIELD TILE OR DRAIN PIPE ENCOUNTERED SHALL BE KEPT BY THE CONTRACTOR AND TURNED OVER TO THE ENGINEER, DEVELOPER OR MUNICIPAL ENGINEER UPON COMPLETION OF THE PROJECT. THE COST OF THIS WORK SHALL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

15. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ON THE JOB.

16. THE CONTRACTOR SHALL COLLECT AND REMOVE ALL CONSTRUCTION DEBRIS, EXCESS MATERIALS, TRASH, OIL AND GREASE RESIDUE, MACHINERY, TOOLS AND OTHER MISCELLANEOUS ITEMS WHICH WERE NOT PRESENT PRIOR TO PROJECT COMMENCEMENT AT NO ADDITIONAL EXPENSE TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ANY AND ALL PERMITS NECESSARY FOR THE HAULING AND DISPOSAL REQUIRED FOR CLEAN-UP AS DIRECTED BY THE ENGINEER OR OWNER. BURNING ON THE SITE IS NOT PERMITTED.

17. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS SPECIFICALLY NOTED ON THE PLANS.

18. TREES NOT MARKED FOR REMOVAL SHALL BE CONSIDERED AS DESIGNATED TO BE SAVED AND SHALL BE PROTECTED.

19. LIMB PRUNING SHALL BE PERFORMED UNDER THE SUPERVISION OF THE LANDSCAPE ARCHITECT MEETING THE OWNER'S APPROVAL AND SHALL BE UNDERTAKEN IN A TIMELY FASHION SO AS NOT TO INTERFERE WITH CONSTRUCTION.

20. ALL LIMBS, BRANCHES, AND OTHER DEBRIS RESULTING FROM THIS WORK SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR AT HIS OWN EXPENSE OFF-SITE.

21. ALL CUTS OVER 1" IN DIAMETER SHALL BE MADE FLUSH WITH THE NEXT LARGE BRANCH. WOUNDS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED TREE PAINT.

22. GENERAL EXCAVATION/UNDERGROUND NOTES

A. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH CODES AND ORDINANCES HAVING JURISDICTION. SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE EITHER BECAUSE OF SPACE RESTRICTIONS OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN A SAFE CONDITION UNTIL COMPLETION OF BACKFILLING.

B. PROVIDE MATERIALS FOR SHORING AND BRACING, SUCH AS SHEET PILING, UPRIGHTS, STRINGERS AND CROSS BRACES, IN GOOD SERVICEABLE CONDITION. PROVIDE MINIMUM REQUIREMENTS FOR TRENCH SHORING AND BRACING TO COMPLY WITH CODES AND AUTHORITIES HAVING JURISDICTION. MAINTAIN SHORING AND BRACING IN EXCAVATIONS REGARDLESS OF TIME PERIOD EXCAVATIONS WILL BE OPEN. CARRY DOWN SHORING AND BRACING AS EXCAVATION PROGRESSES IN ACCORDANCE WITH OSHA AND GOVERNING AUTHORITY.

C. PREVENT SURFACE WATER AND SUBSURFACE OR GROUNDWATER FROM FLOWING INTO EXCAVATIONS. REMOVE WATER TO PREVENT SOFTENING OF FOUNDATION BOTTOMS, UNDERCUTTING FOOTINGS, AND SOIL CHANGES DETRIMENTAL TO STABILITY OF SUBGRADES AND FOUNDATIONS. PROVIDE AND MAINTAIN PUMPS, SUMPS, SUCTION AND DISCHARGE LINES AND OTHER DEWATERING SYSTEM COMPONENTS NECESSARY TO CONVEY WATER AWAY FROM EXCAVATIONS. CONVEY WATER REMOVED FROM EXCAVATIONS AND RAINWATER TO COLLECTING OR RUN-OFF AREAS ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION. PROVIDE AND MAINTAIN TEMPORARY DRAINAGE DITCHES AND OTHER DIVERSIONS OUTSIDE EXCAVATION LIMITS FOR EACH STRUCTURE. DO NOT USE TRENCH EXCAVATIONS AS TEMPORARY DRAINAGE DITCHES.

D. IMMEDIATELY REPORT CONDITIONS THAT MAY CAUSE UNSOUND BEARING TO THE OWNER/DEVELOPER BEFORE CONTINUING WORK.

23. FINAL ACCEPTANCE

A. ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE GUARANTEED BY THE CONTRACTOR AND HIS SURETY FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF FINAL ACCEPTANCE OF THE PROJECT AND THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DEFECTS IN MATERIALS AND WORKMANSHIP OF WHATEVER NATURE DURING THAT PERIOD. THIS GUARANTEE SHALL BE PROVIDED IN THE FORM OF MAINTENANCE BOND IN THE AMOUNT OF 10% OF THE COST OF IMPROVEMENTS.

B. BEFORE ACCEPTANCE BY THE OWNER AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED BY THE OWNER OR HIS REPRESENTATIVE. FINAL PAYMENT WILL BE MADE AFTER ALL THE CONTRACTOR'S WORK HAS BEEN APPROVED AND ACCEPTED.

C. NO UNDERGROUND WORK SHALL BE COVERED UNTIL IT HAS BEEN APPROVED BY THE MUNICIPALITY. APPROVAL TO PROCEED MUST BE OBTAINED FROM THE MUNICIPALITY PRIOR TO INSTALLING PAVEMENT BASE, BINDER, SURFACE, AND PRIOR TO PLACING ANY CONCRETE AFTER FORMS HAVE BEEN SET.

D. AT THE CLOSE OF EACH WORKING DAY AND AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS.

24. UNDERGROUND NOTES

A. UNDERGROUND WORK SHALL INCLUDE TRENCHING, INSTALLATION OF PIPE, CASTINGS, STRUCTURES, BACKFILLING OF TRENCHES AND COMPACTION AND TESTING AS SHOWN ON THE CONSTRUCTION PLANS. FITTINGS AND ACCESSORIES NECESSARY TO COMPLETE THE WORK MAY NOT BE SPECIFIED, BUT SHALL BE CONSIDERED AS INCIDENTAL TO THE COST OF THE CONTRACT.

B. WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, EXISTING DRAINAGE STRUCTURES AND SYSTEMS SHALL BE CLEANED OF DEBRIS AND PATCHED AS NECESSARY TO ASSURE INTEGRITY OF THE STRUCTURE. THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR STRUCTURES AND CONTRACT UNIT PRICE PER LINEAL FOOT FOR SYSTEMS WHICH SHALL BE PAYMENT IN FULL FOR CLEANING, PATCHING, REMOVAL AND DISPOSAL OF DEBRIS AND DIRT. DRAINAGE STRUCTURES AND SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT SHALL BE MAINTAINED BY THE CONTRACTOR AT HIS EXPENSE. NO PAYMENT WILL BE MADE FOR CLEANING STRUCTURES OR SYSTEMS CONSTRUCTED AS PART OF THIS PROJECT.

C. ANY DEWATERING OF SEWER AND WATER TRENCHES AS WELL AS TEMPORARY SHEETING OR BRACING THAT MAY BE REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT BE CONSIDERED EXTRA WORK UNLESS THERE IS A SPECIFIC LINE ITEM FOR DEWATERING. IN THE EVENT THAT SOFT MATERIALS WITH UNCONFINED COMPRESSIVE STRENGTH LESS THAN 0.5 TSF ARE ENCOUNTERED IN SEWER CONSTRUCTION, THE CONTRACTOR SHALL (UPON APPROVAL OF THE OWNER AND/OR ENGINEER) OVER-EXCAVATE TO A DEPTH OF ONE (1) FOOT BELOW THE BOTTOM OF THE PIPE AND BACKFILL WITH COMPACTED CRUSHED STONE, PROPERLY FORMED TO FIT THE BOTTOM OF THE PIPE.

D. TRENCH BACKFILL WILL BE REQUIRED FOR THE FULL TRENCH DEPTH WITHIN FIVE (5) FEET OF PROPOSED OR EXISTING PAVEMENTS, UTILITIES, DRIVEWAYS, AND SIDEWALKS AND EXTENDING A DISTANCE EQUAL TO A 1:1 SLOPE FROM SUBGRADE ELEVATION TO TOP OF PIPE. THE TRENCH BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING INDOT #8 STONE GRADATION. THE TRENCH BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL SPECIFICATIONS. JETTING WITH WATER SHALL NOT BE PERMITTED. THE COST OF SUCH CONSTRUCTION SHALL BE CONSIDERED INCIDENTAL TO THIS CONTRACT AND SHALL BE INCLUDED IN THE UNIT PRICE OF THE PIPE. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

E. THE CONTRACTOR SHALL INSTALL A 4" X 4" X 8' (NOMINAL) POST AT THE TERMINUS OF THE SANITARY, WATER AND STORM SERVICE, SANITARY AND STORM MANHOLES, CATCH BASINS, INLETS AND WATER VAULTS. THE POST SHALL EXTEND 4' ABOVE THE GROUND. THE TOP 12" OF SAID POST SHALL BE PAINTED AS FOLLOWS: SANITARY - RED, WATERMAIN - BLUE, STORM - GREEN.

F. AFTER THE STORM SEWER SYSTEM HAS BEEN CONSTRUCTED, THE CONTRACTOR SHALL PLACE EROSION CONTROL AT REAR YARD INLET LOCATIONS, AND AT OTHER LOCATIONS SELECTED BY THE ENGINEER, TO MINIMIZE THE AMOUNT OF SILTATION WHICH NORMALLY WOULD ENTER THE STORM SEWER SYSTEM.

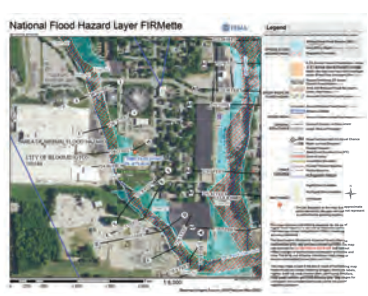
G. HYDRANTS SHALL NOT BE FLUSHED DIRECTLY ON THE ROAD SUBGRADES. WHENEVER POSSIBLE, HOSES SHALL BE USED TO DIRECT THE WATER INTO LOT AREAS OR THE STORM SEWER SYSTEM (IF AVAILABLE). DAMAGE TO THE ROAD SUBGRADE OR LOT GRADING DUE TO EXCESSIVE WATER SATURATION AND/OR EROSION FROM HYDRANT FLUSHING, OR FROM LEAKS IN THE WATER DISTRIBUTION SYSTEM, WILL BE REPAIRED BY THE CONTRACTOR AT HIS COST.

H. ALL TOP OF FRAMES FOR STORM AND SANITARY SEWERS AND VALVE VAULT COVERS ARE TO BE ADJUSTED TO MEET FINAL FINISH GRADE. THIS ADJUSTMENT IS TO BE MADE BY THE SEWER AND WATER CONTRACTOR AND THE COST IS TO BE CONSIDERED INCIDENTAL. THESE ADJUSTMENTS TO FINISHED GRADE WILL NOT ALLEVIATE THE CONTRACTOR FROM ANY ADDITIONAL ADJUSTMENTS AS REQUIRED BY THE MUNICIPALITY UPON FINAL INSPECTION OF THE PROJECT. (FINAL GRADES TO BE DETERMINED BY THE MUNICIPALITY AT THE TIME OF FINAL INSPECTION AND MAY VARY FROM PLAN GRADE.)

I. SLEEVES FOR UTILITY (COMED, TELEPHONE, ETC.) STREET CROSSING, SHALL BE INSTALLED WHERE DIRECTED BY THE OWNER. SLEEVES SHALL BE 6" PVC INSTALLED 36" BELOW THE TOP OF CURB AND EXTEND TWO FEET OUTSIDE THE CURB. TRENCH SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL.

J. THE CONTRACTOR SHALL VERIFY THE SIZE AND INVERT ELEVATION OF ALL CONNECTIONS TO AVOID ANY CONFLICTS BEFORE STARTING WORK. NOTIFY OWNER OF ANY DISCREPANCIES.

25. IT SHALL BE UNDERSTOOD THAT NEITHER THE MUNICIPALITY, ITS OFFICIALS, CONSULTANTS, NOR ITS EMPLOYEES ARE AGENTS OF OR REPRESENTATIVES OF THE OWNER. NONE-THE-LESS, THE MUNICIPALITY, ITS OFFICIALS AND EMPLOYEES ARE TO BE PROVIDED SAFE ACCESS TO ALL PHASES OF ALL WORK PERFORMED ON THE PROJECT SITE TO MONITOR THE QUALITY OF THE WORK AND ASSURE ITS CONFORMITY WITH THE PLANS AND SPECIFICATIONS. THERE SHALL BE NO PERSONAL LIABILITY UPON ANY OFFICIAL OR EMPLOYEE OF THE MUNICIPALITY ON ACCOUNT OF ACTIONS TAKEN OR NOT TAKEN IN THE COURSE OF THEIR WORK. THE CONTRACTOR MUST AT ALL TIMES MAINTAIN A SAFE ACCESS TO THE WORK FOR INSPECTORS. "SAFE" : MEANING CONDITIONS COMPLYING WITH ALL PROVISIONS OF ALL APPLICABLE AND RECOGNIZED SAFETY STANDARDS, FEDERAL, STATE AND LOCAL. IF ACCESS IS NOT SAFE AND INSPECTIONS CANNOT BE MADE UNDER SAFE CONDITIONS, THE INSPECTOR CAN ORDER CESSATION OF THE WORK SO AFFECTED UNTIL SUCH TIME AS CONTRACTOR PROVIDES SAFE ACCESS.



FLOOD MAP

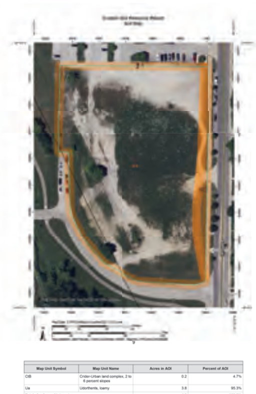
CONTROL POINTS

HORIZONTAL DATUM: INDIANA STATE PLANE COORDINATES, WEST ZONE, U.S. SURVEY FEET
VERTICAL DATUM: NAVD88 (COMPUTED USING GEOID 12A), U.S. SURVEY FEET

POINT #1
NORTHING: 1422042.9410
EASTING: 3106626.5170
ELEVATION: 730.64
DESCRIPTION: MAG NAIL

POINT #2
NORTHING: 1422606.8600
EASTING: 3106432.6290
ELEVATION: 733.58
DESCRIPTION: MAG NAIL

POINT #9
NORTHING: 1421804.8500
EASTING: 3107076.5900
ELEVATION: 723.74
DESCRIPTION: 5/8" REBAR W/ WITNESS CAP (OFF SITE)



SOILS MAP

NO. | DATE | REMARKS

MADELINE ROMEO S. REGISTERED PROFESSIONAL ENGINEER INDIANA — NOT FOR CONSTRUCTION

GENERAL NOTES

BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

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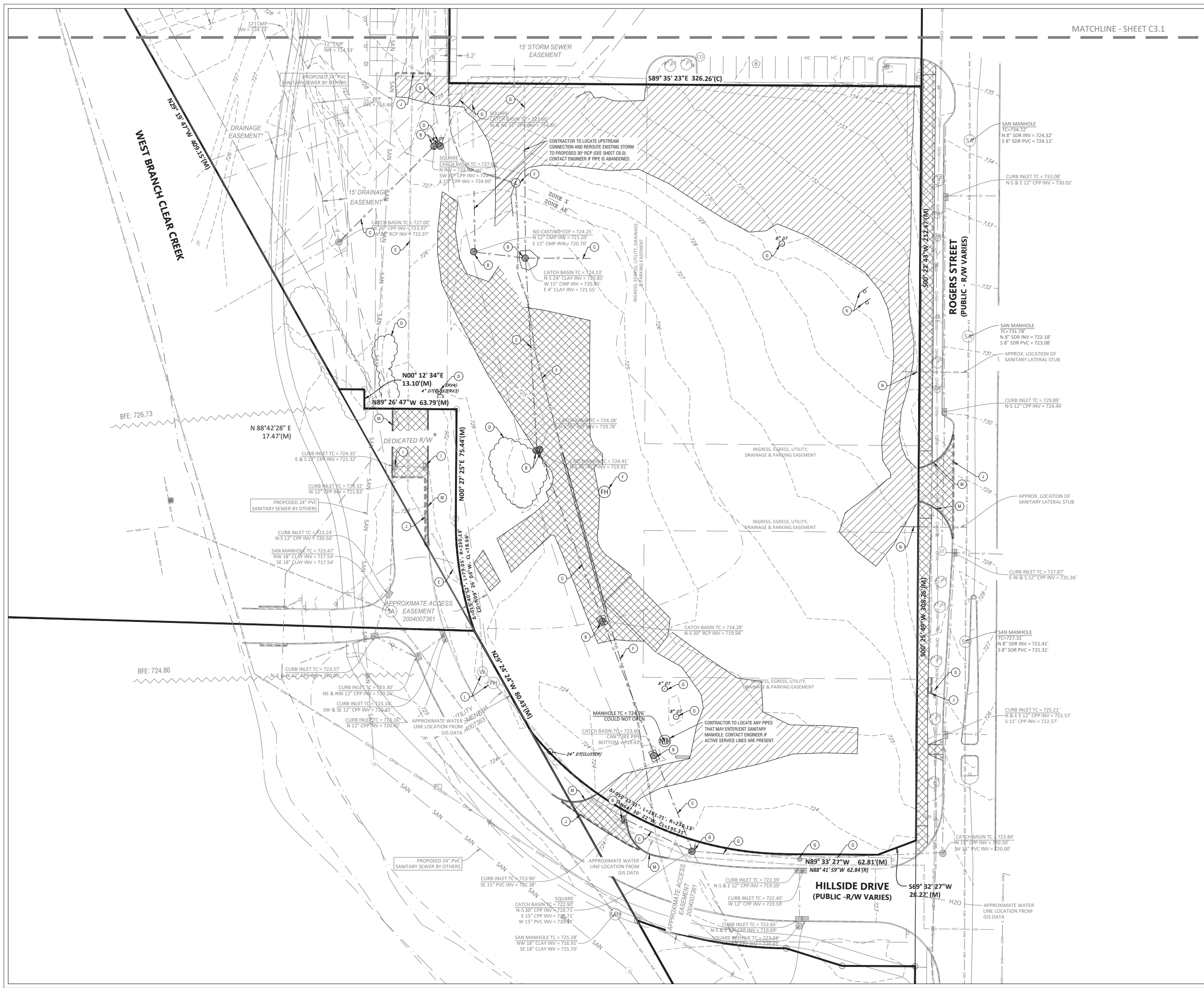

DEMOLITION NOTES

1. CLEAR AND GRUB ALL TREES AND VEGETATION NECESSARY FOR CONSTRUCTION.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL MUD, DIRT, GRAVEL, AND ANY OTHER MATERIALS TRACKED ONTO ANY PUBLIC OR PRIVATE STREETS OR SIDEWALKS. THE CONTRACTOR SHALL USE MEASURES TO CONTROL DUST AT ALL TIMES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING, THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.
3. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING DEMOLITION.
4. ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION AND CONSTRUCTION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT STRUCTURES AND OTHER FACILITIES AND INJURY TO PERSONS.
5. CONDUCT DEMOLITION AND CONSTRUCTION OPERATIONS TO ENSURE MINIMAL INTERFERENCE WITH STREETS, WALKS, AND OTHER ADJACENT OCCUPIED STRUCTURES.
6. ALL UTILITIES TO BE REMOVED SHALL BE DISCONNECTED AND CAPPED AT THE NEAREST CONNECTION POINT UNLESS SPECIFIED OTHERWISE.
7. UTILITIES ARE SHOWN TO BE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY(S) COMPANY FOR THE REMOVAL, RELOCATION, AND/OR DEMOLITION OF ALL EXISTING UTILITIES.
8. ALL DEMOLISHED MATERIALS SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE UNLESS NOTED OTHERWISE.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROPER DRAINAGE IN DEMOLITION AREAS.
10. PROMPTLY REPAIR DAMAGE TO ADJACENT FACILITIES CAUSED BY DEMOLITION AND CONSTRUCTION OPERATIONS AT NO EXTRA TO THE OWNER.
11. DEMOLITION ITEMS INCLUDE BUT ARE NOT LIMITED TO DEMOLITION ITEMS INDICATED ON THIS PLAN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR RELOCATE ITEMS WHICH INTERFERE WITH NEW CONSTRUCTION.
12. THE OWNER/DEVELOPER AND/OR CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING QUALITY CONTROL AT ALL TIMES DURING THE CONSTRUCTION PROCESS.
13. CONTACT OWNER IMMEDIATELY IF CONTAMINATED SOILS ARE ENCOUNTERED DURING CONSTRUCTION. CONTAMINATED SOILS MUST BE HAULED OFF-SITE AND PROPERLY DISPOSED.

DEMOLITION KEYNOTES

A. PAVEMENT TO BE REMOVED
B. STORM STRUCTURE TO BE REMOVED
C. STORM PIPE TO BE REMOVED
D. VEGETATION TO BE REMOVED
E. WATER LINE TO BE PROTECTED
F. FIBER LINE AND ASSOCIATED STRUCTURE(S) TO BE REMOVED
G. STORM STRUCTURE/PIPE TO BE PROTECTED
H. GRAVEL TO BE REMOVED
I. EXISTING STORM PIPE AND STRUCTURES TO BE PROTECTED
J. SAWCUT FULL DEPTH FOR CLEAN EDGE
K. SIGN TO BE REMOVED
L. FIRE HYDRANT AND VALVE TO BE PROTECTED
M. CURB TO BE REMOVED
N. EXISTING SANITARY LATERAL TO BE PROTECTED
O. REMOVE AND PRESERVE BENCH TO BE REPLACED

NO.	DATE	REMARKS

MADELINE ROMEO — NOT FOR CONSTRUCTION — PROFESSIONAL ENGINEER — INDIANA

EXISTING CONDITIONS & DEMO PLAN - SOUTH

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1320 S ROGERS STREET
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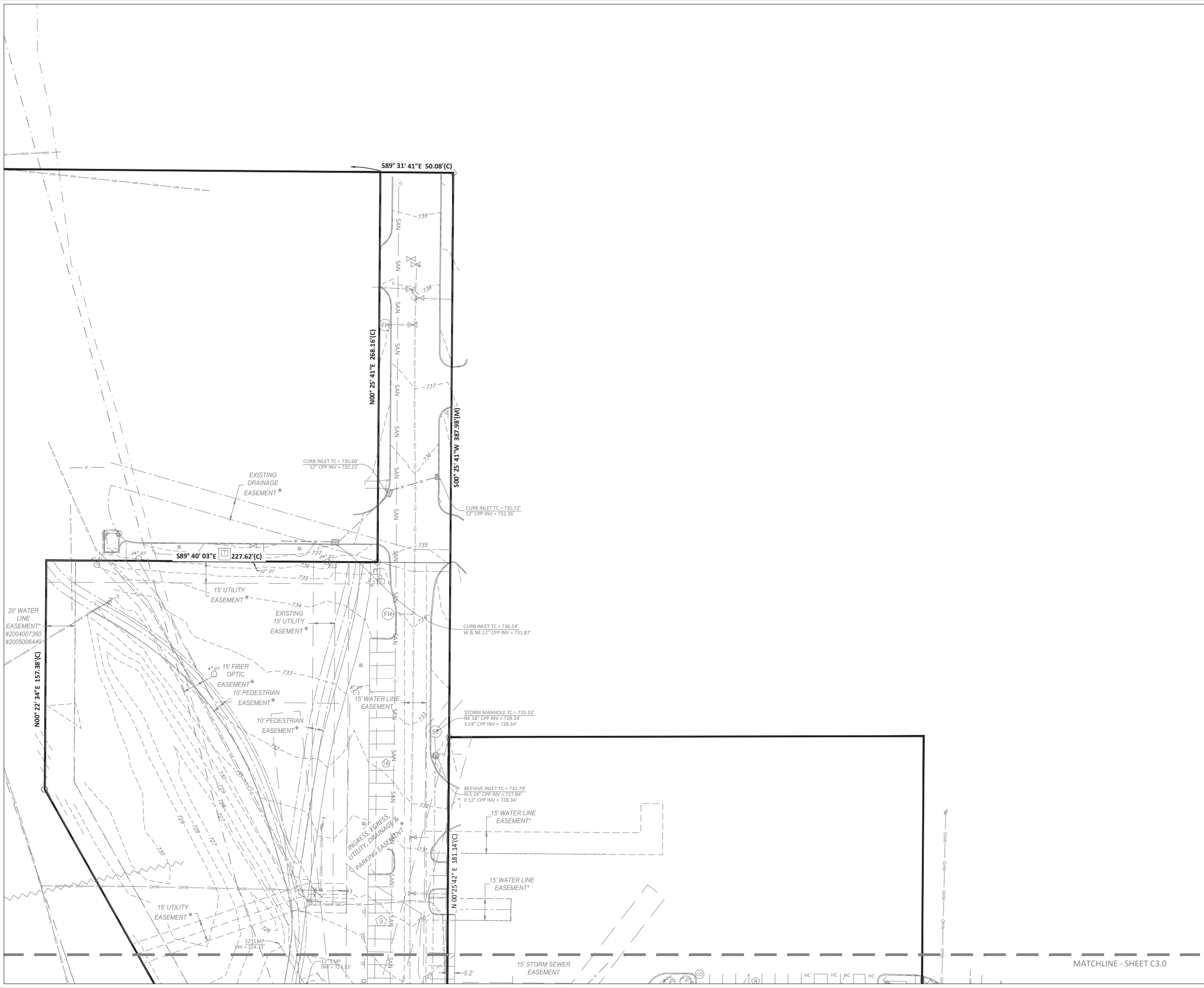

DEMOLITION NOTES

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3. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING DEMOLITION.
4. ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION AND CONSTRUCTION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT STRUCTURES AND OTHER FACILITIES AND INJURY TO PERSONS.
5. CONDUCT DEMOLITION AND CONSTRUCTION OPERATIONS TO ENSURE MINIMAL INTERFERENCE WITH STREETS, WALKS, AND OTHER ADJACENT OCCUPIED STRUCTURES.
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8. ALL DEMOLISHED MATERIALS SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE UNLESS NOTED OTHERWISE.
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10. PROMPTLY REPAIR DAMAGE TO ADJACENT FACILITIES CAUSED BY DEMOLITION AND CONSTRUCTION OPERATIONS AT NO EXTRA TO THE OWNER.
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J. SAWCUT FULL DEPTH FOR CLEAN EDGE
K. SIGN TO BE REMOVED
L. FIRE HYDRANT AND VALVE TO BE PROTECTED
M. CURB TO BE REMOVED

Know what's below. Call before you dig.

SCALE 1" = 30'
0 30 60

NO.	DATE	REMARKS

MADELINE ROMEO S. REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA
NOT FOR CONSTRUCTION

EXISTING CONDITIONS & DEMO PLAN - NORTH

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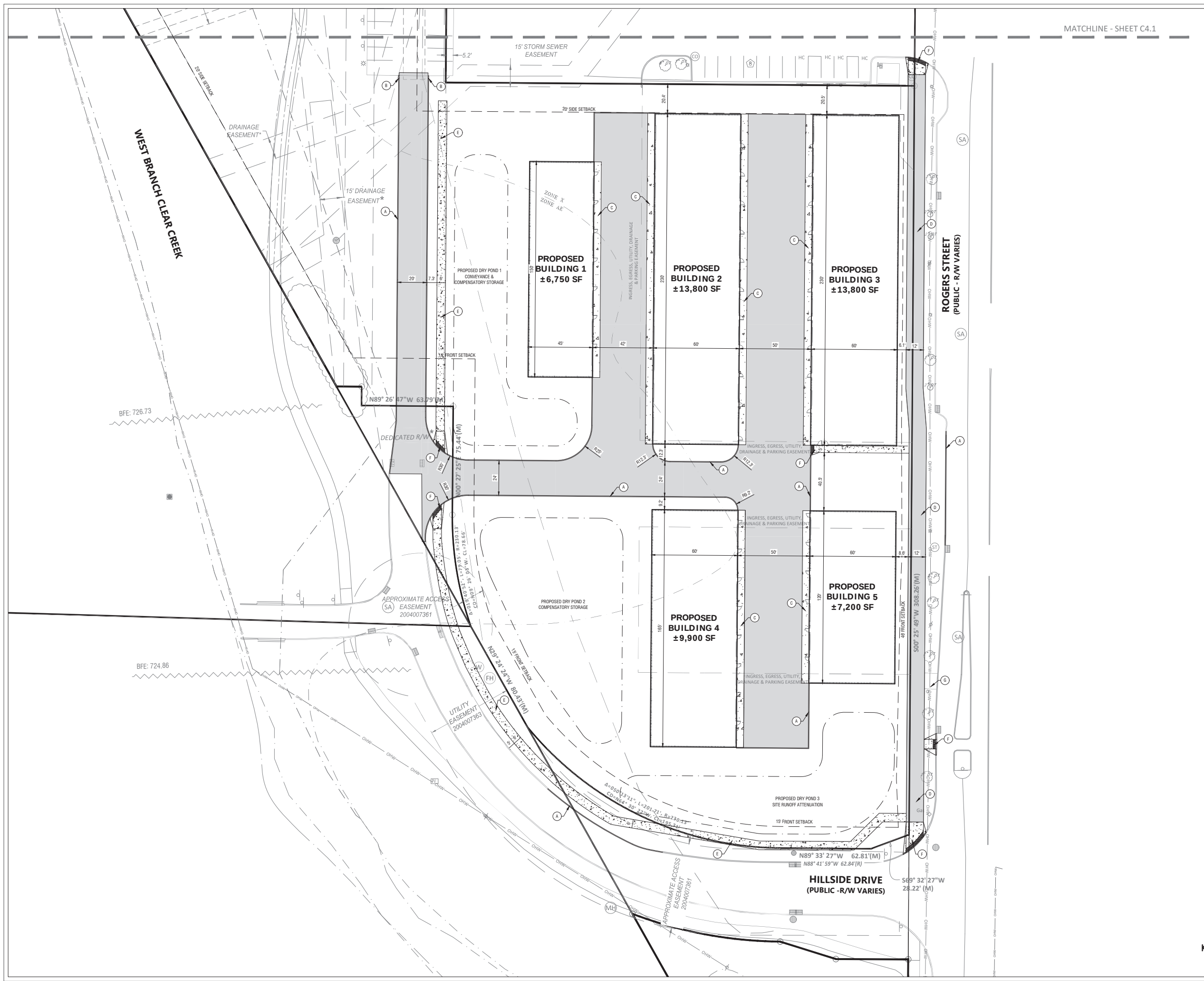

SITE PLAN NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, OR VERIFYING, THAT ALL PERMITS AND APPROVALS ARE OBTAINED FROM THE RESPECTIVE CITY, COUNTY, AND STATE AGENCIES PRIOR TO STARTING CONSTRUCTION.
2. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES IN THE VICINITY OF THE CONSTRUCTION AREA PRIOR TO STARTING CONSTRUCTION.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH RESPECTIVE UTILITY COMPANIES.
4. ALL CONSTRUCTION ACTIVITY ON THIS SITE IS TO BE PERFORMED IN COMPLIANCE WITH MOST CURRENT APPLICABLE OSHA STANDARDS FOR WORKER SAFETY.
5. ALL RADII AND STREET DIMENSIONS SHALL BE MEASURED TO FACE OF CURB OR FACE OF INTEGRAL CURB AND WALK. ALL DIMENSIONS TO THE BUILDING ARE TO THE OUTSIDE OF BUILDING FOUNDATION WALL.
6. EXISTING PAVEMENT TO BE SAW CUT IN ALL AREAS WHERE INDICATED NEW PAVEMENT TO JOIN EXISTING PAVEMENT.
7. THE EDGE OF THE EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING ASPHALT.
8. ALL CONSTRUCTION JOINTS SHALL BE SAWN, CLEANED OF DEBRIS, BLOWN DRY AND IMMEDIATELY SEALED WITH THE APPROPRIATE SEALANT ACCORDING TO MANUFACTURER'S DIRECTIONS.
9. ALL PARKING STRIPES ARE TO BE 4" WHITE PAINT. ADA PARKING AREAS AND ACCESS AISLES TO BE 4" BLUE PAINT.
10. BEARINGS, DIMENSIONS AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY. SEE RECORD SURVEYS AND PLATS FOR EXACT INFORMATION.
11. SEE ARCHITECTURAL PLANS FOR DETAILS OF BUILDINGS AND BUILDING DIMENSIONS.
12. TEMPORARY TRAFFIC CONTROL DURING CONSTRUCTION TO CONFORM TO APPLICABLE LOCAL STANDARDS, MUTCD AND INDOT SPECIFICATIONS.
13. ANY DISCREPANCIES OR CONFLICTS WHICH BECOME APPARENT BEFORE OR DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
14. CONTACT ENGINEER IF ADDITIONAL DIMENSIONS ARE NEEDED FOR CONSTRUCTION.
15. SEE STRUCTURAL PLANS FOR DETAILS OF CONCRETE STOOPS TO BE CONSTRUCTED OUTSIDE BUILDING AT ENTRY POINTS. ALL STOOPS TO BE 5'X5' UNLESS NOTED OTHERWISE.

LEGEND:

- ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- CONCRETE PAVEMENT
- RIGHT-OF-WAY CONCRETE PAVEMENT

KEYNOTES:

A. 6" CONCRETE CURB
B. 2' CURB TAPER
C. 5' CONCRETE APRON
D. 12' MULTI-USE ASPHALT TRAIL
E. 6' CONCRETE SIDEWALK
F. CURB RAMP
G. REPLACE BENCH

NO.	DATE	REMARKS

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SITE PLAN - SOUTH

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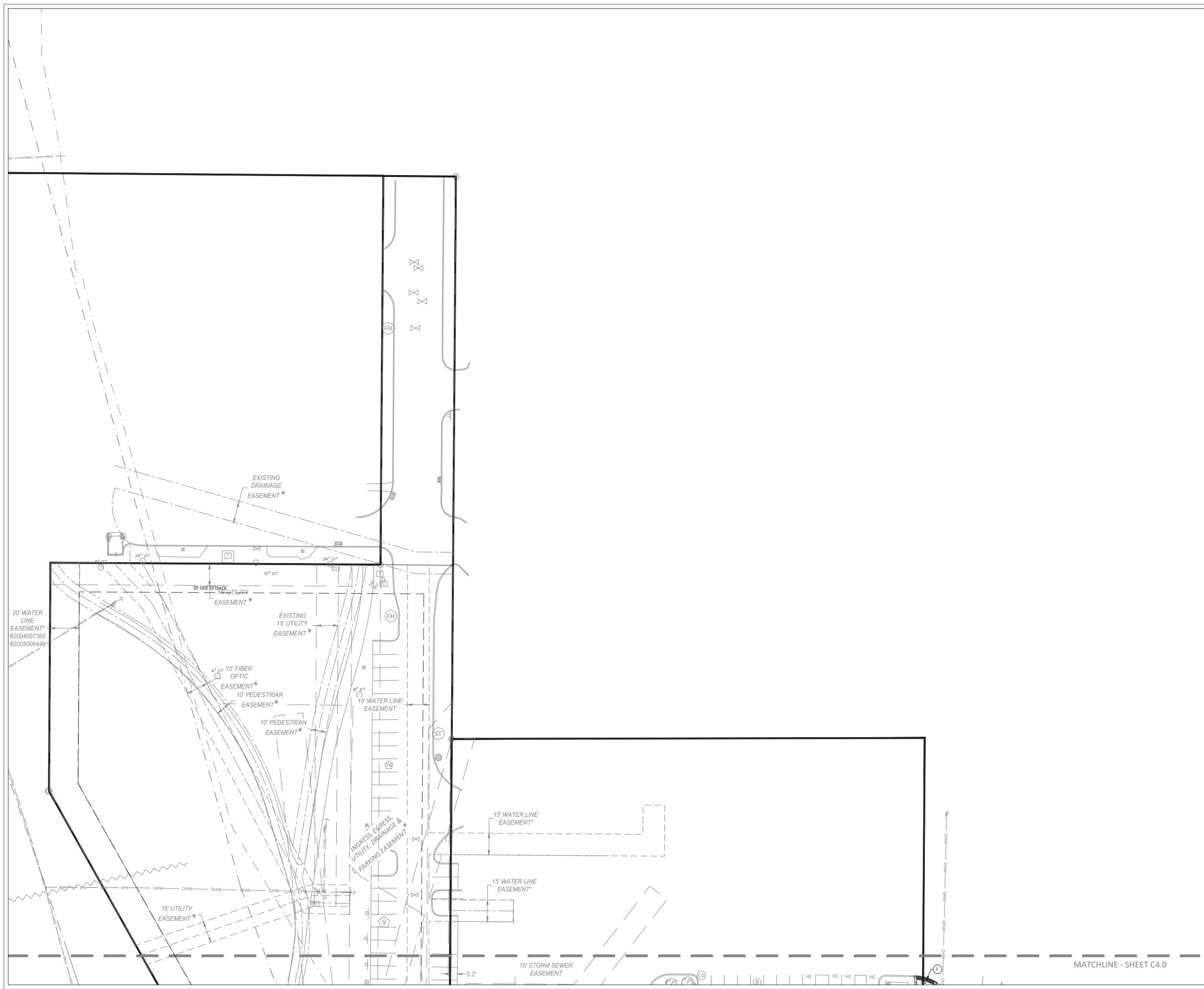

SITE PLAN NOTES:

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3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY FOR NOTIFICATION AND COORDINATION OF ALL CONSTRUCTION WITH RESPECTIVE UTILITY COMPANIES.
4. ALL CONSTRUCTION ACTIVITY ON THIS SITE IS TO BE PERFORMED IN COMPLIANCE WITH MOST CURRENT APPLICABLE OSHA STANDARDS FOR WORKER SAFETY.
5. ALL RADII AND STREET DIMENSIONS SHALL BE MEASURED TO FACE OF CURB OR FACE OF INTEGRAL CURB AND WALK. ALL DIMENSIONS TO THE BUILDING ARE TO THE OUTSIDE OF BUILDING FOUNDATION WALL.
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8. ALL CONSTRUCTION JOINTS SHALL BE SAWN, CLEANED OF DEBRIS, BLOWN DRY AND IMMEDIATELY SEALED WITH THE APPROPRIATE SEALANT ACCORDING TO MANUFACTURER'S DIRECTIONS.
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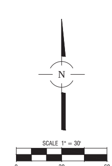

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SITE PLAN - NORTH

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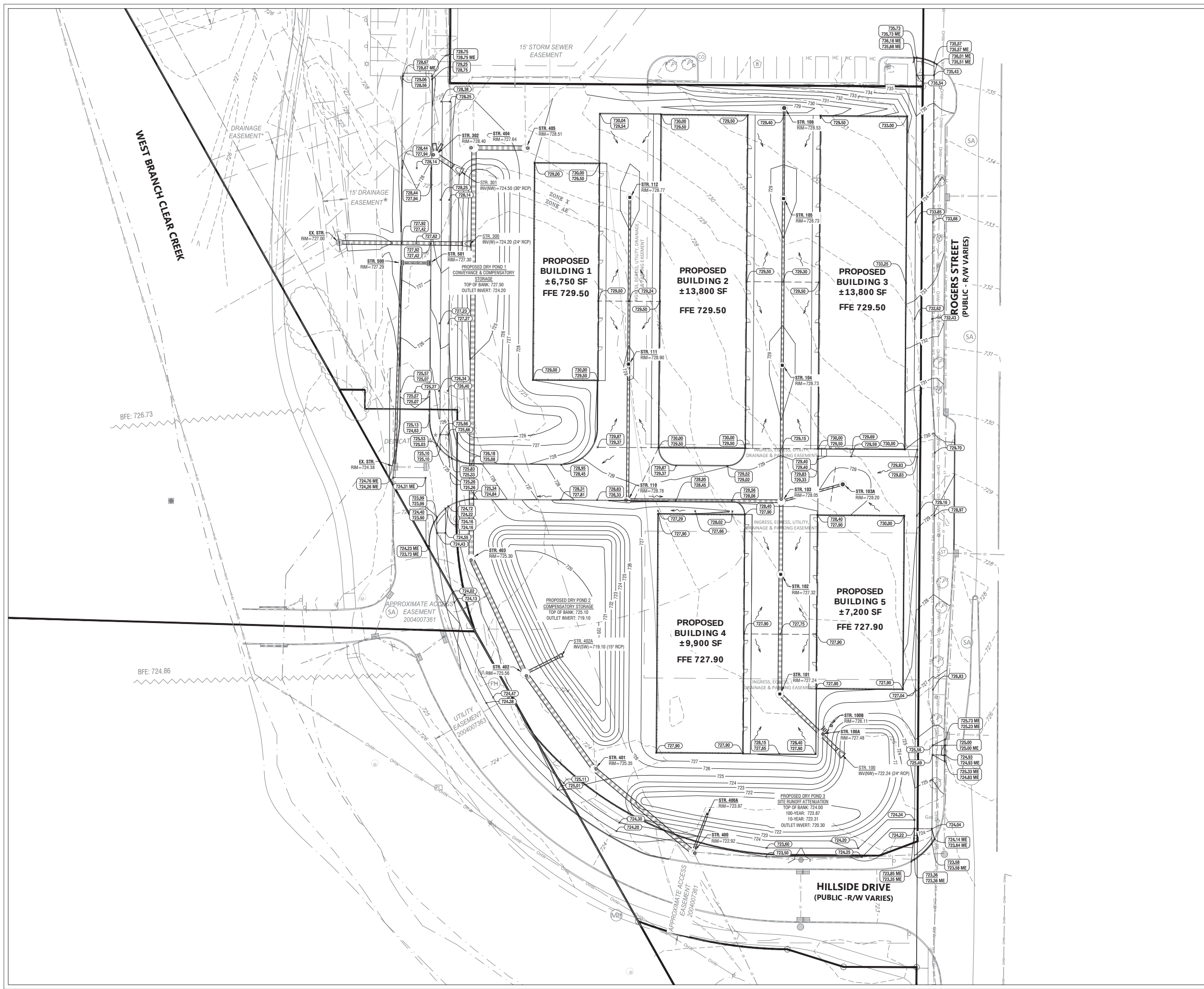


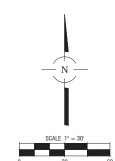
GRADING NOTES:

1. ALL ELEVATIONS AT CONSTRUCTION LIMITS SHALL MATCH EXISTING GRADE.
2. TOPSOIL SHALL BE PLACED IN ALL LANDSCAPE AND YARD AREAS WITH A MINIMUM DEPTH OF 6".
3. MAINTAIN SITE DRAINAGE AT ALL TIMES DURING EARTHWORK OPERATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY DRAINAGE FACILITIES IF NECESSARY THROUGHOUT CONSTRUCTION.
4. CONTOURS SHOW GRADING INTENT. THE CONTRACTOR MUST USE PROPOSED SPOT GRADE ELEVATIONS AND PROFILES TO BUILD SITE. CONTACT ENGINEER IF ADDITIONAL SPOT GRADES ARE NEEDED FOR CONSTRUCTION.
5. PAVEMENT AREAS SHALL BE CONSTRUCTED OF SUITABLE FILL MATERIAL AND COMPACTED PER SPECIFICATIONS. FILL AREAS FOR PAVEMENTS ARE TO BE STRIPPED OF ALL TOPSOIL PRIOR TO PLACEMENT OF FILL.
6. ANY DISCREPANCIES OR CONFLICTS WHICH BECOME APPARENT BEFORE OR DURING CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
7. SEE STORM SEWER PROFILES FOR STORM SEWER INVERT AND RIM ELEVATIONS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING THAT STAKED GRADES MATCH DESIGN ELEVATIONS AND POSITIVE DRAINAGE TO STORMWATER MANAGEMENT SYSTEM IS ACHIEVED. CONTACT ENGINEER IF DESIGN ELEVATIONS DO NOT PROVIDE POSITIVE DRAINAGE.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EARTHWORK QUANTITIES AND INCLUDE ANY NECESSARY EXPORT OR IMPORT OF MATERIAL. IMPORT MATERIAL SHALL BE PRE-APPROVED BY THE ENGINEER/ARCHITECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE EXISTING CONDITIONS AND INCLUDE IN THEIR BID ALL EARTHWORK COSTS INCLUDING IMPORTS AND/OR EXORTS NECESSARY TO MAKE THE SITE BALANCE.
10. CONTRACTOR TO ADJUST ALL EXISTING SURFACE INFRASTRUCTURE (HYDRANTS, VALVES, HANDHOLES, CASTINGS, IRRIGATION SYSTEM, UTILITY PEDESTALS, ETC.) AS REQUIRED TO MEET PROPOSED GRADE AT NO COST TO OWNER.
11. PROVIDE POSITIVE DRAINAGE WITHOUT PONDING IN ALL AREAS. AFTER INSTALLATION, CONTRACTOR TO TEST FOR AND CORRECT, IF ANY, STANDING WATER CONDITIONS AT NO COST TO OWNER.
12. CONTRACTOR TO PERPETUATE ANY SUBSURFACE DRAIN TILES OR PIPES ENCOUNTERED DURING CONSTRUCTION AND PROVIDE POSITIVE OUTLET TO DOWNSTREAM RECEIVING SYSTEM. CONTRACTOR TO NOTIFY THE ENGINEER WITH ANY CIRCUMSTANCES WHERE THIS CANNOT BE ACCOMPLISHED.

GRADING LEGEND:

FF	FINISHED FLOOR
	LOCAL DRAINAGE
727	MAJOR CONTOUR
727	MINOR CONTOUR
727	EXISTING CONTOUR
871.57 / 871.57	TOP OF CURB / EDGE OF PAVEMENT
	GRADE BREAK

Know what's below. Call before you dig.



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GRADING PLAN

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Rosemont, IL – Morris, IL – Indianapolis, IN
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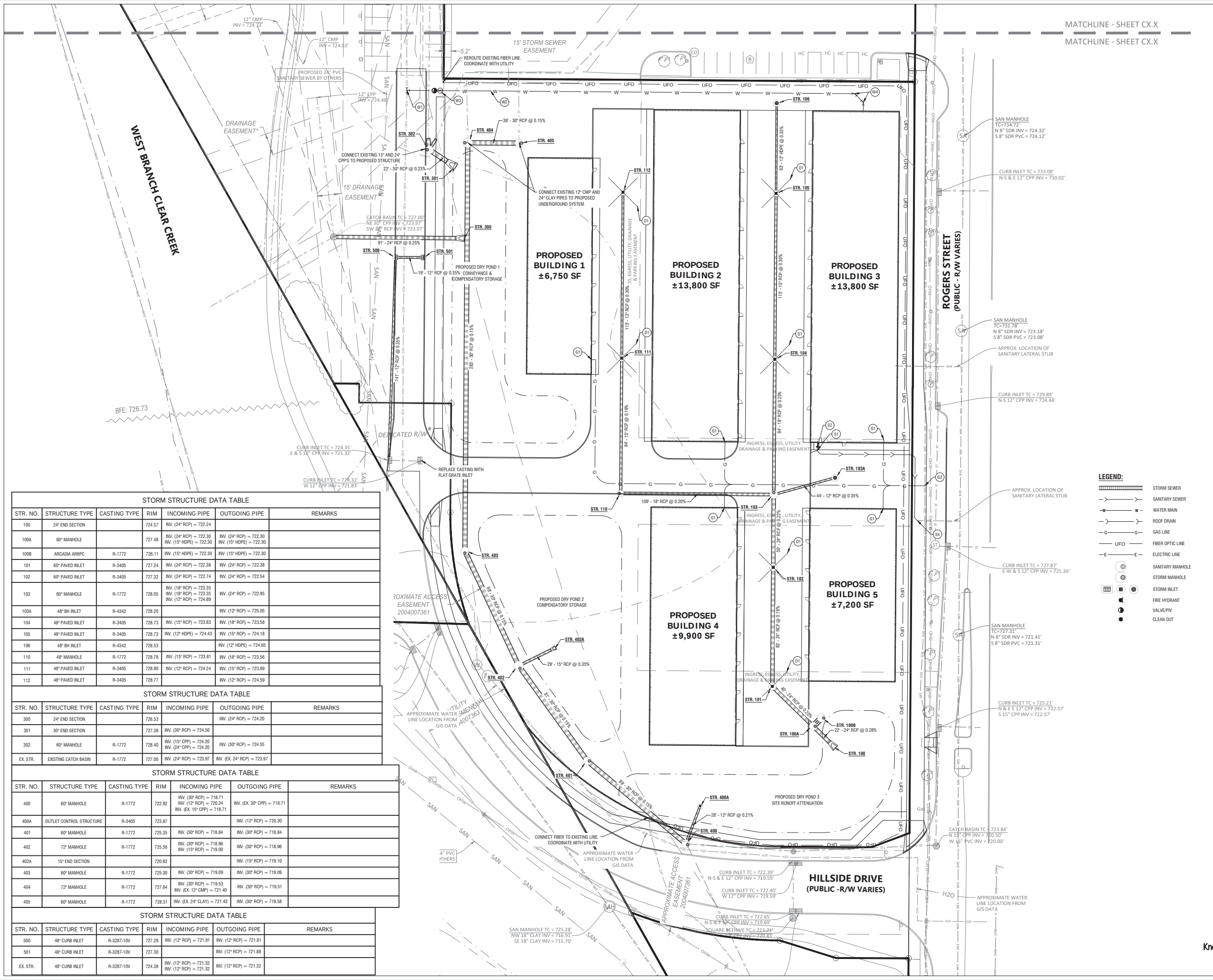
FILENAME: 13341_C5.0_GR
DATE: 09/04/2025
JOB NO. 13341
SHEET C5.0



STORM STRUCTURE DATA TABLE

STR. NO.	STRUCTURE TYPE	CASTING TYPE	RIM	INCOMING PIPE	OUTGOING PIPE	REMARKS
100	24" END SECTION		724.57	INV. (24" RCP) = 722.24		
100A	60" MANHOLE		727.48	INV. (24" RCP) = 722.30 INV. (15" HDPE) = 722.30	INV. (24" RCP) = 722.30 INV. (15" HDPE) = 722.30	
100B	ARCADIA AR6PC	R-1772	726.11	INV. (15" HDPE) = 722.30	INV. (15" HDPE) = 722.30	
101	60" PAVED INLET	R-3405	727.24	INV. (24" RCP) = 722.38	INV. (24" RCP) = 722.38	
102	60" PAVED INLET	R-3405	727.32	INV. (24" RCP) = 722.74	INV. (24" RCP) = 722.54	
103	60" MANHOLE	R-1772	728.05	INV. (18" RCP) = 723.35 INV. (18" RCP) = 723.35 INV. (12" RCP) = 724.89	INV. (24" RCP) = 722.85	
103A	48" BH INLET	R-4342	728.20		INV. (12" RCP) = 725.05	
104	48" PAVED INLET	R-3405	728.73	INV. (15" RCP) = 723.83	INV. (18" RCP) = 723.58	
105	48" PAVED INLET	R-3405	728.73	INV. (12" HDPE) = 724.43	INV. (15" RCP) = 724.18	
106	48" BH INLET	R-4342	728.53		INV. (12" HDPE) = 724.65	
110	48" MANHOLE	R-1772	728.78	INV. (15" RCP) = 723.81	INV. (18" RCP) = 723.56	
111	48" PAVED INLET	R-3405	728.90	INV. (12" RCP) = 724.24	INV. (15" RCP) = 723.99	
112	48" PAVED INLET	R-3405	728.77		INV. (12" RCP) = 724.59	

STORM STRUCTURE DATA TABLE

STR. NO.	STRUCTURE TYPE	CASTING TYPE	RIM	INCOMING PIPE	OUTGOING PIPE	REMARKS
300	24" END SECTION		726.53		INV. (24" RCP) = 724.20	
301	30" END SECTION		727.38	INV. (30" RCP) = 724.50		
302	60" MANHOLE	R-1772	728.40	INV. (15" CPP) = 724.20 INV. (24" CPP) = 724.20	INV. (30" RCP) = 724.55	
EX. STR.	EXISTING CATCH BASIN	R-1772	727.00	INV. (24" RCP) = 723.97	INV. (EX. 24" RCP) = 723.97	

STORM STRUCTURE DATA TABLE

STR. NO.	STRUCTURE TYPE	CASTING TYPE	RIM	INCOMING PIPE	OUTGOING PIPE	REMARKS
400	60" MANHOLE	R-1772	722.92	INV. (30" RCP) = 718.71 INV. (12" RCP) = 720.24 INV. (EX. 15" CPP) = 718.71	INV. (EX. 30" CPP) = 718.71	
400A	OUTLET CONTROL STRUCTURE	R-3405	723.87		INV. (12" RCP) = 720.30	
401	60" MANHOLE	R-1772	725.35	INV. (30" RCP) = 718.84	INV. (30" RCP) = 718.84	
402	72" MANHOLE	R-1772	725.56	INV. (30" RCP) = 718.96 INV. (15" RCP) = 719.00	INV. (30" RCP) = 718.96	
402A	15" END SECTION		720.62		INV. (15" RCP) = 719.10	
403	60" MANHOLE	R-1772	725.30	INV. (30" RCP) = 719.09	INV. (30" RCP) = 719.09	
404	72" MANHOLE	R-1772	727.64	INV. (30" RCP) = 719.53 INV. (EX. 12" CMP) = 721.40	INV. (30" RCP) = 719.51	
405	60" MANHOLE	R-1772	728.51	INV. (EX. 24" CLAY) = 721.43	INV. (30" RCP) = 719.58	

STORM STRUCTURE DATA TABLE

STR. NO.	STRUCTURE TYPE	CASTING TYPE	RIM	INCOMING PIPE	OUTGOING PIPE	REMARKS
500	48" CURB INLET	R-3287-10V	727.29	INV. (12" RCP) = 721.81	INV. (12" RCP) = 721.81	
501	48" CURB INLET	R-3287-10V	727.30		INV. (12" RCP) = 721.88	
EX. STR.	48" CURB INLET	R-3287-10V	724.38	INV. (12" RCP) = 721.32 INV. (12" RCP) = 721.32	INV. (12" RCP) = 721.32	

UTILITY NOTES

1. RIM OR TOP OF CASTING ELEVATION EQUALS THE LOWEST POINT ON THE CASTING WHERE WATER ENTERS THE STRUCTURE OR THE TOP OF A SOLID CASTING.
2. PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE OR END OF PIPE END SECTION.
3. WATER MAINS THROUGHOUT THE PROJECT SHALL BE INSTALLED WITH AT LEAST 60 INCHES OF COVER FROM FINISH GRADE TO TOP OF WATER LINE. CONTRACTOR TO PROVIDE ALL FITTINGS REQUIRED TO ASSURE PROPER INSTALLATION OF WATER MAINS AND LATERALS.
4. ELECTRICAL CONDUIT SHALL BE INSTALLED AT A MINIMUM OF 36 INCHES BELOW THE FINISH GRADE. ENDS OF THE CONDUIT SHALL BE MARKED BY INSTALLING A 4X4 WOOD POST PAINTED RED.
5. LOCATIONS OF EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR IS TO FIELD VERIFY ALL HORIZONTAL AND VERTICAL LOCATIONS PRIOR TO CONSTRUCTION.
6. ALL 6" SANITARY SEWER LATERALS ARE TO BE CONSTRUCTED WITH SDR-26 PVC @ 1.0% MINIMUM SLOPE UNLESS NOTED OTHERWISE. ALL 10" SANITARY SEWER MAINS SHALL BE CONSTRUCTED OF SDR-35 PVC @ 0.40% MINIMUM SLOPE.
7. TRACER WIRE IS REQUIRED ON ALL SANITARY SEWER LATERALS.
8. SEE CITY OF BLOOMINGTON STANDARDS FOR WATER AND SEWER SPECIFICATIONS.
9. CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY COORDINATION WITH LOCAL JURISDICTION AND ALL RESPECTIVE UTILITY COMPANIES FOR GAS, ELECTRIC, TELEPHONE, AND CABLE SERVICES.
10. CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND PROVIDING TRAFFIC CONTROL PER LOCAL STANDARDS AND REQUIREMENTS. ALL STREET CUTS SHALL BE REPAIRED PER LOCAL REQUIREMENTS.
11. SEE ARCHITECTURAL PLANS FOR DETAILED INFORMATION AND EXACT LOCATIONS FOR UTILITIES COMING INTO THE BUILDING.
12. SEE ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF DOWNSPOUTS.
13. FOR VIEWING CLARITY OF THESE CONSTRUCTION PLANS, PIPES OR STRUCTURES MAY NOT BE SHOWN TO SCALE.
14. ALL UTILITY MATERIALS AND INSTALLATION SHALL CONFORM TO LOCAL STANDARDS FOR EACH UTILITY AGENCY HAVING JURISDICTION.
15. IN THE EVENT OF A CONFLICT BETWEEN WATER LINES AND STORM DRAINS, THE CONTRACTOR SHALL EITHER ADJUST THE WATER LINE DOWNWARD IN SUCH A MANNER SO THAT THE PIPE MANUFACTURER'S RECOMMENDATIONS ON PIPE DEFLECTION AND JOINT STRESS ARE NOT EXCEEDED OR THE CONTRACTOR SHALL PROVIDE APPROPRIATE BENDS AND CROSSINGS.
16. WATER AND SEWER MAIN CROSSINGS SHALL BE IN ACCORDANCE WITH 10 STATE STANDARDS. WATER AND SEWER MAINS SHALL HAVE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FROM EDGE OF PIPE TO EDGE OF PIPE. WATER PIPES CROSSING ABOVE SEWER PIPES MUST HAVE A MINIMUM VERTICAL SEPARATION OF 18 INCHES CLEARANCE BETWEEN PIPES.
17. CONTRACTOR TO VERIFY BEFORE INSTALLATION FIRE AND DOMESTIC WATER SERVICE LINES INTERNAL DIAMETER (ID) MEETS THE DEMAND SPECIFIED BY THE PLUMBING AND FIRE SUPPRESSION DESIGNER
18. THE CONTRACTOR SHALL CONTACT ENGINEER FOR ALL QUESTIONS REGARDING UTILITY PLAN DISCREPANCIES AND/OR CONFLICTS IN THE FIELD.
19. STRUCTURES RECEIVING SUB-SURFACE DRAINS (SSD) SHALL HAVE BOTH PORTS CORE DRILLED. T OR Y BLIND CONNECTIONS ARE NOT ALLOWED.
20. CONTRACTOR TO VERIFY BEFORE INSTALLATION FIRE AND DOMESTIC WATER SERVICE LINES INTERNAL DIAMETER (ID) MEETS THE DEMAND SPECIFIED BY THE PLUMBING AND FIRE SUPPRESSION DESIGNER.

LEGEND:

- STORM SEWER
- SANITARY SEWER
- WATER MAIN
- ROOF DRAIN
- GAS LINE
- FIBER OPTIC LINE
- ELECTRIC LINE
- SANITARY MANHOLE
- STORM MANHOLE
- STORM INLET
- FIRE HYDRANT
- VALVE/PIV
- CLEAN OUT

UTILITY KEYNOTES:

WATERLINE
- W1. 12"x1.5" TAPPING SLEEVE AND VALVE
- W2. 1.5" HDPE DR9 SERVICE LINE
- W3. 1" WATER METER
- W4. WATER BEND W/ CONCRETE THRUST BLOCK
- W5. ISOLATION VALVE

SANITARY SEWER
- S1. 6" PVC SDR-26 SANITARY LATERAL @ 1.0% MIN.
- S2. DOUBLE SWEEP SANITARY SEWER CLEANOUT
- S3. 8" PVC SDR-35 SANITARY MAIN @ 0.45% MIN.
- S4. CONNECT SERVICE LINE TO EXISTING LATERAL STUB. CONTRACTOR TO VERIFY LOCATION AND DEPTH

GAS
- G1. GAS SERVICE LINE. COORDINATE WITH UTILITY.
- G2. CONNECT TO EXISTING GAS LINE. COORDINATE WITH UTILITY.

ELECTRIC
- E1. ELECTRIC SERVICE LINE. COORDINATE WITH UTILITY.
- E2. TRANSFORMER LOCATION. COORDINATE LOCATION AND SPECIFICATIONS WITH UTILITY.

DRAINAGE
- D1. PAVEMENT SUBSURFACE DRAIN
- D2. 6" HDPE ROOF DRAIN LINE
- D3. ROOF DRAIN CLEANOUT

811 Know what's below. Call before you dig.

NO.	DATE	REMARKS

MADELINE ROMEO S... REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA — NOT FOR CONSTRUCTION

UTILITY PLAN

BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

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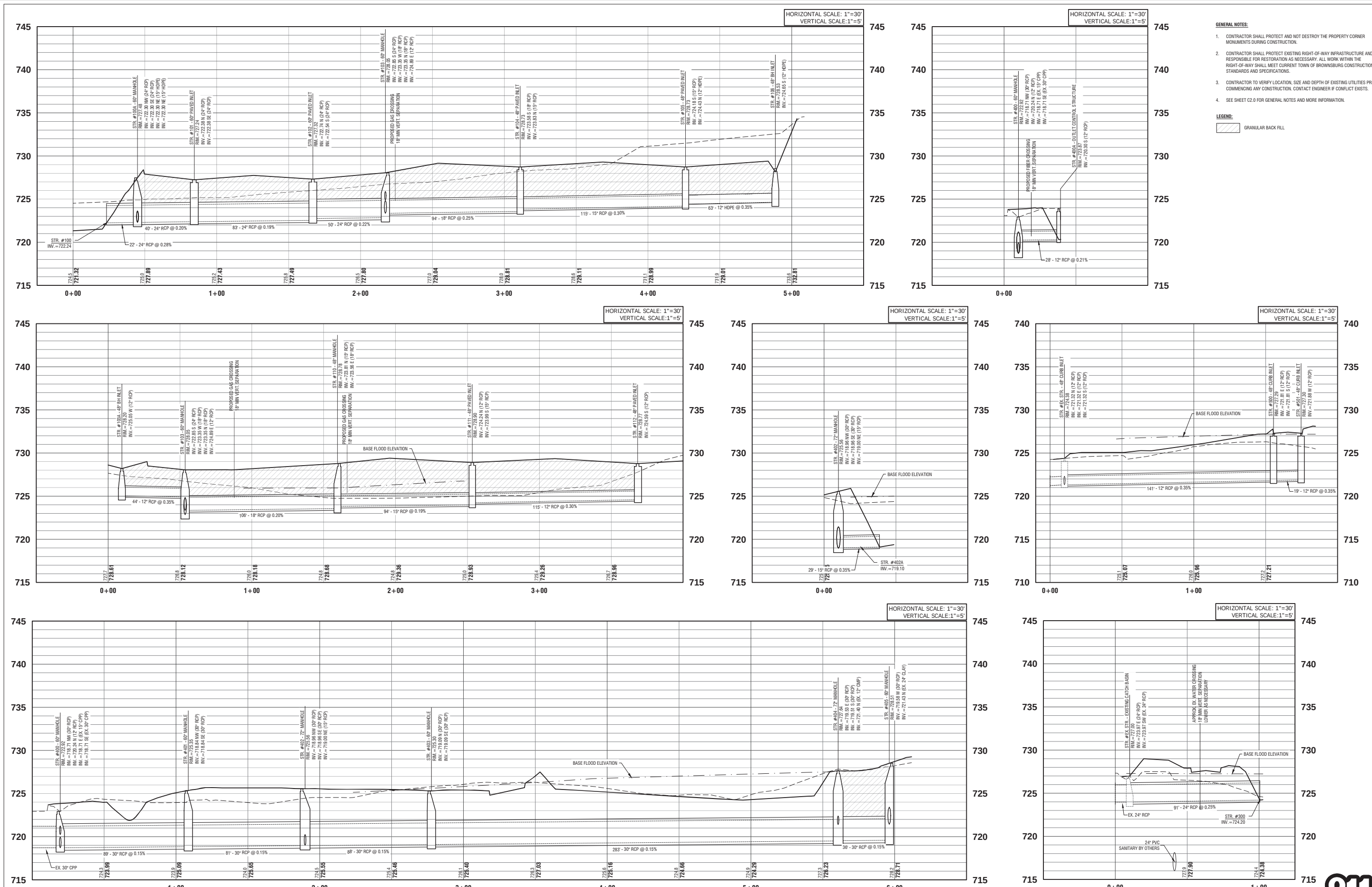

GENERAL NOTES:

1. CONTRACTOR SHALL PROTECT AND NOT DESTROY THE PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.
2. CONTRACTOR SHALL PROTECT EXISTING RIGHT-OF-WAY INFRASTRUCTURE AND BE RESPONSIBLE FOR RESTORATION AS NECESSARY. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL MEET CURRENT TOWN OF BROWNSBURG CONSTRUCTION STANDARDS AND SPECIFICATIONS.
3. CONTRACTOR TO VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES PRIOR TO COMMENCING ANY CONSTRUCTION. CONTACT ENGINEER IF CONFLICT EXISTS.
4. SEE SHEET C2.0 FOR GENERAL NOTES AND MORE INFORMATION.

LEGEND:

GRANULAR BACK FILL

NO. | DATE | REMARKS

MADELINE ROMEO S. REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA — NOT FOR CONSTRUCTION

Know what's below. Call before you dig.

STORM SEWER PLAN & PROFILE

BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

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FILENAME: 13341_C7.0_STMPP
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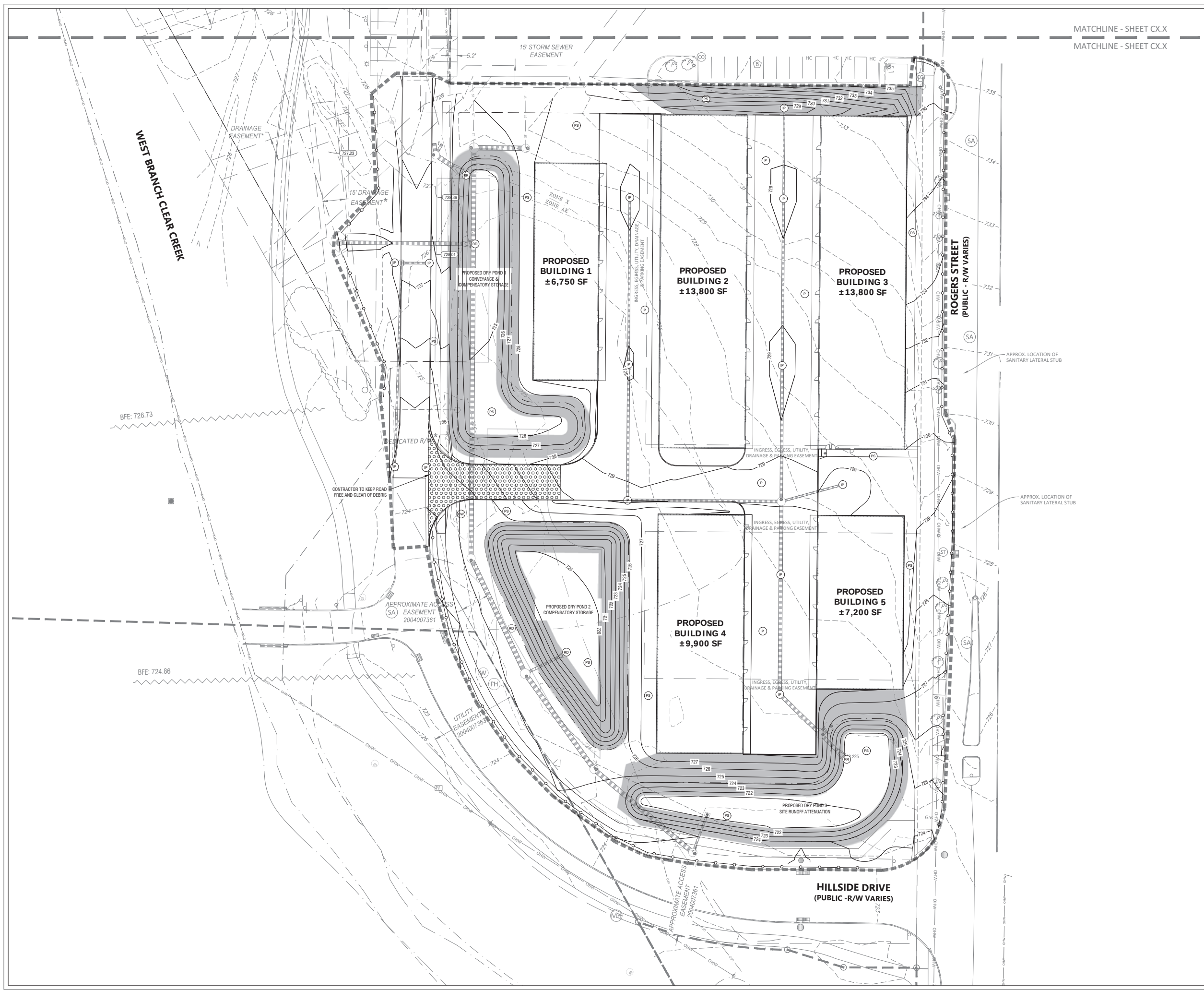

EROSION CONTROL NOTES

1. SEE SHEET C7.2 FOR SOILS MAP AND SOIL CHARACTERISTICS.
2. SEE SHEET C7.1 FOR EROSION CONTROL DETAILS.
3. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO CONSTRUCTION.
4. ACCESS TO THE SITE SHALL BE RESTRICTED TO THE TO THE LOCATION AS SHOWN. NO OTHER SITE ACCESS IS AVAILABLE UNLESS THE CONTRACTOR OBTAINS APPROVAL FROM ADJACENT PROPERTY OWNER AND APPROVAL FROM THE CITY OF INDIANAPOLIS MS4 OPERATOR.
5. SEE EROSION CONTROL SEQUENCE AND IMPLEMENTATION NOTES ON SHEET C7.2.
6. EROSION CONTROL MAINTENANCE - SITE TO BE INSPECTED ONCE A WEEK AND AFTER EVERY RAINFALL EVENT. MAKE REPAIRS IMMEDIATELY.
7. THE SITE IS NOT LOCATED ON OR ADJACENT TO ANY FLOODWAY/FLOOD PLAIN AREAS.
8. EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS AND UNTIL ALL DISTURBED AREAS ARE STABILIZED.
9. AREAS THAT WILL BE DISTURBED FOR MORE THAN 15 DAYS SHALL BE STABILIZED IMMEDIATELY WITH TEMPORARY SEEDING. ALL DISTURBED YARD/GRASS AREAS MUST BE STABILIZED WITH PERMANENT SEEDING MEASURES.
10. SEE THIS SHEET FOR GENERAL SEEDING AND SURFACE STABILIZATION PROCEDURES.
11. CONTRACTOR SHALL IMPLEMENT AND MAINTAIN ADDITIONAL EROSION CONTROL MEASURES AT REQUEST OF LOCAL AND/OR STATE STORMWATER AND EROSION CONTROL INSPECTORS.
12. SPOILS TO BE REMOVED FROM SITE, CONTRACTOR TO DETERMINE LOCATION AND COORDINATE WITH THE LOCAL EROSION CONTROL AUTHORITY.
13. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
14. SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN RECEIVING WATER. NO STORMWATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
15. WASTE AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORMWATER RUNOFF. PROPER DISPOSAL OF ALL WASTE AND UNUSED BUILDING MATERIALS IS REQUIRED.
16. PRIOR TO COMPLETION OF THE PROJECT, CONTRACTOR SHALL CLEAN OUT ALL STORM DRAINAGE STRUCTURES AND RESTORE ALL DITCHES AND BASINS TO DESIGNED GRADES.
17. ALL PROPOSED EROSION AND SEDIMENT CONTROL SHALL BE IN CONFORMANCE WITH CHAPTER 600 OF THE CITY OF INDIANAPOLIS STORMWATER DESIGN AND SPECIFICATIONS MANUAL, LATEST EDITION. DISCREPANCIES BETWEEN THE PLANS AND THE MANUAL SHALL NOT ALLEVIATE THE CONTRACTOR FROM ADHERING TO THE REQUIREMENTS SET FORTH IN THE MANUAL.
18. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED BY IDEM, MCSW AND/OR THE CITY INSPECTOR.

EROSION CONTROL LEGEND

- SILT FENCE
- CONSTRUCTION LIMITS
- EROSION CONTROL BLANKET
- SE — STABILIZED CONSTRUCTION ENTRANCE
- IP — INLET PROTECTION
- P — PAVING
- PS — PERMANENT SEEDING
- CW — CONCRETE WASHOUT
- RR — RIPRAP APRON
- RD — ROCK DONUT

NO.	DATE	REMARKS

MADELINE ROMEO S... REGISTERED PROFESSIONAL ENGINEER, INDIANA — NOT FOR CONSTRUCTION

EROSION CONTROL PLAN

BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

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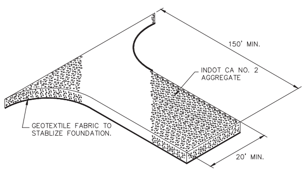


INSTALLATION NOTES:

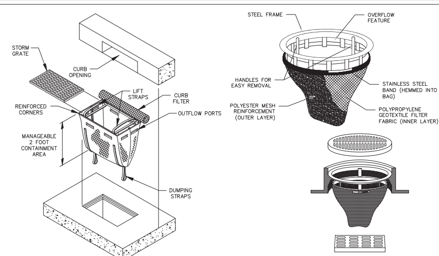
1. REMOVE ALL VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
2. GRADE FOUNDATION AND CROWN FOR POSITIVE DRAINAGE. IF THE SLOPE OF THE CONSTRUCTION ENTRANCE IS TOWARD A PUBLIC ROAD AND EXCEEDS TWO PERCENT, CONSTRUCT AN EIGHT INCH HIGH DIVERSION RIDGE WITH A RATIO OF 3–TO–1 SIDE SLOPES ACROSS THE FOUNDATION AREA ABOUT 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE ROAD.
3. INSTALL A CULVERT PIPE UNDER THE PAD IF NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.
4. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.
5. PLACE AGGREGATE (INDOT CA NO. 2) TO THE DIMENSIONS AND GRADE SHOWN IN THE CONSTRUCTION PLANS, LEAVING THE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. TOP–DRESS THE FIRST 50 FEET ADJACENT TO THE PUBLIC ROADWAY WITH TWO TO THREE INCHES OF WASHED AGGREGATE (INDOT CA NO. 53) [OPTIONAL, USED PRIMARILY WHERE THE PURPOSED OF THE PAD IS KEEP SOIL FROM ADHERING TO VEHICLE TIRES]
7. WHERE POSSIBLE, DIVERT ALL STORM WATER RUNOFF AND DRAINAGE FROM THE INGRESS,/EGRESS PAD TO A SEDIMENT TRAP OR BASIN.

MAINTENANCE NOTES:

8. INSPECT DAILY.
9. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
10. TOP DRESS WITH CLEAN AGGREGATE AS NEEDED.
11. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS.
12. FLUSHING SHOULD ONLY BE USED IF THE WATER CAN BE CONVEYED INTO A SEDIMENT TRAP OR BASIN.

TEMPORARY CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE



INSTALLATION AND MAINTENANCE GUIDELINES

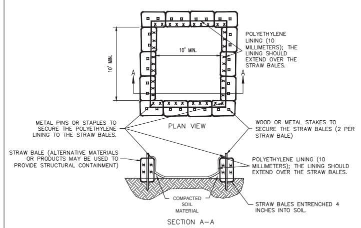
INSTALLATION:
1. REMOVE THE GRATE FROM THE CATCH BASIN.
2. IF USING OPTION OIL ABSORBENTS, PLACE ABSORBENT PILLOW IN UNIT.
3. STAND THE GRATE ON END, MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO THE DANDY SACK SO THAT THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS.
4. HOLDING THE LIDTING DEVICES, INSTER THE GRATE INTO THE INLET.
5. MAKE SURE THE CYLINDRICAL PORTION IS UP AGAINST THE CURB OPENING TO PREVENT SILT AND DEBRIS FROM ENTERING THE INLET.

MAINTENANCE:
- INSPECT DAILY.
- REMOVE ALL ACCUMULATED SEDIMENT AFTER EACH STORM EVENT. DISPOSE OF SEDIMENT IN AN AREA WHERE IT WILL NOT REENTER THE PAVED AREA OR STORM DRAINS. TO EMPTY UNIT, LIFT THE UNIT OUT OF THE INLET BY USING THE LIFTING STRAPS AND REMOVE THE GRATE.
- WHEN CONTRIBUTING DRAINAGE AREA HAD BEEN STABILIZED, REMOVE INLET PROTECTION.

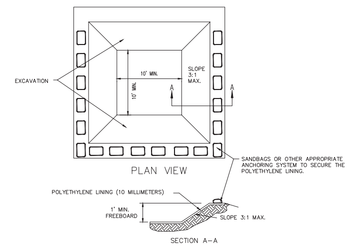
NOTE: CONTRACTOR TO USE FLEXSTORM CATCH–IT INLET PROTECTOR, DANDY BAG OR APPROVED ALTERNATE.

DROP BAG INLET PROTECTION

NOT TO SCALE



CONCRETE WASHOUT (ABOVE GRADE)



CONCRETE WASHOUT (BELOW GRADE)

INSTALLATION:

PREFABRICATED WASHOUT SYSTEMS/CONTAINERS:
1. INSTALL AND LOCATE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

DESIGNED AND INSTALLED SYSTEMS:

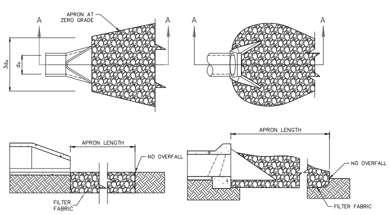
2. UTILIZE AND FOLLOW THE DESIGN IN THE STORM WATER POLLUTION PREVENTION PLAN TO INSTALL THE SYSTEM.
3. DEPENDENT UPON THE TYPE OF SYSTEM, EITHER EXCAVATE THE PIT OR INSTALL THE CONTAINMENT SYSTEM.
4. A BASE SHALL BE CONSTRUCTED AND PREPARED THAT IS FREE OF ROCKS AND OTHER DEBRIS THAT MAY CAUSE TEARS OR PUNCTURES IN THE POLYETHYLENE LINING.
5. INSTALL THE POLYETHYLENE LINING. FOR EXCAVATED SYSTEMS, THE LINING SHOULD EXTEND OVER THE ENTIRE EXCAVATION. THE LINING FOR BERMED SYSTEMS SHOULD BE INSTALLED OVER THE POOLING AREA WITH ENOUGH MATERIAL TO EXTEND THE LINING OVER THE BERM OR CONTAINMENT SYSTEM. THE LINING SHOULD BE SECURED WITH PINS, STAPLES, OR OTHER FASTENERS.
6. PLACE FLAGS, SAFETY FENCING, OR EQUIVALENT TO PROVIDE A BARRIER TO CONSTRUCTION EQUIPMENT AND OTHER TRAFFIC.
7. PLACE A NON–COLLAPSING, NON–WATER HOLDING COVER OVER THE WASHOUT FACILITY PRIOR TO A PREDICTED RAINFALL EVENT TO PREVENT ACCUMULATION OF WATER AND POSSIBLE OVERFLOW OF THE SYSTEM (OPTIONAL).
8. INSTALL SIGNAGE THAT IDENTIFIES CONCRETE WASHOUT AREAS.
9. POST SIGNS DIRECTING CONTRACTORS AND SUPPLIERS TO DESIGNATED LOCATIONS.
10. WHERE NECESSARY, PROVIDE STABLE INGRESS AND EGRESS OR ALTERNATIVE APPROACH PAD FOR CONCRETE WASHOUT SYSTEMS.

MAINTENANCE:

11. INSPECT DAILY AND AFTER EACH STORM EVENT.
12. INSPECT THE INTEGRITY OF THE OVERALL STRUCTURE INCLUDING, WHERE APPLICABLE, THE CONTAINMENT SYSTEM.
13. INSPECT THE SYSTEM FOR LEAKS, SPILLS, AND TRACKING OF SOIL BY EQUIPMENT.
14. INSPECT THE POLYETHYLENE LINING FOR FAILURE, INCLUDING TEARS AND PUNCTURES.
15. ONCE CONCRETE WASTES HARDEN, REMOVE AND DISPOSE OF THE MATERIAL.
16. EXCESS CONCRETE SHOULD BE REMOVED WHEN THE WASHOUT SYSTEM REACHES 50 PERCENT OF THE DESIGN CAPACITY. USE OF THE SYSTEM SHOULD BE DISCONTINUED UNTIL APPROPRIATE MEASURES CAN BE INITIATED TO CLEAN THE STRUCTURE. PREFABRICATED SYSTEMS SHOULD ALSO UTILIZE THIS CRITERION, UNLESS THE MANUFACTURER HAS ALTERNATE SPECIFICATIONS.
17. UPON REMOVAL OF THE SOLIDS, INSPECT THE STRUCTURE. REPAIR THE STRUCTURE AS NEEDED OR CONSTRUCT A NEW SYSTEM.
18. DISPOSE OF ALL CONCRETE IN A LEGAL MANNER. REUSE THE MATERIAL ON SITE, RECYCLE, OR HAUL THE MATERIAL TO AN APPROVED CONSTRUCTION/DEMOLITION LANDFILL SITE. RECYCLING OF MATERIAL IS ENCOURAGED. THE WASTE MATERIAL CAN BE USED FOR MULTIPLE APPLICATIONS INCLUDING BUT NOT LIMITED TO ROADBEDS AND BUILDING. THE AVAILABILITY FOR RECYCLING SHOULD BE CHECKED LOCALLY.
19. THE PLASTIC LINER SHOULD BE REPLACED AFTER EVERY CLEANING; THE REMOVAL OF MATERIAL WILL USUALLY DAMAGE THE LINING.
20. THE CONCRETE WASHOUT SYSTEM SHOULD BE REPAIRED OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE.
21. CONCRETE WASHOUT SYSTEMS ARE DESIGNED TO PROMOTE EVAPORATION. HOWEVER, IF THE LIQUIDS DO NOT EVAPORATE AND THE SYSTEM IS NEAR CAPACITY IT MAY BE NECESSARY TO VACUUM OR REMOVE THE LIQUIDS AND DISPOSE OF THEM IN AN ACCEPTABLE METHOD. DISPOSAL MAY BE ALLOWED AT THE LOCAL SANITARY SEWER AUTHORITY PROVIDED THEIR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMITS ALLOW FOR ACCEPTANCE OF THIS MATERIAL. ANOTHER OPTION WOULD BE TO UTILIZE A SECONDARY CONTAINMENT SYSTEM OR BASIN FOR FURTHER DEWATERING.
22. PREFABRICATED UNITS ARE OFTEN PUMPED AND THE COMPANY SUPPLYING THE UNIT PROVIDES THIS SERVICE.
23. INSPECT CONSTRUCTION ACTIVITIES ON A REGULAR BASIS TO ENSURE SUPPLIERS, CONTRACTORS, AND OTHERS ARE UTILIZING DESIGNATED WASHOUT AREAS. IF CONCRETE WASTE IS BEING DISPOSED OF IMPROPERLY, IDENTIFY THE VIOLATORS AND TAKE APPROPRIATE ACTION.
24. WHEN CONCRETE WASHOUT SYSTEMS ARE NO LONGER REQUIRED, THE CONCRETE WASHOUT SYSTEMS SHALL BE CLOSED. DISPOSE OF ALL HARDENED CONCRETE AND OTHER MATERIALS USED TO CONSTRUCT THE SYSTEM.
25. HOLES, DEPRESSIONS AND OTHER LAND DISTURBANCES ASSOCIATED WITH THE SYSTEM SHOULD BE BACKFILLED, GRADED, AND STABILIZED.

CONCRETE WASHOUT DETAIL

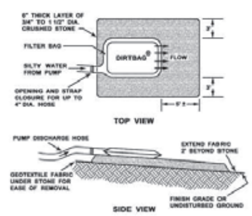
NOT TO SCALE



PIPE SIZE	"L"	"W"	d_{50}
15" and smaller	8'	9.5'	6"
15" to 21"	14'	16'	6" to 9"
21" to 30"	20'	24'	9" to 12"
30" to 36"	24'	27'	12" to 18"
36" to 48"	27'	31'	24" to 30"

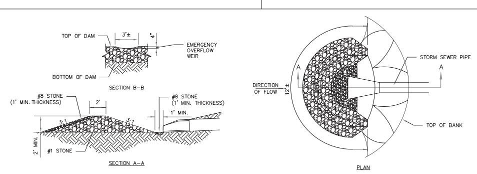
RIPRAP APRON DETAIL

NOT TO SCALE



DEWATERING DETAIL

NOT TO SCALE



MAINTENANCE
- INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE AND PROPERLY DISPOSE OF ANY UNSTABLE SEDIMENT AND CONSTRUCTION MATERIAL, AND RE–STABILIZE.

ROCK DONUT DETAIL

NOT TO SCALE

SILT FENCE

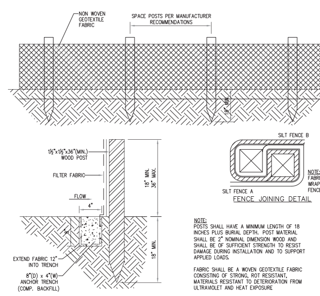
LOCATION
- INSTALLED PARALLEL TO THE SLOPE CONTOUR
- MINIMUM 10 FEET BEYOND THE TOE OF SLOPE TO PROVIDE A BROAD, SHALLOW SEDIMENT POOL.
- ACCESSIBLE FOR MAINTENANCE (REMOVAL OF SEDIMENT AND SILT FENCE REPAIR)

INSTALLATION

1. LAYOUT THE LOCATION OF THE FENCE SO THAT IT IS PARALLEL TO THE CONTOUR OF THE SLOPE AND AT LEAST 10 FEET BEYOND THE TOE OF THE SLOPE TO PROVIDE A SEDIMENT STORAGE AREA. TURN THE ENDS OF THE FENCE UP SLOPE SUCH THAT THE POINT OF CONTACT BETWEEN THE GROUND AND THE BOTTOM OF THE FENCE END TERMINATES AT A HIGHER ELEVATION THAN THE TOP OF THE FENCE AT ITS LOWEST POINT.
2. EXCAVATE AN EIGHT–INCH DEEP BY FOUR–INCH WIDE TRENCH ALONG THE ENTIRE LENGTH OF THE FENCE LINE. INSTALLATION BY PLOWING IS ALSO ACCEPTABLE.
3. INSTALL THE SILT FENCE WITH THE FILTER FABRIC LOCATED ON THE UP–SLOPE SIDE OF THE EXCAVATED TRENCH AND THE SUPPORT POSTS ON THE DOWN–SLOPE SIDE OF THE TRENCH.
4. DRIVE THE SUPPORT POSTS AT LEAST 18 INCHES INTO THE GROUND, TIGHTLY STRETCHING THE FABRIC BETWEEN THE POSTS AS EACH IS DRIVEN INTO THE SOIL. A MINIMUM OF 12 INCHES OF THE FILTER FABRIC SHOULD EXTEND INTO THE TRENCH. (IF IT IS NECESSARY TO JOIN THE ENDS OF THE TWO FENCE, USE THE WRAP JOINT METHOD SHOWN.)
5. LAY THE LOWER FOUR INCHES OF FILTER FABRIC ON THE BOTTOM OF THE TRENCH AND EXTEND IT TOWARD THE UP–SLOPE SIDE OF THE TRENCH.
6. BACKFILL THE TRENCH WITH SOIL MATERIAL AND COMPACT IT IN PLACE.

MAINTENANCE

- INSPECT WITHIN 24 HOURS OF A RAIN EVENT AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS.
- IF FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY. NOTE: ALL REPAIRS SHOULD MEET SPECIFICATIONS AS OUTLINED WITHIN THIS MEASURE.
- REMOVE DEPOSITED SEDIMENT WHEN IT IS CAUSING THE FILTER FABRIC TO BULGE OR WHEN IT REACHES ONE–HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT. WHEN CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, GRADE THE SITE TO BLEND WITH THE SURROUNDING AREA, AND STABILIZE.



NOTE:
POSTS SHALL HAVE A MINIMUM LENGTH OF 18 INCHES PLUS BURIAL DEPTH. POST MATERIAL SHALL BE 2" NOMINAL DIMENSION WOOD AND SHALL BE OF SUFFICIENT STRENGTH TO RESIST DAMAGE DURING INSTALLATION AND TO SUPPORT APPLIED LOADS.

FABRIC SHALL BE A WOVEN GEOTEXTILE FABRIC CONSISTING OF STRONG, ROT RESISTANT, MATERIALS RESISTANT TO DETERIORATION FROM ULTRAVIOLET AND HEAT EXPOSURE

SILT FENCE DETAIL

NOT TO SCALE

NO.	DATE	REMARKS

NOT FOR CONSTRUCTION

EROSION CONTROL DETAILS

BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com

FILENAME: 13341_C8.1_ECD

DATE: 09/04/2025

JOB NO. 13341

SHEET C8.1

SITE NAME

The area scheduled for construction is known as "BUILT Bloomington" (hereinafter referred to as the "Project")

PROJECT LOCATION

The property is located 1320 S Rogers Street in Bloomington, Indiana, at a latitude of 39°09'05" N and a longitude of 86°32'22" W.

OWNER'S INFORMATION

Name: Alt Construction
Address: 10650 N Bennett Parkway Suite 200, Zionsville IN 46077
Representative: Seth Alt
Telephone: 317-253-1251
Email:Seth@AltConstruction.com

OPERATOR'S INFORMATION

Name: Alt Construction
Address: 10650 N Bennett Parkway Suite 200, Zionsville IN 46077
Representative: Seth Alt
Telephone: 317-253-1251
Email:Seth@AltConstruction.com

NOTICE OF INTENT

All parties defined as owners must submit a Notice of Intent (NOI) at least 48 hours prior to commencement of on-site construction activities. Submittal of late NOI's is not prohibited; however, authorization under the construction general permit is only for discharges that occur after permit coverage is granted. Unpermitted discharges may be subject to enforcement actions by the EPA. For the purposes of this permit, an owner is defined as any party meeting either of the following requirements:

1) The party has operational control over the construction plans and specifications, including the ability to make modifications to those plans and specifications.

2) The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with a stormwater pollution prevention plan for the site or other permit conditions.

A1 PLAN INDEX

Refer to the Erosion Control Plan which shows the required plan elements.

A2 VICINITY MAP

Refer to the Cover Sheet for a vicinity map.

A3 PROJECT NARRATIVE

This project consists of five proposed buildings with square footage ranging from 6,750 sf to 13,800 sf along with associated asphalt pavement, utilities, and drainage infrastructure. Runoff generated by proposed impervious area will be collected and treated using an underground storage system and a mechanical BMP prior to being discharged to an onsite dry pond. The site will ultimately discharge to West Branch Clear Creek.

A4 LATITUDE AND LONGITUDE

The project is located at a latitude of 39°09'04" N and a longitude of 86°32'22" W

A5 LEGAL DESCRIPTION OF THE PROJECT SITE

Section: 14
Township: 08N
Range: 1W
Civil Township: PERRY

Refer to the General Notes Sheet (C2.0) for legal description.

A6 11" X 17" PLAT

See Site Plan Sheet C4.0.

A7 100 YEAR FLOODPLAINS, FLOODWAY FRINGES AND FLOODWAYS BOUNDARY

A portion of the site is located in a flood hazard area Zone AE and a floodway Zone AE as shown on the Monroe County, Indiana, Flood Insurance Rate Map 18105C0143d dated December 17, 2010.

A8 ADJACENT PROPERTY LAND USE

North: Commercial
South: Vacant
East: Residential
West: Industrial

A9 IDENTIFICATION OF U.S. EPA APPROVED OR ESTABLISHED TMDL

The project area does not fall within a watershed for which there is a Total Maximum Daily Load (TMDL).

A10 IDENTIFICATION OF RECEIVING WATER(S)

Clear Creek is the ultimate receiving water for this project.

A11 IDENTIFICATION OF DISCHARGE TO 303(d) IMPAIRED WATERS

Clear Creek is 303(d) listed. Impaired parameters include E. coli.

A12 SOILS MAP

Refer to this sheet for the soils map.

A13 LOCATION AND NAME OF ALL WETLANDS, LAKES, AND WATERCOURSES ON AND ADJACENT TO THE SITE

There are no wetlands, lakes, or watercourses on the site. Directly adjacent the site on the west side is an unnamed tributary of Clear Creek which is classified as an R4SBC Riverine habitat by the National Wetlands Inventory map.

A14 IDENTIFICATION OF STATE AND FEDERAL WATER QUALITY PERMITS

Indiana Department of Environmental Management (IDEM) Construction Stormwater General Permit (CSGP)

A15 IDENTIFICATION AND DELINEATION OF EXISTING COVER

The existing land cover onsite is mostly undeveloped land with some gravel and asphalt.

A16 EXISTING TOPOGRAPHY

Refer to the Existing Conditions Plan Sheet (C3.0).

A17 LOCATION(S) WHERE RUNOFF ENTERS THE PROJECT SITE

There are no areas where a significant amount of offsite runoff enters the project site.

A18 LOCATION(S) WHERE RUNOFF DISCHARGES FROM THE PROJECT SITE

Stormwater will be conveyed via sheet flow, inlets, and storm sewer to onsite dry pond. The pond will discharge to an unnamed tributary of Clear Creek which eventually outlets to Clear Creek.

A19 LOCATION OF ALL EXISTING STRUCTURES

Refer to the Existing Conditions Plan Sheet (C3.0).

A20 EXISTING PERMANENT RETENTION OR DETENTION FACILITIES

There are no existing detention facilities on site. Refer to the Existing Conditions plan Sheet (C3.0).

A21 LOCATIONS WHERE STORMWATER MAY BE DISCHARGED TO GROUNDWATER

There are no areas where stormwater may be discharged to groundwater on this project. Refer to the Existing Conditions plan Sheet (C3.0).

A22 SIZE OF PROJECT AREA

±6.42 acres

A23 TOTAL EXPECTED LAND DISTURBANCE

±3.94 acres

A24 PROPOSED FINAL TOPOGRAPHY

Refer to the Grading Plan (C5.0).

A25 LOCATIONS AND BOUNDARIES OF DISTURBED AREAS

Refer to the Erosion Control Plan (C8.0).

A26 LOCATIONS, SIZE, AND DIMENSIONS OF STORMWATER DRAINAGE SYSTEM

Locations of stormwater systems:	Refer to the Utility Plans
Size of storm sewers:	Refer to the Utility Plans or Storm Sewer Plan and Profiles
Details of storm inlets and manholes:	Refer to the Construction Details

A27 LOCATIONS WHERE STORMWATER AND NON-STORMWATER DISCHARGE LEAVES THE SITE

Stormwater drainage from the site will be conveyed via sheet flow, inlets, and storm sewer and discharge to an onsite detention pond with will outlet to an unnamed tributary of Clear Creek.

A28 LOCATIONS AND BOUNDARIES OF DISTURBED AREAS

Refer to the Site Plan for site improvements and refer to the Utility Plan for all utility improvements.

A29 LOCATION OF ALL ON-SITE AND OFF-SITE SOIL STOCKPILES AND BORROW AREAS

No excess soil is anticipated for this project. In the event that excess soil becomes should be stockpiled, it shall be immediately surrounded with silt fence, seeded and/or removed from the project site in accordance with all applicable laws.

A30 CONSTRUCTION SUPPORT ACTIVITIES

Support activities must be directly related to the construction site and not a commercial/industrial operation or serve multiple unrelated construction projects. Support activities must not continue to operate beyond the completion of the construction activity for the project it support. See the Erosion Control Plan (C8.0) for the location of a construction staging area.

A31 LOCATION OF IN-STREAM ACTIVITIES

No water bodies are present on the project site.

B1 DESCRIPTION OF POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

The following potential pollutant sources may be associated with construction activities on site:
1. Material storage area
2. Construction waste material
3. Fuel storage areas and fueling stations
4. Exposed soils
5. Leaking vehicles and equipment
6. Sanitary waste from temporary toilet facilities
7. Litter
8. Windblown dust
9. Soil tracking off site from construction equipment

The following materials may be staged or stored on site at various points during construction:
1. Structural fill
2. Pavement base stone
3. HDPE, PVC, RCP, or Ductile Iron Pipe
4. Precast concrete, HDPE, or PVC drainage and sanitary structures

B2 STABLE CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS

Construction entrances will be in place prior to any site construction or demolition. Entrances are shown on the Erosion Control Plan (C8.0). Refer to the Erosion Control Details for details.

B3 SPECIFICATIONS FOR TEMPORARY AND PERMANENT STABILIZATION

Temporary
Surface stabilization is required on any bare or thinly vegetated areas that is scheduled or likely to remain inactive for a period of 10 days or more. Refer to the Temporary Seeding Detail within the Erosion Control Details for specifics on soil amendments, seed mixtures, and mulching. The surface stabilization for the lots needs to be established as soon as possible to prevent dirt wash-out into the streets. If this is not possible, then silt fencing will need to be installed along the back of curbs.

Permanent
1.) Loosen lawn area to a minimum depth of 6 inches. Mix soil amendments and fertilizers with topsoil at rates specified. Organic soil amendments such as peat, compost, or manure shall be applied at 2" depth evenly over soil and incorporated into the top 6" of topsoil. Provide fertilizer with percentage of nitrogen required to provide not less than 1 pound of actual nitrogen per 1,000 square feet of lawn area and not less than 4 percent phosphoric acid and 2 percent potassium. At least 50 percent of nitrogen to be organic form. Delay mixing of fertilizer if planting will not follow placing of planting soil within a few days.
2.) Fertilizer for lawns: provide a fast release fertilizer with a composition of 1 lb per 1,000 square feet of actual nitrogen, 4 percent phosphorous, and 2 percent potassium by weight.
3.) Slow-release fertilizer for trees and shrubs: granular fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorous and potassium made up of a composition by weight of 5 percent.
4.) Grade lawn and grass areas to a smooth, even surface with loose, uniformly fine texture. Limit fine grading to areas that can be planted within immediate future. Remove trash, debris, stones larger than 1 inch diameter, and other objects that may interfere with planting or maintenance operations. Sow seed using a spreader of seeding machine. Do not seed when wind velocity exceeds 5 miles per hour.
5.) Distribute seed evenly over entire area by sowing equal quantity in 2 directions at right angles to each other.
6.) Rake seed lightly into top 1/8 inch of soil, roll lightly, and water with a fine spray.
7.) Install erosion control blankets as indicated on the Erosion Control Plan.
8.) Protect seeded areas against erosion by spreading clean, seed-free straw mulch after completion of speeding operations. Spread uniformly to form a continuous blanket not less than 1-1/2 inches loose measurements over seeded areas.
9.) Water newly planted lawn areas and keep moist until new grass is established. Immediately repair any lawn areas disturbed by construction activities including tree and shrub installation.
10.) Refer to the Permanent Seeding Details within the Erosion Control Detail Sheet, for timing of permanent seeding, grass seed specifications and mulching specifications.
11.) Stabilization shall be initiated by the end of the seventh day an area is left idle and the stabilization shall be completed within 14 days after initiation.

B4 SEDIMENT CONTROL MEASURES FOR CONCENTRATED FLOW AREAS

Proposed swales will be stabilized with erosion control blankets. Straw bales and silt fences will not be allowed as concentrated flow protection measures. Rock check dams will be placed every 100' along the flow path of any / all proposed swales. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details.

B5 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS

Sheet flow areas will be protected by seed and mulch or hydroseeding. Erosion control blankets will be installed on sloped areas where the slope exceeds 4:1 (horizontal to vertical). Silt fencing will be utilized to prevent sedimentation from leaving the site. Refer to the Erosion Control Plan for locations and the Erosion Control Details for details.

B6 RUNOFF CONTROL MEASURES

Perimeter silt fence will be used to control run off during construction.

B7 STORMWATER OUTLET PROTECTION MEASURES

Rip rap will be utilized for protection at stormwater outlet points. Refer to the Erosion Control Plan for stormwater outlet protection locations.

B8 GRADE STABILIZATION STRUCTURE LOCATIONS

N/A

B9 DEWATERING APPLICATIONS AND MANAGEMENT METHODS

If dewatering is necessary for the project, a dewatering detail can be found on the Construction Details Sheet.

B10 MEASURES UTILIZED FOR WORK WITHIN WATERBODIES

No water bodies are present on the project site.

B11 MAINTENANCE GUIDELINES FOR STORMWATER QUALITY MEASURES

Inspection Schedule/Reporting
All impacted areas, as well as all erosion and sediment control devices, will be inspected every seven (7) calendar days and within 24 hours after a rianfall of 0.5 inch or greater. Where sites have been final or temporarily stabilized or on sites where runoff is unlikely due to winter conditions (e.g. site is covered with snow, ice, or frozen ground exists), such inspections shall be conducted at least once every month.

Inspections shall be conducted and a written report prepared, by a designated and qualified person familiar with the USEPA NPDES Storm Water General Permit, this SWPPP, and the Project.

Inspection reports shall be completed including scope of the inspection, name(s) and qualifications of personnel making the inspection, the date of the inspection, observations relating to the implementation of the SWPPP, and any actions taken as a result of incidents of noncompliance noted during the inspection. The inspection report should state whether the site was in compliance or identify and incidents of noncompliance. The contractor shall keep a copy of the inspection reports on site and permanently for a period of two years following construction. The on-site reports may be requested by inspections conducted by the local governing authority.

Construction Entrance
Locations where vehicles exit the site shall be inspected for evidence of off-site sediment tracking. Each contractor and subcontractor shall be responsible for maintaining the Construction Entrance and other controls as described in this SWPPP.

Material Storage Inspections
Inspectors must evaluate areas used for storage of materials that are exposed to precipitation. The purpose is to ensure that materials are protected and/or impounded so that pollutants cannot discharge from storage areas. Off-site material storage areas used solely b the subject project are considered to be part of the project and must be included in the erosion control plans and site inspection reports.

Soil Stabilization Inspections
Seeded areas will be inspected to confirm that a healthy stand of vegetation is maintained. The site has achieved final stabilization once all areas are covered with pavement or have a stand of vegetation with at least 70% of the background vegetation density. The density of 70% or greater must be maintained to be considered as stabilized. The operator or their representative will water, fertilize, and reseed disturbed areas as needed to achieve this goal.

Erosion and Sediment Control Inspections
All controls should be inspected at least once every seven (7) calendar days and following any storm event of 0.5 inch or greater. The following is a list of inspection/maintenance practices that will be used for specific controls:
1. Geotextiles/Erosion Control Mats: Missing or loose matting must be replaced or re-anchored.
2. Inlet Protection: If silt fence inlet protection is to be used, sediment should be removed when it reaches approximately one-half the height of the fence. If a sump is used, sediment should be removed when the volume of the basin is reduced by 50%.
3. Mulching: Inspect for thin or bare spots caused by natural decomposition or weather-related events. Mulch in high traffic areas should be replaced on a regular basis to maintain uniform protection.
4. Silt Fence: Removal of built-up sediment will occur when the sediment reaches one-third the height of the fence.
5. Stabilized Construction Entrance: Periodic re-grading and top dressing with additional stone.
6. Vegetation: Protect newly seeded areas from excessive runoff and traffic until vegetation is established. Establish a watering and fertilizing schedule.
7. Good Housekeeping: Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges through screening of outfalls and daily pickup of litter.

In the event that sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize adverse impacts. An example of this may be the situation where sediment has washed into the street and could be carried into the storm sewers by the next rainfall and/or pose a safety hazard to user of public street.

Modifications/Revisions to SWPPP
Based on inspection results, any necessary modification to this SWPPP shall be implemented within seven (7) calendar days of the inspection. A modification is necessary if a control measure or operational procedure does not provide adequate pollutant control. All revisions shall be recorded on a Record of Revisions within seven (7) calendar days of the inspection.

It is the responsibility of the operator to maintain effective pollutant discharge controls. Physical site conditions or contractor/subcontractor practices could make it necessary to install more control than were originally planned. Fore example, localized concentrations of surface runoff or unusually steep areas could required additional silt barrier or other structural controls. Assessing the need for and installing additional controls will be a continuing contractor/subcontractor responsibility until final stabilization is achieved.

Contractors and subcontractors implementing this SWPPP must remain alert to the need to periodically refine and update this SWPPP in order to accomplish the intended goals.

Notice of Termination
Compliance of the site with the General Construction Permit remains the responsibility of all operators that have submitted an NOI until such time as they have submitted a Notice of Termination (NOT). The permittee's authorization to discharge under the General Construction Permit terminates at midnight of the day the NOT is signed.

All permittees must submit an NOT within thirty (30) days after one or more of the following conditions have been met:
1. Final stabilization has been achieved on all portions of the site for which the permittee was responsbile.
2. Another operator/permittee has assumed control over all areas of the site that have not been finally stabilized.
3. In residential construction operations, temporary stabilization has been completed and the residence has been transferred to the homeowner.

B12 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION RELATIVE TO LAND-DISTURBING ACTIVITIES

Pre-construction Activity
1. The exact locations of all existing utilities within the project limits are to verified prior to construction.
2. Schedule pre-construction meeting with local stormwater authority 48 hours prior to start of construction.
3. Install protection fencing for existing trees to remain in place within the project limits

Construction Site Access
1. Install gravel construction entrance
2. Post the NOI and contact information at the construction entrance. NOI to remain posted for duration of the project.
3. Install construction staging pads, fueling station, material storage areas, concrete washout, construction parking areas, and stabilize construction routes

Perimeter Controls
1. Utilize the gravel construction entrance for installation of the perimeter silt fence. Add stone if needed.

Initial Land Clearing and Grading Activities
1. Add protection measures to existing inlets.
2. Strip the topsoil and stabilize the topsoil stockpile.

Secondary Land Grading Activities
1. Begin site grading/construction of detention basins (if applicable) and stabilize any soil stockpiles that will be left dormant for more than 10 days.
2. Complete the cut and fills on the site. Final grade and seed the pond slopes (if applicable). Stabilize slopes with erosion control blanket.
3. Install storm sewer system and install inlet protection immediately upon complete of the inlet and install rip-rap outlet protection prior to installing outlets.

Surface Stabilization
1. Apply temporary seeding and stabilize slopes in areas where rough grading has been completed.
2. Apply permanent seeding and stabilize slopes in areas where final grading has been completed.

Building Construction
1. Prior to building construction install stone surface for paved areas.
2. Building pads left dormant for more than 10 days, must be temporarily seeded.
3. Start building construction. Install staging area for building materials and stabilize.

Final Shaping/Landscaping
1. Utilize topsoil salvage in applicable areas and apply permanent seeding.
2. Apply permanent seeding around the perimeter of the site.
3. Complete utility installation, curbs, paving, and building construction.
4. Install landscaping plant material and stabilize all disturbed areas.
5. Remove all erosion and sediment control practices when areas have a uniform grass cover.

B13 EROSION AND SEDIMENT CONTROL ON INDIVIDUAL RESIDENTIAL BUILDING LOTS

This project is not subdivided into lots.

B14 MATERIAL HANDLING AND SPILL PREVENTION PLAN

Hazardous Waste
Whenever possible, minimize the use of hazardous materials and generation of hazardous wastes. All hazardous waste materials will be disposed in the manner specified by federal, state, or local regulations or by the manufacturer.

Use containment berms in fueling and maintenance areas and where potential for spills is high.

A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous waste procedures. The location of any hazardous waste storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the facility.

Material Handling and Spill Prevention
Discharge of hazardous substances or oil into stormwater is subject to reporting requirements. In the event of a spill of a hazardous substance, the operator is required to notify the National Response Center (1-800-424-8802) to properly report the spill. In addition, the operator shall submit a written description of the release (including the type and amount of material released, the date of the release, the circumstances of the release, and the steps to be taken to prevent future spill) to the local governing authority. The SWPPP must be revised within 14 calendar days after the release to reflect the release, stating the information above along with modifications minimize the possibility of future occurrences. Each contractor and subcontactor is responsible for complying with these reporting requirements.

Spill Response Plan
Minor - Small spills that typically involve oil, gasoline, paint, hydraulic fluid, etc. can be controlled by the first responder at the discovery of the spill.
- Contain spill to prevent material from entering storm or groundwater. Do not flush with water or bury.
- Use absorbent material to clean-up spill material and any subsequently contaminated soil and dispose of properly.

Semi-Significant Spills - Approximately ten gallons or less of pollutant with no contamination of ground or surface waters. Minor spills can be generally controlled by the first responder with help from other site personnel. This response may require other operations to stop to make sure the spill is quickly and safely addressed. At the discovery of the spill:
- Contain spill to prevent material from entering storm or ground water. Do not flush with water or bury.
- Use absorbent material to clean-up spills and dispose of properly. Spills on impervious surfaces should be disposed of as soon as possible to prevent migration deeper into the soil and groundwater. Dispose of contaminated soils or absorbents properly.
- Contact 911 if the spill could be a safety issue
- Contact supervisors and designated site inspectors, including MS4 personnel, immediately.

Contaminated solids are to be removed to an approved landfill.
Major or Hazardous Spills - More than ten gallons, there is the potential for death, injury or illness to humans or animals, or has the potential for surface or groundwater pollution.
- Control or contain the spill without risking bodily harm. Temporarily plug storm drains if possible to prevent migration of the spill into the stormwater system
- Immediately contact the local Fire Department at 911 to report any hazardous material spill.
- Contact supervisors and designated site inspectors immediately. Governing authorities, including MS4 personnel, responsible for stormeater facilities should be contacted as well. The contractor is responsible for having these contact numbers available at the job site. A written report should be submitted to the owner as soon as possible.
- As soon as possible but within 2 hours of discovery, contact the local agency responsible for spill management. The following information should be noted for future reports to the agency:
  - Name, address and phone number of person making the spill report
  - The location of the spill
  - The time of the spill
  - Identification of the spilled substance
  - Approximate quantity of the substance that has been spilled or may be further spilled
  - The duration and source of the spill
  - Name and location of the damaged waters
  - Name of spill response organization
  - What measures were taken in the spill response
  - Other information that may be significant

Additional regulations or requirement may be present. A spill response professional should be consulted to make sure all appropriate and required steps have been taken. Contaminated solids should only be removed from the site after approval is give by the appropriate agency.

In the event of a spill, contact the IDEM Office of Emergency Response (888) 233-7745 and the Town of Brownsburg Department of Development Services (317) 852-1128.

B15 MATERIAL HANDLING AND STORAGE PROCEDURES ASSOCIATED WITH CONSTRUCTION ACTIVITY

Sanitary/Septic
Contractors and subcontractors must comply with all state and local sanitary sewer, portable toilet, or septic system regulations. Sanitary facilities shall be provided at the site by each contractor or subcontractor throughout construction activities. The sanitary facilities should be utilized by all construction personnel and be serviced regularly. All expenses associated with providing sanitary facilities are the responsibility of the contractors and subcontractors. The location of any sanitary facilities should be indicated on the stormwater pollution prevention plan by the operator following on-site location of said facilities.

Water Source
Water used to establish and maintain grass, to control dust, and for other construction purposes must originate from a public water supply or private well approved by the State or local health department.

Equipment Fueling and Storage Areas
Equipment fueling, maintenance, and cleaning should only be completed in protected areas (i.e., bermed area). Leaking equipment and maintenance fluids will be collected and not allowed to discharge onto soil where they may be washed away during a rain event.

Equipment wash-down (except wheel washes) should take place within an area surrounded by a berm. The use of detergents is prohibited.

Dust Control/Off-Site Vehicle Tracking
During construction, water trucks should be used, as needed, by each contractor or subcontractor to reduce dust. After construction, the site should stabilized to reduce dust.

Construction traffic should enter and exit the site at a Construction Entrance with a rock pad or equivalent device. The purpose of the rock pad is to minimize the amount of soil and mud that is tracked onto existing street. If sediment escapes the construction site, off-site accumulations of sediment must be removed a frequency sufficient to minimize off-site impacts.

Hazardous Material Storage
Chemicals, paint, solvents, fertilizers, and other toxic or hazardous materials should be stored in their original containers (if original container is not resealable, store the products in a clearly labeled, waterproof container). Except during application, the containers should be kept in trucks or in bermed areas within covered storage facilities. Runoff containing such materials shall be collected, removed from the site, and disposed of in accordance with the federal state, and local regulations.

As may be required by federal, state or local regulations, the Contractor should have a Hazardous Materials Management Plan and/or Hazardous Materials Spill and Prevention Program in place. A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper hazardous materials storage and handling procedures. The location of any hazardous material storage areas should be indicated on the stormwater pollution prevention plan by the operator following on-site location of the storage areas.

Concrete Washout
All concrete trucks waste material shall be completely contained and disposed in accordance with all local, state, and federal regulations. A pit or container is required when cleaning concrete chutes.

Solid Waste Disposal
No solid material, including building materials, is permitted to be discharged to surface waters or buried on site. All solid waste materials, including disposable materials incidental to construction activity, must be collected in containers or closed dumpsters. The collection containers must be emptied periodically and the collected material hauled to a landfill permitted by the State and/or appropriate local municipality to accept the waste for disposal.

A foreman or supervisor should be designated in writing to oversee, enforce, and instruct construction workers on proper solid waste procedures.

C1 DESCRIPTION OF POLLUTANTS AND THEIR SOURCES ASSOCIATED WITH THE PROPOSED LAND USE

The proposed land use is light industrial buildings with associated asphalt pavement and utiltities. The pollutants and sources of each pollutant normally expected from this type of land use are:

Pollutant Source: Passenger vehicles, delivery vehicles.
Type of Pollutant: Oil, gasoline, diesel fuel, any hydrocarbon associated with vehicular fuels and lubricants, grease, antifreeze, windshield cleaner solution, brake fluid, dust, rubber, glass, metal and plastic fragments, grit, road de-icing materials.

Pollutant Source: Building
Type of Pollutant: Cleaning solutions or solvents, leaks from HVAC equipment, grit from roof drainage, aggregate or rubber fragments from roofing system.

Pollutant Source: Trash Dumpster
Type of Pollutant: Cleaning solutions or solvents, litter (paper, plastic, general refuse associated with distribution operations), uneaten food products, bacteria.

Pollutant Source: Parking Lot
Type of Pollutant: Any pollutant associated with vehicular sources, grit from asphalt wearing surface, bituminous compounds from periodic maintenance (sealing, resurfacing, and patching), pavement de-icing materials, paint fragments from parking stall striping, concrete fragments, wind-blown litter from off-site sources, elevated water temperatures from contact with impervious surfaces.

Pollutant Source: Lawn and Landscape Areas
Type of Pollutant: Fertilizers, soil, organic material (leaves, mulch, grass clippings)

C2 DESCRIPTION OF PROPOSED POST-CONSTRUCTION STORMWATER QUALITY MEASURES

Vegetated Swale
Vegetated swales are designed to reduce pollutant and sediment loads in stormwater runoff. Stormwater runoff is directioned in the swale which conveys the runoff from the site. While moving through the swale, runoff velocity is greatly decreased allowing biofiltration (uptake of nutrients by plants), infiltration (percolation of water through the swale's porous soil substrate), and sedimentation (settling of later suspended particles).

Permanent Vegetation
Topsoil will be placed in lawn areas and seeded with grass, and graded not to exceed 3:1 slopes. Proposed landscape trees and shrubs will also be added. These bio areas will act as a natural filter strip to help improve stormwater quality. The vegetated areas will slow the velocities of stormwater runoff, reduce sediment runoff, and reduce problems associated with mud or dust from bare soils.

Wet Pond (Existing Post-Construction Measure)
Wet ponds included a permanent pool for water quality treatment and are effective for pollutant removal and peak rate mitigation. The primary treatment mechanism is settling by gravity of particulates and their associated pollutants while stormwater is detained in the pond.

Good Housekeeping Measures
Good housekeeping measures such as regular street or pavement sweeping, installation of trash receptacles, and reduction in fertilizer overspray can be incorporated by the owner and/or occupant.

Mechanical BMP (Cascade Separator, etc.)
A BMP structure will be installed at the downstream end of the storm sewer system, prior to the storm sewer outlet. The primary purpose of the BMP is to remove sediment, oils and floatable debris from the stormwater prior to discharging from the site.

C3 PLAN DETAILS FOR EACH STORMWATER MEASURE

Refer to the Erosion Control Plan and Erosion Control Details.

C4 SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION

Refer to the Erosion Control Plan and Erosion Control Details.

C4 LOCATION, DIMENSIONS, SPECIFICATIONS, AND CONSTRUCTION DETAILS OF EACH STORMWATER QUALITY MEASURE

The location, dimension, specification, and construction details of the dry pond and the hydrodynamic separator can be found on the Grading & Drainage Plan, Storm Plan & Profiles, and the Construction Details.

C5 MAINTENANCE GUIDELINES FOR POST-CONSTRUCTION STORMWATER QUALITY MEASURES

Maintenance requirements for the stormwater quality measures which will remain in place after construction is complete, are described below.

Vegetated Swale
Vegetated swales require little maintenance if properly designed. Mow as needed during the growing season; inspect for erosion control problems twice during the first year, annually thereafter; and removed sediment, trash and debris annually or more frequently if needed.

Dry Pond
Remove debris and sediment from the system when necessary. Inspect inlet and outlet devices and structures annually and after major storm events. Refer to the Operations & Maintenance Manual for details maintenance information.

Mechanical BMP
Frequent inspection and cleanout is critical for proper operation. Recommended inspection and maintenance schedules vary with each manufacturer.

C6 ENTITY RESPONSIBLE FOR OPERATION AND MAINTENANCE OF POST CONSTRUCTION STORMWATER MEASURES

Refer to Owner and Operator information on this sheet.

NO.	DATE	REMARKS

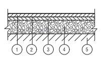
NOT FOR CONSTRUCTION

STORMWATER POLLUTION PREVENTION PLAN

BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com

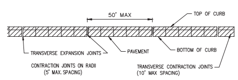
FILENAME: 13341_C8.2_SWPPP
DATE: 09/04/2025
JOB NO. 13341
SHEET C8.2



ASPHALT PAVEMENT SECTION

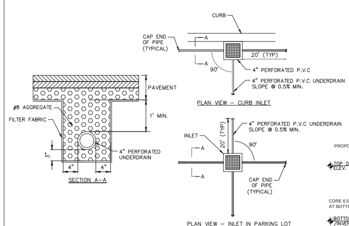
N.T.S.

1. 1" HMA SURFACE COURSE
2. TACK COAT
3. 1.5" HMA INTERMEDIATE COURSE
4. 6" AGGREGATE BASE COURSE, #53 STONE
5. COMPACTED AND STABLE SUBGRADE



CURB JOINT DETAIL

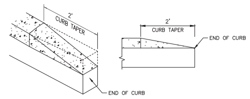
NOT TO SCALE



CURB
CAP END OF PIPE (TYPICAL)
20' (TYP)
4" PERFORATED P.V.C
4" PERFORATED P.V.C UNDERDRAIN SLOPE @ 0.5% MIN.
PLAN VIEW – CURB INLET
PAVEMENT
#8 AGGREGATE
FILTER FABRIC
1' MIN.
4" PERFORATED UNDERDRAIN
SECTION A–A
INLET
4" PERFORATED P.V.C UNDERDRAIN SLOPE @ 0.5% MIN.
CAP END OF PIPE (TYPICAL)
PLAN VIEW – INLET IN PARKING LOT

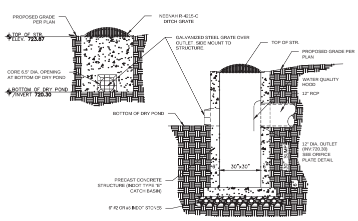
PAVEMENT UNDERDRAIN DETAIL

NOT TO SCALE



CURB TAPER DETAIL

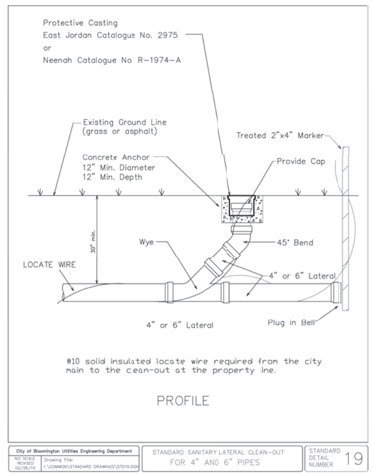
NOT TO SCALE



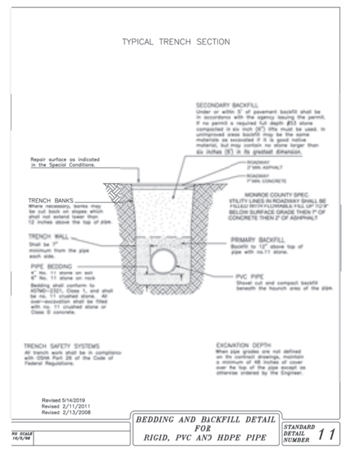
PROPOSED GRADE PER PLAN
NEENAH R-4215-C DITCH GRATE
TOP OF STR. ELEV. 723.87
GALVANIZED STEEL GRATE OVER OUTLET. SIDE MOUNT TO STRUCTURE.
TOP OF STR.
PROPOSED GRADE PER PLAN
CORE 6.5" DIA. OPENING AT BOTTOM OF DRY POND
WATER QUALITY HOOD
BOTTOM OF DRY POND INVERT 720.30
12" RCP
BOTTOM OF DRY POND
12" DIA. OUTLET INV 720.30 SEE ORIFICE PLATE DETAIL
30"x30"
PRECAST CONCRETE STRUCTURE (INDOT TYPE "E" CATCH BASIN)
6" #2 OR #8 INDOT STONES

DRY POND OUTLET STRUCTURE DETAIL

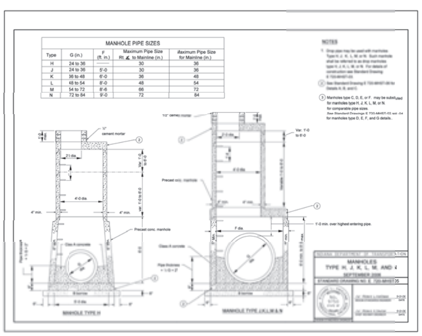
NOT TO SCALE (REV. 06/18)

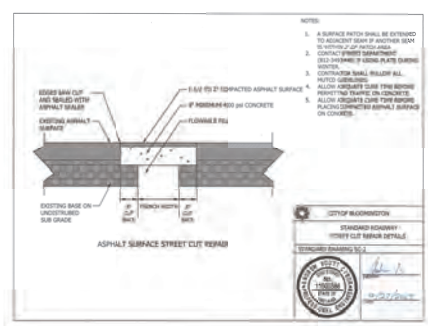


Protective Casting
East Jordan Catalogue No. 2975
or
Neenah Catalogue No R-1974-A
Existing Ground Line (grass or asphalt)
Treated 2"x4" Marker
Concrete Anchor 12" Min. Diameter 12" Min. Depth
Provide Cap
30" min.
Wye
45° Bend
LOCATE WIRE
4" or 6" Lateral
4" or 6" Lateral
Plug in Bell
#10 solid insulated locate wire required from the city main to the clean-out at the property line.
PROFILE
City of Bloomington Utilities Engineering Department
STANDARD SANITARY LATERAL CLEAN-OUT FOR 4" AND 6" PIPES
STANDARD DETAIL NUMBER 19

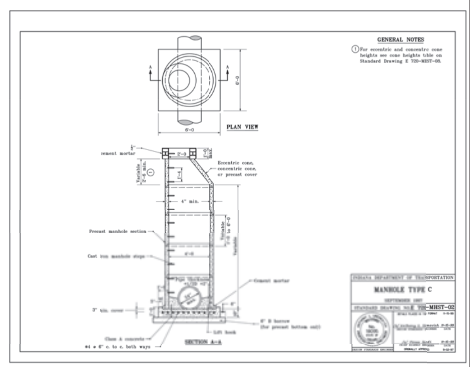


TYPICAL TRENCH SECTION
SECONDARY BACKFILL
Repair surface as indicated in the Special Conditions.
TRENCH BANKS
TRENCH WALL
PIPE BEDDING
MONROE COUNTY SPEC.
PRIMARY BACKFILL
PVC PIPE
TRENCH SAFETY SYSTEMS
EXCAVATION DEPTH
Revised 5/14/2019
Revised 2/11/2011
Revised 2/13/2008
BEDDING AND BACKFILL DETAIL FOR RIGID, PVC AND HDPE PIPE
STANDARD DETAIL NUMBER 11





NOTES:
EDGES SAW CUT AND SEALED WITH ASPHALT SEALER
EXISTING ASPHALT SURFACE
FLOWABLE FILL
EXISTING BASE ON UNDISTURBED SUB GRADE
TRENCH WIDTH
ASPHALT SURFACE STREET CUT REPAIR
CITY OF BLOOMINGTON
STANDARD ROADWAY STREET CUT REPAIR DETAILS



NO.	DATE	REMARKS

MADELINE ROMEO — REGISTERED — NOT FOR CONSTRUCTION — STATE OF INDIANA — PROFESSIONAL ENGINEER

CONSTRUCTION DETAILS - 1

BUILT BLOOMINGTON

1320 S ROGERS STREET

BLOOMINGTON, INDIANA

Spaceco

Civil Engineering & Surveying

Rosemont, IL – Morris, IL – Indianapolis, IN

spacecoinc.com

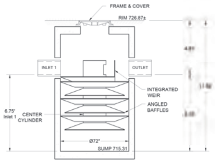
FILENAME: 13341_C9.0_DET

DATE: 09/04/2025

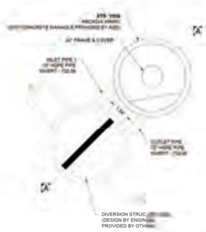
JOB NO. 13341

SHEET C9.0

ARCADIA AR6PC				STR. 100B
TREATMENT RATE (NJCAT/NJDEP 50% REMOVAL)				3.78 CFS
BYPASS RATE				---
		DIAMETER	PIPE MATERIAL	INVERT
INLET	1	15"	HDPE	722.06
	2			
	3			
	4			
OUTLET		15"	HDPE	722.06



PROFILE VIEW
NTS



SITE SPECIFIC PLAN VIEW
SCALE : 1/4"=1'

BUILT BLOOMINGTON
BLOOMINGTON, IN

ARCADIA
Stormwater Separator

ADS

AS NOTED

SHEET 2 OF 2

NO.	DATE	REMARKS

NOT FOR CONSTRUCTION

CONSTRUCTION DETAILS - 2
BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

Spaceco
Civil Engineering & Surveying
Rosemont, IL - Morris, IL - Indianapolis, IN
spacecoinc.com

FILENAME: 13341_C9.0_DET
DATE: 09/04/2025
JOB NO. 13341
SHEET C9.1

EARTHWORK:

A. GENERAL

1. EARTHWORK INCLUDES CLEARING, GRUBBING, SUBGRADE PREPARATION, REMOVAL OF TREES AND VEGETATION (INCLUDING STUMPS), PROTECTION OF TREES TO REMAIN, STRIPPING AND STORAGE OF TOPSOIL, FILL COMPACTION AND ROUGH GRADING OF ENTIRE SITE AS INDICATED ON DRAWINGS.

2. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.

3. CONTRACTOR SHALL PROVIDE AND PLACE ANY ADDITIONAL FILL MATERIAL FROM OFF THE SITE AS MAY BE NECESSARY TO PRODUCE THE GRADES REQUIRED AS SHOWN ON THE DRAWINGS. FILL OBTAINED FROM OFF SITE MUST BE SUITABLE SOIL AS DEFINED IN THE SPECIFICATIONS OR AS OTHERWISE APPROVED BY OWNER.

4. THE CONTRACTOR SHALL ACCEPT THE SITE IN ITS CURRENT STATE AND SHALL REMOVE ALL TRASH, RUBBISH, AND DEBRIS FROM THE SITE PRIOR TO STARTING EXCAVATION.

5. EXCEPT FOR STRIPPED TOPSOIL AND OTHER MATERIALS INDICATED TO BE STOCKPILED OR OTHERWISE REMAIN OWNER'S PROPERTY, CLEARED MATERIALS SHALL BECOME CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM PROJECT SITE.

6. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, DRIVES, FACILITIES, ETC. WITHOUT OWNER PERMISSION OR AUTHORITY HAVING JURISDICTION.

7. ALL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO COMMENCING EARTHWORK AND CLEARING OPERATIONS. EROSION CONTROL MEASURES SHOULD BE PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION.

8. CONTRACTOR SHALL CAREFULLY MAINTAIN ALL BENCHMARKS, MONUMENTS, AND OTHER REFERENCE POINTS. IF DISTURBED, CONTRACTOR SHALL ENGAGE LICENSED LAND SURVEY FOR REPLACEMENT OF REFERENCE POINTS.

9. WHERE THESE SPECIFICATIONS CONFLICT WITH CITY OF BLOOMINGTON STANDARDS, THE STANDARDS OF THE JURISDICTION HAVING AUTHORITY SHALL PREVAIL.

B. MATERIALS

1. CONTRACTOR TO PROVIDE BORROW SOIL MATERIALS WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE FROM EXCAVATIONS.

2. SATISFACTORY (OR SUITABLE) SOILS: SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM ACCORDING TO ASTM D2487, OR A COMBINATION OF THESE GROUPS; FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIALS, VEGETATION AND OTHER DELETERIOUS MATERIAL.

3. UNSATISFACTORY (OR UNSUITABLE) SOILS: SOIL CLASSIFICATION GROUPS GC, SC, CL, ML, OL, CH, MH, OH, AND PT ACCORDING TO ASTM D 2487, OR A COMBINATION OF THESE GROUPS. UNSATISFACTORY SOILS ALSO INCLUDES SATISFACTORY SOILS NOT MAINTAINED WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION.

C. EXECUTION

1. CONTRACTOR SHALL LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP UTILITIES INDICATED TO BE REMOVED OR ABANDONED IN PLACE. DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER UNLESS PERMISSION IS GRANTED. NOTIFY OWNER AT LEAST TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.

2. REMOVE OBSTRUCTIONS, TREES, SHRUBS, AND OTHER VEGETATION AS REQUIRED FOR NEW CONSTRUCTION. STRIP TOPSOIL TO DEPTH AS REQUIRED IN THE FIELD TO PREVENT INTERMINGLING WITH UNDERLYING SUBSOIL OR OTHER WASTE MATERIALS. STOCKPILE TOPSOIL AWAY FROM EXCAVATIONS WITHOUT INTERMIXING WITH SUBSOIL AND GRADE STOCKPILES TO DRAIN SURFACE WATER.

3. REMOVE EXISTING ABOVE AND BELOW-GRADE IMPROVEMENTS AS INDICATED AND NECESSARY TO FACILITATE NEW CONSTRUCTION.

4. PROTECT SUBGRADES AND FOUNDATION SOILS FROM FREEZING TEMPERATURES, FROST, AND PONDING WATER.

5. EXCAVATE TO INDICATED ELEVATIONS AND DIMENSIONS FOR ALL STRUCTURES, WALKS, PAVEMENTS, AND UTILITY TRENCHES.

6. CONTRACTOR SHALL FURNISH AND OPERATE ALL DEWATERING MEASURES REQUIRED TO FACILITATE NEW CONSTRUCTION AND IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS.

7. PROOF ROLL SUBGRADE BELOW BUILDING PAVEMENTS WITH A PNEUMATIC-TIRED DUMP TRUCK TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF ROLL WET OR SATURATED SUBGRADES. RECONSTRUCT SUBGRADES DAMAGED BY FREEZING TEMPERATURES, FROST, RAIN, ACCUMULATED WATER, OR CONSTRUCTION ACTIVITIES AS DIRECTED BY ENGINEER OR OWNER REPRESENTATIVE, WITHOUT ADDITIONAL COMPENSATION.

8. BACKFILL ALL UTILITY TRENCHES BENEATH PAVEMENT (AND WITHIN 5') WITH GRANULAR MATERIAL.

9. SOIL FILL: USE SATISFACTORY SOIL MATERIAL UNDER ALL WALKS, PAVEMENTS, STEPS, RAMPS, BUILDING SLABS, FOOTINGS, AND FOUNDATIONS.

10. UNIFORMLY MOISTEN OR AERATE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL SOIL LAYER BEFORE COMPACTION TO WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT. DO NOT PLACE BACKFILL OR FILL SOIL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN, OR CONTAIN FROST OR ICE. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTHERWISE SATISFACTORY SOIL MATERIAL THAT EXCEEDS OPTIMUM MOISTURE CONTENT BY 2 PERCENT AND IS TOO WET TO COMPACT TO SPECIFIED UNIT WEIGHT.

11. COMPACTION OF SOIL BACKFILLS AND FILLS ARE TO BE IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS. WHERE NO GEOTECHNICAL REPORT EXISTS, COMPACT ALL FILL MATERIAL BELOW STRUCTURES, PAVEMENTS, WALKS, UTILITY TRENCHES AND STEPS (AND WITHIN 5 FEET OF SAID AREAS) TO 95 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR DENSITY). COMPACT ALL FILL MATERIALS BELOW TURF OR UNPAVED AREAS TO 85 PERCENT OF THE MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR DENSITY). ALL FILL MATERIALS TO BE COMPACTED IN MAXIMUM 8-INCH LIFTS.

12. SITE ROUGH GRADING: SLOPE GRADES TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING. FINISH SUBGRADES TO REQUIRED ELEVATIONS WITHIN THE FOLLOWING TOLERANCES:
    - i. TURF OR UNPAVED AREAS: PLUS OR MINUS 1 INCH
    - ii. WALKS: PLUS OR MINUS I/2 INCH.
    - iii. PAVEMENTS: PLUS OR MINUS 1/2 INCH
    - iv. INSIDE BUILDING LINES: FINISH SUBGRADE TO A TOLERANCE OF $\frac{1}{2}$ INCH WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE.

13. QUALITY CONTROL: QUALIFIED GEOTECHNICAL ENGINEER TO BE ENGAGED AS TESTING AGENCY AS DIRECTED BY OWNER.

14. REPAIR AND REESTABLISH GRADES TO SPECIFIED TOLERANCES WHERE COMPLETED OR PARTIALLY COMPLETED SURFACES BECOME ERODED, RUTTED, SETTLED, OR WHERE THEY LOSE COMPACTION DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS OR WEATHER

STORM SEWER:

A. GENERAL

1. STORM SEWER INCLUDES ALL PIPES, FITTINGS, MANHOLES, CLEANOUTS, TRANSITION COUPLINGS, CATCH BASINS, INLETS, END SECTIONS, AND OUTLETS.

2. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.

3. CONTRACTOR SHALL LOCATE, IDENTIFY, DISCONNECT, AND SEAL OR CAP UTILITIES INDICATED TO BE REMOVED OR ABANDONED IN PLACE. DO NOT INTERRUPT UTILITIES SERVING FACILITIES OCCUPIED BY OWNER UNLESS PERMISSION IS GRANTED. NOTIFY OWNER AT LEAST TWO DAYS IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS.

B. PRODUCTS

1. PE PIPE AND FITTINGS: PE DRAINAGE PIPE AND FITTINGS NP 3 TO NPS 10, AASHTO M 252M, TYPE S, WITH SMOOTH WATERWAY FOR COUPLING JOINTS. PE DRAINAGE PIPE AND FITTINGS NPS 12 TO NPS 60, AASHTO M 294M, TYPE S, WITH SMOOTH WATERWAY FOR COUPLING JOINTS.

2. PVC PIPE AND FITTINGS: PIPE: ASTM F 949, PVC, OR ASTM 0-3034, F-1336, F-679, CORRUGATED PIPE WITH BELL AND SPIGOT ENDS FOR GASKETED JOINTS. FITTINGS: ASTM 949, PVC MOLDED OR FABRICATED, SOCKET TYPE. GASKETS: ASTM F 477, ELASTOMERIC SEALS.

3. CONCRETE PIPE AND FITTINGS: REINFORCED CONCRETE SEWER PIPE AND FITTINGS MEETING ASTM C 76 WITH BELL AND SPIGOT ENDS AND GASKETED JOINTS WITH ASTM C 443 RUBBER GASKETS. PIPE TO BE CLASS III UNLESS OTHERWISE INDICATED ON PLANS.

4. COMPLY WITH ASTM C 1173, ELASTOMERIC SLEEVE-TYPE REDUCING OR TRANSITION COUPLING, FOR JOINTING UNDERGROUND NON-PRESSURE PIPING. INCLUDE ENDS OF SAME SIZES AS PIPING TO BE JOINED, AND CORROSION-RESISTANT METAL TENSION BAND AND TIGHTENING MECHANISM ON EACH END.

5. CLEANOUTS: CAST IRON CLEANOUTS: ASME A112.36.2M ROUND, GRAY-IRON HOUSING WITH CLAMPING DEVICE AND ROUND, SECURED, SCORIATED, GRAY-IRON COVER. HEAVY DUTY TOP LOADING IS REQUIRED. PLASTIC CLEANOUTS: PVC BODY WITH PVC THREADED PLUG.

6. MANHOLES AND CATCH BASINS: STANDARD REINFORCED PRECAST CONCRETE MANHOLES MEETING ASTM C 478. MINIMUM 48-INCH DIAMETER UNLESS OTHERWISE INDICATED. BASE SECTION TO BE MINIMUM 6-INCH THICKNESS AND 4-INCH THICKNESS FOR WALLS AND BASE RISER SECTION. REINFORCED CONCRETE GRADE RINGS, 6-9 INCH TOTAL THICKNESS, TO MATCH DIAMETER OF MANHOLE FRAME AND COVER. MANHOLE FRAMES AND COVERS AS INDICATED ON DRAWINGS. PIPE CONNECTORS SHOULD BE PROVIDED TO MEET ASTM C293, RESILIENT, OF SIZE REQUIRED, FOR EACH PIPE CONNECTING TO THE BASE SECTION.

7. CONCRETE: CAST-IN-PLACE CONCRETE ACCORDING TO ACI 318 AND ACI 350/350R AND IN ACCORDANCE WITH THE FOLLOWING:
    - i. CEMENT: ASTM C 150, TYPE III
    - ii. FINE AGGREGATE: ASTM C 33, SAND
    - iii. COARSE AGGREGATE: ASTM C 33, CRUSHED GRAVEL
    - iv. WATER: POTABLE

8. PORTLAND CEMENT DESIGN MIX: 4,000 PSI MINIMUM WITH 0.45 MAXIMUM WATER/CEMENTIOUS MATERIALS RATIO. REINFORCING FABRIC TO MEET ASTM A 185/A 185M, STEEL, WELDED WIRE FABRIC, PLAIN. REINFORCING BARS TO MEET ASTM A 615/A 615M, GRADE 60 DEFORMED STEEL.

9. MANHOLE CHANNELS TO BE FORMED WITH AN INVERT SLOPE OF 2 PERCENT THROUGH THE MANHOLE AND BENCHES AT 4 PERCENT, SLOPED TO DRAIN INTO CHANNEL.

10. INLETS: PROVIDE INLETS WITH HEAVY DUTY CASTINGS AS SHOWN ON DRAWINGS.

11. OUTLETS: CONCRETE END SECTION SHOULD BE PROVIDED AT ALL PIPE ENDS AND AS INDICATED ON DRAWINGS. RIP RAP APRONS TO BE INSTALLED AT ALL END SECTIONS TO DIMENSIONS INDICATED. AVERAGE RIP-RAP SIZE TO BE 6-INCHES UNLESS OTHERWISE INDICATED ON DRAWINGS.

C. EXECUTION

1. INSTALL PIPING BEGINNING AT LOW POINT, TRUE TO GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. PLACE BELL ENDS OF PIPING FACING UPSTREAM. INSTALL GASKETS, SEALS, SLEEVES, AND OTHER COUPLINGS ACCORDING TO MANUFACTURERS WRITTEN INSTRUCTIONS.

2. WHEN INSTALLING PIPE UNDER STREETS OR OTHER OBSTRUCTIONS THAT CANNOT BE DISTURBED, USE PIPE-JACKING PROCESS OF MICRO-TUNNELING.

3. INSTALL PIPING PITCHED DOWN IN DIRECTION OF FLOW. INSTALL PE CORRUGATED SEWER PIPING IN ACCORDANCE WITH ASTM D 2231. INSTALL PVC PIPING ACCORDING TO ASTM D 2321 AND ASTM F 1668. INSTALL REINFORCED CONCRETE SEWER PIPING IN ACCORDANCE WITH ASTM C 1479 AND ACPA'S "CONCRETE PIPE INSTALLATION MANUAL."

4. PIPE JOINT CONSTRUCTION: JOIN CORRUGATED PE PIPE ACCORDING TO ASTM D 3212 FOR PUSH ON JOINTS. JOIN PVC CORRUGATED SEWER PIPING IN ACCORDANCE WITH ASTM D 2321 FOR ELASTOMERIC-SEAL JOINTS. JOIN REINFORCED CONCRETE PIPE ACCORDING TO ACPA'S "CONCRETE PIPE INSTALLATION MANUAL" FOR RUBBER-GASKETED JOINTS. JON DISSIMILAR PIPE MATERIALS WITH NON-PRESSURE TYPE FLEXIBLE COUPLINGS.

5. CONTRACTOR TO INSPECT INTERIOR OF PIPING AND MANHOLES FOR DEFECTS. DEFECTS REQUIRING CORRECTION INCLUDE THE FOLLOWING:
    - i. ALIGNMENT: LESS THAN FULL DIAMETER OF INSIDE OF PIPE IS VISIBLE BETWEEN STRUCTURES.
    - ii. DEFLECTION: FLEXIBLE PIPING WITH DEFLECTION THAT PREVENTS PASSAGE OF BALL OR CYLINDER OF SIZE NOT LESS THAN 92.5 PERCENT OF PIPING DIAMETER.
    - iii. DAMAGE: CRUSHED, BROKEN, CRACKED, OR OTHERWISE DAMAGED PIPING.
    - iv. INFILTRATION: WATER LEAKAGE INTO PIPING.
    - v. EXFILTRATION: WATER LEAKAGE FROM OR AROUND PIPING
      REPLACE DEFECTIVE PIPING USING NEW MATERIALS, AND REPEAT INSPECTION UNTIL DEFECTS ARE WITHIN ALLOWANCES SPECIFIED.

6. TEST NEW PIPING SYSTEMS, AND PARTS OF EXISTING SYSTEMS THAT HAVE BEEN ALTERED, EXTENDED, REPAIRED, FOR LEAKS AND DEFECTS. FOR GRAVITY FLOW STORM DRAINAGE PIPING: TEST ACCORDING TO REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION, UNI-B-6, AND THE FOLLOWING:
    - i. EXCEPTION: PIPING WITH SOILTIGHT JOINTS UNLESS REQUIRED BY AUTHORITIES HAVING JURISDICTION.
    - ii. OPTION: TEST PLASTIC PIPING ACCORDING TO ASTM F 1417
    - iii. OPTION: TEST CONCRETE PIPING ACCORDING TO ASTM C 924

7. SUBMIT TESTING REPORTS AS REQUIRED BY OWNER OR AUTHORITY HAVING JURISDICTION.

ASPHALT PAVING:

A. GENERAL

1. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING OF ANY CHANGES, ERRORS, OR OMISSIONS FOUND ON THE PLANS OR IN THE FIELD, BEFORE WORK IS STARTED OR RESUMED.

2. USE MATERIALS AND GRADATIONS THAT HAVE PERFORMED SATISFACTORILY IN PREVIOUS INSTALLATIONS.

B. PRODUCTS

1. AGGREGATES
    - i. COURSE AGGREGATE: ASTM D 692/D92M, SOUND; ANGULAR CRUSHED STONE, CRUSHED GRAVEL, OR CURED, CRUSHED BLAST-FURNANCE SLAG.
    - ii. FINE AGGREGATE: ASTM D 1073 OR AASHTO M 29, SHARP-EDGED NATURAL SAND OR SAND PREPARED FROM STONE, GRAVEL, CURED BLAST-FURNANCE SLAG, OR COMBINATIONS THEREOF.
        - a. FOR HOT-MIX ASPHALT, LIMIT NATURAL SAND TO A MAXIMUM OF 20 PERCENT BY WEIGHT OF THE TOTAL AGGREGATE MASS.
    - iii. MINERAL FILLER: ASTM D 242 OR AASHTO M 17, ROCK OR SLAG DUST, HYDRAULIC CEMENT, OR OTHER INERT MATERIAL.

2. ASPHALT MATERIALS
    - i. ASPHALT BINDER: AASHTO M 320, PG 64-22 (OR AS OTHERWISE RECOMMENDED BY INDOT STANDARDS)
    - ii. ASPHALT CEMENT: PER INDOT STANDARDS
    - iii. CUTBACK PRIME COAT: PER INDOT STANDARDS
    - iv. EMULSIFIED ASPHALT PRIME COAT: PER INDOT STANDARDS
    - v. TACK COAT: PER INDOT STANDARDS
    - vi. WATER: POTABLE.
    - vii. UNDERSEALING ASPHALT: ASTM D 3141; PUMPING CONSISTENCY.

3. AUXILIARY MATERIALS
    - i. RECYCLED MATERIALS FOR HOT-MIX ASPHALT MIXES: RECLAIMED ASPHALT PAVEMENT; RECLAIMED, UNBOUND AGGREGATE BASE MATERIAL; AND RECYCLED ASPHALT SHINGLES FROM SOURCES AND GRADATIONS THAT HAVE PERFORMED SATISFACTORILY IN PREVIOUS INSTALLATIONS, EQUAL TO PERFORMANCE OF REQUIRED HOT-MIX ASPHALT PAVING PRODUCED FROM ALL NEW MATERIALS.
    - ii. HERBICIDE: COMMERCIAL CHEMICAL FOR WEED CONTROL, REGISTERED BY THE EPA, AND NOT CLASSIFIED AS "RESTRICTED USE" FOR LOCATIONS AND CONDITIONS OF APPLICATION. PROVIDE IN GRANULAR, LIQUID, OR WETTABLE POWDER FORM.
    - iii. SAND: ASTM D 1073 OR AASHTO M 29, GRADE NO. 2 OR NO. 3.

4. MIXES
    - i. RECYCLED CONTENT OF HOT-MIX ASPHALT: PER INDOT STANDARDS
    - ii. HOT-MIX ASPHALT: DENSE-GRADED, HOT-LAID, HOT-MIX ASPHALT PLANT MIXES APPROVED BY INDOT AND COMPLYING WITH THE FOLLOWING REQUIREMENTS:
        - a. PROVIDE MIXES WITH A HISTORY OF SATISFACTORY PERFORMANCE IN GEOGRAPHICAL AREA WHERE PROJECT IS LOCATED.
        - b. BASE COURSE: 25.0 MM OR 19.0 MM (AS INDICATED ON DRAWINGS)
        - c. SURFACE COURSE: 9.5MM

C. EXECUTION

1. EXAMINATION
    - i. VERIFY THAT SUBGRADE IS DRY AND IN SUITABLE CONDITION TO BEGIN PAVING.
    - ii. PROOF-ROLL SUBGRADE BELOW PAVEMENTS WITH HEAVY PNEUMATIC-TIRED EQUIPMENT TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING. DO NOT PROOF-ROLL WET OR SATURATED SUBGRADES. PROOFROLL TO BE PERFORMED BY QUALIFIED GEOTECHNICAL ENGINEER.
        - a. COMPLETELY PROOF-ROLL SUBGRADE IN ONE DIRECTION LIMIT VEHICLE SPEED TO 3 MPH.
        - b. PROOF ROLL WITH A LOADED 10-WHEEL, TANDEM-AXLE DUMP TRUCK WEIGHING NOT LESS THAN 15 TONS
        - c. EXCAVATE SOFT SPOTS, UNSATISFACTORY SOILS, AND AREAS OF EXCESSIVE PUMPING OR RUTTING, AS DETERMINED BY ENGINEER, AND REPLACE WITH COMPACTED BACKFILL OR FILL AS DIRECTED.
        - d. PROCEED WITH PAVING ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

2. SURFACE PREPARATION
    - i. GENERAL: IMMEDIATELY BEFORE PLACING ASPHALT MATERIALS, REMOVE LOOSE AND DELETERIOUS MATERIAL FROM SUBSTRATE SURFACES. ENSURE THAT PREPARED SUBGRADE IS READY TO RECEIVE PAVING.
    - ii. HERBICIDE TREATMENT: APPLY HERBICIDE ACCORDING TO MANUFACTURER'S RECOMMENDED RATES AND WRITTEN APPLICATION INSTRUCTIONS. APPLY TO DRY, PREPARED SUBGRADE OR SURFACE OF COMPACTED-AGGREGATE BASE BEFORE APPLYING PAVING MATERIALS.
        - a. MIX HERBICIDE WITH PRIME COAT IF FORMULATED BY MANUFACTURER FOR THAT PURPOSE
    - iii. CUTBACK PRIME COAT: APPLY UNIFORMLY OVER SURFACE OF COMPACTED UNBOUND-AGGREGATE BASE COURSE AT A RATE OF 0.15 TO 0.50 GAL./SQ. YD. APPLY ENOUGH MATERIAL TO PENETRATE AND SEAL, BUT NOT FLOOD, SURFACE. ALLOW PRIME COAT TO CURE.
        - a. IF PRIME COAT IS NOT ENTIRELY ABSORBED WITHIN 24 HOURS AFTER APPLICATION, SPREAD SAND OVER SURFACE TO BLOT EXCESS ASPHALT. USE ENOUGH SAND TO PREVENT PICKUP UNDER TRAFFIC. REMOVE LOOSE SAND BY SWEEPING BEFORE PAVEMENT IS PLACED AND AFTER VOLATILES HAVE EVAPORATED.
        - b. PROTECT PRIMED SUBSTRATE FROM DAMAGE UNTIL READY TO RECEIVE PAVING.
    - iv. TACK COAT: APPLY UNIFORMLY TO SURFACES OF EXISTING PAVEMENT AT A RATE OF 0.05 TO 0.15 GAL./SQ. YD.
        - a. ALLOW TACK COAT TO CURE UNDISTURBED BEFORE APPLYING HOT-MIX ASPHALT PAVING.
        - b. AVOID SMEARING OR STAINING ADJOINING SURFACES, APPURTENANCES, AND SURROUNDINGS. REMOVE SPILLAGES AND CLEAN AFFECTED SURFACES.

3. PLACING HOT-MIX ASPHALT
    - i. MACHINE PLACE HOT-MIX ASPHALT ON PREPARED SURFACE, SPREAD UNIFORMLY, AND STRIKE OFF. PLACE ASPHALT MIX BY HAND IN AREAS INACCESSIBLE TO EQUIPMENT IN A MANNER THAT PREVENTS SEGREGATION OF MIX. PLACE EACH COURSE TO REQUIRED GRADE, CROSS SECTION, AND THICKNESS WHEN COMPACTED.
        - a. PLACE HOT-MIX ASPHALT BASE COURSE IN NUMBER OF LIFTS AND THICKNESSES INDICATED.
        - b. PLACE HOT-MIX ASPHALT SURFACE COURSE IN SINGLE LIFT.
        - c. SPREAD MIX AT A MINIMUM TEMPERATURE OF 250 DEG F
        - d. BEGIN APPLYING MIX ALONG CENTERLINE OF CROWN FOR CROWNED SECTIONS AND ON HIGH SIDE OF ONE-WAY SLOPES UNLESS OTHERWISE INDICATED.
        - e. REGULATE PAVER MACHINE SPEED TO OBTAIN SMOOTH, CONTINUOUS SURFACE FREE OF PULLS AND TEARS IN ASPHALT-PAVING MAT.
    - ii. PLACE PAVING IN CONSECUTIVE STRIPS NOT LESS THAN 10 FEET WIDE UNLESS INFILL EDGE STRIPS OF A LESSER WIDTH ARE REQUIRED.
        - a. AFTER FIRST STRIP HAS BEEN PLACED AND ROLLED, PLACE SUCCEEDING STRIPS AND EXTEND ROLLING TO OVERLAP PREVIOUS STRIPS. OVERLAP MIX PLACEMENT ABOUT 1 TO 1-1/2 INCHES FROM STRIP TO STRIP TO ENSURE PROPER COMPACTION OF MIX ALONG LONGITUDINAL JOINTS.
        - b. COMPLETE A SECTION OF ASPHALT BASE COURSE BEFORE PLACING ASPHALT SURFACE COURSE.
    - iii. PROMPTLY CORRECT SURFACE IRREGULARITIES IN PAVING COURSE BEHIND PAVER. USE SUITABLE HAND TOOLS TO REMOVE EXCESS MATERIAL FORMING HIGH SPOTS. FILL DEPRESSIONS WITH HOT-MIX ASPHALT TO PREVENT SEGREGATION OF MIX; USE SUITABLE HAND TOOLS TO SMOOTH SURFACE.

4. JOINTS
    - i. CONSTRUCT JOINTS TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING PAVING SECTIONS. CONSTRUCT JOINTS FREE OF DEPRESSIONS, WITH SAME TEXTURE AND SMOOTHNESS AS OTHER SECTIONS OF HOT-MIX ASPHALT COURSE.
        - a. CLEAN CONTACT SURFACES AND APPLY TACK COAT TO JOINTS.
        - b. OFFSET LONGITUDINAL JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 6 INCHES
        - c. OFFSET TRANSVERSE JOINTS, IN SUCCESSIVE COURSES, A MINIMUM OF 24 INCHES
        - d. CONSTRUCT TRANSVERSE JOINTS AT EACH POINT WHERE PAVER ENDS A DAY'S WORK AND RESUMES WORK AT A SUBSEQUENT TIME. CONSTRUCT THESE JOINTS USING EITHER "BULKHEAD" OR "PAPERED" METHOD ACCORDING TO AI MS-22, FOR BOTH "ENDING A LANE" AND "RESUMPTION OF PAVING OPERATIONS."
        - e. COMPACT JOINTS AS SOON AS HOT-MIX ASPHALT WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT.
        - f. COMPACT ASPHALT AT JOINTS TO A DENSITY WITHIN 2 PERCENT OF SPECIFIED COURSE DENSITY.

5. COMPACTION
    - i. GENERAL: BEGIN COMPACTION AS SOON AS PLACED HOT-MIX PAVING WILL BEAR ROLLER WEIGHT WITHOUT EXCESSIVE DISPLACEMENT. COMPACT HOT-MIX PAVING WITH HOT, HAND TAMPERS OR WITH VIBRATORY-PLATE COMPACTORS IN AREAS INACCESSIBLE TO ROLLERS.
        - a. COMPLETE COMPACTION BEFORE MIX TEMPERATURE COOLS TO 185 DEG F
    - ii. BREAKDOWN ROLLING: COMPLETE BREAKDOWN OR INITIAL ROLLING IMMEDIATELY AFTER ROLLING JOINTS AND OUTSIDE EDGE. EXAMINE SURFACE IMMEDIATELY AFTER BREAKDOWN ROLLING FOR INDICATED CROWN, GRADE, AND SMOOTHNESS. CORRECT LAYDOWN AND ROLLING OPERATIONS TO COMPLY WITH REQUIREMENTS.
    - iii. INTERMEDIATE ROLLING: BEGIN INTERMEDIATE ROLLING IMMEDIATELY AFTER BREAKDOWN ROLLING WHILE HOT-MIX ASPHALT IS STILL HOT ENOUGH TO ACHIEVE SPECIFIED DENSITY. CONTINUE ROLLING UNTIL HOT-MIX ASPHALT COURSE HAS BEEN UNIFORMLY COMPACTED TO THE FOLLOWING DENSITY:
        - a. AVERAGE DENSITY: 96 PERCENT OF REFERENCE LABORATORY DENSITY ACCORDING TO ASTM D 6927 OR AASHTO T 245, BUT NOT LESS THAN 94 PERCENT OR GREATER THAN 100 PERCENT.
        - b. AVERAGE DENSITY: 92 PERCENT OF REFERENCE MAXIMUM THEORETICAL DENSITY ACCORDING TO ASTM D 2041, BUT NOT LESS THAN 90 PERCENT OR GREATER THAN 96 PERCENT.
    - iv. FINISH ROLLING: FINISH ROLL PAVED SURFACES TO REMOVE ROLLER MARKS WHILE HOT-MIX ASPHALT IS STILL WARM.
    - v. EDGE SHAPING: WHILE SURFACE IS BEING COMPACTED AND FINISHED, TRIM EDGES OF PAVEMENT TO PROPER ALIGNMENT. BEVEL EDGES WHILE ASPHALT IS STILL HOT; COMPACT THOROUGHLY.
    - vi. REPAIRS: REMOVE PAVED AREAS THAT ARE DEFECTIVE OR CONTAMINATED WITH FOREIGN MATERIALS AND REPLACE WITH FRESH, HOT-MIX ASPHALT. COMPACT BY ROLLING TO SPECIFIED DENSITY AND SURFACE SMOOTHNESS.
    - viii. PROTECTION: AFTER FINAL ROLLING, DO NOT PERMIT VEHICULAR TRAFFIC ON PAVEMENT UNTIL IT HAS COOLED AND HARDENED.
    - viiii. ERECT BARRICADES TO PROTECT PAVING FROM TRAFFIC UNTIL MIXTURE HAS COOLED ENOUGH NOT TO BECOME MARKED.

6. INSTALLATION TOLERANCES
    - i. PAVEMENT THICKNESS: COMPACT EACH COURSE TO PRODUCE THE THICKNESS INDICATED WITHIN THE FOLLOWING TOLERANCES:
        - a. BASE COURSE: PLUS OR MINUS 1/2 INCH
        - b. SURFACE COURSE: PLUS 1/4 INCH NO MINUS.
    - ii. PAVEMENT SURFACE SMOOTHNESS: COMPACT EACH COURSE TO PRODUCE A SURFACE SMOOTHNESS WITHIN THE FOLLOWING TOLERANCES AS DETERMINED BY USING A 10-FOOT STRAIGHTEDGE APPLIED TRANSVERSELY OR LONGITUDINALLY TO PAVED AREAS:
        - a. BASE COURSE: 1/4 INCH
        - b. SURFACE COURSE: 1/8 INCH
        - c. CROWNED SURFACES: TEST WITH CROWNED TEMPLATE CENTERED AND AT RIGHT ANGLE TO CROWN. MAXIMUM ALLOWABLE VARIANCE FROM TEMPLATE IS 1/4 INCH

7. FIELD QUALITY CONTROL
    - i. TESTING AGENCY: CONTRACTOR TO ENGAGE A QUALIFIED TESTING AGENCY TO PERFORM TESTS AND INSPECTIONS.
    - ii. THICKNESS: IN-PLACE COMPACTED THICKNESS OF HOT-MIX ASPHALT COURSES WILL BE DETERMINED ACCORDING TO ASTM D 3549.
    - iii. SURFACE SMOOTHNESS: FINISHED SURFACE OF EACH HOT-MIX ASPHALT COURSE WILL BE TESTED FOR COMPLIANCE WITH SMOOTHNESS TOLERANCES.
    - iv. IN-PLACE DENSITY: TESTING AGENCY WILL TAKE SAMPLES OF UNCOMPACTED PAVING MIXTURES AND COMPACTED PAVEMENT ACCORDING TO ASTM D 979 OR AASHTO T 168.
        - a. REFERENCE MAXIMUM THEORETICAL DENSITY WILL BE DETERMINED BY AVERAGING RESULTS FROM FOUR SAMPLES OF HOT-MIX ASPHALT-PAVING MIXTURE DELIVERED DAILY TO SITE, PREPARED ACCORDING TO ASTM D 2041, AND COMPACTED ACCORDING TO JOB-MIX SPECIFICATIONS.
        - b. IN-PLACE DENSITY OF COMPACTED PAVEMENT WILL BE DETERMINED BY TESTING CORE SAMPLES ACCORDING TO ASTM D 1188 OR ASTM D 2726.
    - v. ONE CORE SAMPLE WILL BE TAKEN FOR EVERY 1000 SQ. YD. OR LESS OF INSTALLED PAVEMENT, WITH NO FEWER THAN THREE CORES TAKEN.
    - vi. FIELD DENSITY OF IN-PLACE COMPACTED PAVEMENT MAY ALSO BE DETERMINED BY NUCLEAR METHOD ACCORDING TO ASTM D 2950 AND CORRELATED WITH ASTM D 1188 OR ASTM D 2726.
    - vii. REPLACE AND COMPACT HOT-MIX ASPHALT WHERE CORE TESTS WERE TAKEN.
    - viii. REMOVE AND REPLACE OR INSTALL ADDITIONAL HOT-MIX ASPHALT WHERE TEST RESULTS OR MEASUREMENTS INDICATE THAT IT DOES NOT COMPLY WITH SPECIFIED REQUIREMENTS.

CONCRETE PAVING:

A. GENERAL

1. CONCRETE PAVING SECTION INCLUDES DRIVEWAYS, ROADWAYS, PARKING LOTS, CURBS AND GUTTERS, WALKS, AND CONCRETE APRONS.

2. ACTION SUBMITTALS
    - i. PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.
    - ii. OTHER ACTION SUBMITTALS
        - a. DESIGN MIXTURES: FOR EACH CONCRETE PAVING MIXTURE. INCLUDE ALTERNATE DESIGN MIXTURES WHEN CHARACTERISTICS OF MATERIALS PROJECT CONDITIONS, WEATHER, TEST RESULTS, OR OTHER CIRCUMSTANCES WARRANT ADJUSTMENTS.
        - b. MATERIAL TEST REPORTS: FROM A QUALIFIED TESTING AGENCY INDICATING AND INTERPRETING TEST RESULTS FOR COMPLIANCE OF THE FOLLOWING WITH REQUIREMENTS INDICATED, BASED ON COMPREHENSIVE TESTING OF CURRENT MATERIALS.

3. QUALITY ASSURANCE
    - i. READY-MIX-CONCRETE MANUFACTURER QUALIFICATIONS: A FIRM EXPERIENCED IN MANUFACTURING READY-MIXED CONCRETE PRODUCTS AND THAT COMPLIES WITH ASTM C 94/C 94M REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT.
    - ii. ACI PUBLICATIONS: COMPLY WITH ACI 301 (ACI 301M) UNLESS OTHERWISE INDICATED.
    - iii. HANDICAP STANDARDS: PROVIDE RAMPS INDICATED FOR HANDICAP ACCESS IN ACCORDANCE WITH ANSI A117 AND FEDERAL AMERICANS WITH DISABILITIES ACT (ADA).

B. PRODUCTS

1. STEEL REINFORCEMENT
    - i. RECYCLED CONTENT: POST CONSUMER RECYCLED CONTENT PLUS ONE-HALF OF PRECONSUMER RECYCLED CONTENT NOT LESS THAN 25 PERCENT.
    - ii. PLAIN-STEEL WELDED WIRE REINFORCEMENT: ASTM A 185/A 185M, FABRICATED FROM AS-DRAWN STEEL WIRE INTO FLAT SHEETS.
    - iii. DEFORMED-STEEL WELDED WIRE REINFORCEMENT: ASTM A 497/A 497M, FLAT SHEET.
    - iv. REINFORCING BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420); DEFORMED.
    - v. PLAIN-STEEL WIRE: ASTM A 82/A 82M, AS DRAWN.
    - vi. DEFORMED-STEEL WIRE: ASTM A 496/A 496M.
    - vii. DOWEL BARS: ASTM A 615/A 615M, GRADE 60 (GRADE 420) PLAIN-STEEL BARS; ZINC COATED (GALVANIZED) AFTER FABRICATION ACCORDING TO ASTM A 767/A 767M, CLASS I COATING. CUT BARS TRUE TO LENGTH WITH ENDS SQUARE AND FREE OF BURRS.
    - viii. BAR SUPPORTS: BOLSTERS, CHAIRS, SPACERS, AND OTHER DEVICES FOR SPACING, SUPPORTING, AND FASTENING REINFORCING BARS, WELDED WIRE REINFORCEMENT, AND DOWELS IN PLACE. MANUFACTURE BAR SUPPORTS ACCORDING TO CRSI'S "MANUAL OF STANDARD PRACTICE" FROM STEEL WIRE, PLASTIC, OR PRECAST CONCRETE OF GREATER COMPRESSIVE STRENGTH THAN CONCRETE SPECIFIED.

2. CONCRETE MATERIALS
    - i. CEMENTITIOUS MATERIAL: USE THE FOLLOWING CEMENTITIOUS MATERIALS, OF SAME TYPE, BRAND, AND SOURCE THROUGHOUT PROJECT:
        - a. PORTLAND CEMENT: ASTM C 150, PORTLAND CEMENT TYPE I.
        - b. FLY ASH: ASTM C 618, CLASS C OR CLASS F.
        - c. GROUND GRANULATED BLAST-FURNACE SLAG: ASTM C 989, GRADE 100 OR 120.
    - ii. NORMAL-WEIGHT AGGREGATES: ASTM C 33,UNIFORMLY GRADED, AND AS FOLLOWS:
        - a. COMBINED AGGREGATE GRADATION: WELL GRADED FROM COARSEST TO FINEST WITH NOT MORE THAN 18 PERCENT AND NOT LESS THAN 8 PERCENT RETAINED ON A INDIVIDUAL SIEVE, EXPECT THAT LESS THAN 8 PERCENT MAY BE RETAINED ON COARSEST SIEVE AND ON NO. 50 SIEVE, AND LESS THAN 8 PERCENT MAY BE RETAINED ON SIEVES FINER THAN NO. 50.
        - b. USE CRUSHED LIMESTONE COARSE AGGREGATE FOR CONCRETE EXPOSED TO WEATHER.
    - iii. WATER: POTABLE AND COMPLYING WITH ASTM C 94/C 94M.
    - iv. AIR-ENTRAINING ADMIXTURE: ASTM C 260.
    - v. CHEMICAL ADMIXTURES: ADMIXTURES CERTIFIED BY MANUFACTURER TO BE COMPATIBLE WITH OTHER ADMIXTURES AND TO CONTAIN NOT MORE THAN 0.1 PERCENT WATER-SOLUBLE CHLORIDE IONS BY MASS OF CEMENTITIOUS MATERIAL.
    - vi. NOTE: WHERE CLASS A, B, OR C CONCRETE IS REFERENCE IN PLANS OR SPECIFICATIONS, THE CLASS IS AS DEFINED IN ACI 347-04.

3. CURING MATERIALS
    - i. ABSORPTIVE COVER: AASHTO M 182, CLASS 3, BURLAP CLOTH MADE FROM JUTE OR KENAF, WEIGHING APPROXIMATELY 9 OZ./SQ. YD. (305 G/SQ. M) DRY.
    - ii. MOISTURE-RETAINING COVER: ASTM C 171, POLYETHYLENE FILM OR WHITE BURLAP-POLYETHYLENE SHEET.
    - iii. WATER: POTABLE.
    - iv. EVAPORATION RETARDER: WATERBORNE, MONOMOLECULAR, FILM FORMING, MANUFACTURED FOR APPLICATION TO FRESH CONCRETE.
    - v. CLEAR, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 1, CLASS B, DISSIPATING.
    - vi. WHITE, WATERBORNE, MEMBRANE-FORMING CURING COMPOUND: ASTM C 309, TYPE 2, CLASS B, DISSIPATING.

4. FIBER REINFORCEMENT
    - i. FIBROUS REINFORCEMENT: 100% VIRGIN HOMOPOLYMER POLYPROPYLENE MULTIFILAMENT FIBERS FOR SECONDARY REINFORCEMENT OF CONCRETE, ASTM C 116, TYPE III. SHALL CONTAIN NO REPROCESSED OLEFIN MATERIALS.
        - a. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING: FIBERMESH 150; PROPEX CONCRETE SYSTEMS CORP., STEALTH FIBER MICRO REINFORCEMENT; SI CONCRETE SYSTEMS, OR APPROVED EQUAL

5. RELATED MATERIALS
    - i. JOINT FILLERS: ASTM D 1751, ASPHALT-SATURATED CELLULOSIC FIBER OR ASTM D 1752, CORK OR SELF-EXPANDING CORK IN PREFORMED STRIPS.
    - ii. PENETRATING ANTI-SPALLING SEALER: THE SEALER SHALL BE A SILANE WATER BASED COMPOUND WHICH HAS A 96% CHLORIDE-ION SCREEN AND A REPELLENCY FACTOR OF 92% WHEN TESTED IN ACCORDANCE WITH NCHRP #244, TEST METHOD. IN ADDITION, THE SEALER-TREATED CONCRETE MUST EXHIBIT NO SCALING WHEN EXPOSED TO 120 CYCLES OF FREEZING-AND-THAWING IN ACCORDANCE WITH ASTM C 672.
        - a. PRODUCTS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE ONE OF THE FOLLOWING: "WEATHER WORKER HEAVY-DUTY WB (J-27 WB)"; DAYTON SUPERIOR CORP., "ENVIROSEAL 20"; HYDROZO INCORP., "PENTANE WB"; L & M CONSTRUCTION CHEMICALS, INC.

6. CONCRETE MIXTURES
    - i. PREPARE DESIGN MIXTURES, PROPORTIONED ACCORDING TO ACI 301 (ACI 301M), WITH THE FOLLOWING PROPERTIES:
        - a. COMPRESSIVE STRENGTH (28 DAYS): 4000 PSI (27.6 MPA).
        - b. MAXIMUM WATER-CEMENTITIOUS MATERIALS RATIO AT POINT OF PLACEMENT: 0.45.
        - c. SLUMP LIMIT: 5 INCHES (125 MM), PLUS OR MINUS 1 INCH (25 MM).
        - d. AIR CONTENT: 6.5 PERCENT PLUS OR MINUS 1.5 PERCENT.
    - ii. CHEMICAL ADMIXTURES: USE ADMIXTURES ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

7. CONCRETE MIXING
    - i. READY-MIXED CONCRETE: MEASURE, BATCH, AND MIX CONCRETE MATERIALS AND CONCRETE ACCORDING TO ASTM C 94/C 94M. FURNISH BATCH CERTIFICATES FOR EACH BATCH DISCHARGED AND USED IN THE WORK.

C. EXECUTION

1. EXAMINATION AND PREPARATION
    - i. PROOF-ROLL PREPARED SUBBASE SURFACE BELOW CONCRETE PAVING TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS YIELDING.
    - ii. REMOVE LOOSE MATERIAL FROM COMPACTED SUBBASE SURFACE IMMEDIATELY BEFORE PLACING CONCRETE.

2. EDGE FORMS AND SCREED CONSTRUCTION
    - i. SET, BRACE, AND SECURE EDGE FORMS, BULKHEADS, AND INTERMEDIATE SCREED GUIDES TO REQUIRED LINES, GRADES, AND ELEVATIONS. INSTALL FORMS TO ALLOW CONTINUOUS PROGRESS OF WORK AND SO FORMS CAN REMAIN IN PLACE AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT.
    - ii. CLEAN FORMS AFTER EACH USE AND COAT WITH FORM-RELEASE AGENT TO ENSURE SEPARATION FROM CONCRETE WITHOUT DAMAGE.

3. STEEL REINFORCEMENT
    - i. GENERAL: COMPLY WITH CRSI'S "MANUAL OF STANDARD PRACTICE" FOR FABRICATING, PLACING, AND SUPPORTING REINFORCEMENT.

4. JOINTS
    - i. GENERAL: FORM CONSTRUCTION, ISOLATION, AND CONTRACTION JOINTS AND TOOL EDGES TRUE TO LINE, WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE UNLESS OTHERWISE INDICATED.
    - ii. CONSTRUCTION JOINTS: SET CONSTRUCTION JOINTS AT SIDE AND END TERMINATIONS OF PAVING AND AT LOCATIONS WHERE PAVING OPERATIONS ARE STOPPED FOR MORE THAN ONE-HALF HOUR UNLESS PAVING TERMINATES AT ISOLATION JOINTS.
    - iii. ISOLATION JOINTS: FORM ISOLATION JOINTS OF PREFORMED JOINT-FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, STRUCTURES, OTHER FIXED OBJECTS, AND WHERE INDICATED.
    - iv. CONTRACTION JOINTS: FORM WEAKENED-PLANE CONTRACTION JOINTS, SECTIONING CONCRETE INTO AREAS AS INDICATED. CONSTRUCT CONTRACTION JOINTS FOR A DEPTH EQUAL TO AT LEAST ONE-FOURTH OF THE CONCRETE THICKNESS.
    - v. EDGING: AFTER INITIAL FLOATING, TOOL EDGES OF PAVING, GUTTERS, CURBS, AND JOINTS IN CONCRETE WITH AN EDGING TOOL TO A 1/4-INCH (6-MM) RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE EDGING-TOOL MARKS ON CONCRETE SURFACES.

5. CONCRETE PLACEMENT
    - i. MOISTEN SUBBASE TO PROVIDE A UNIFORM DAMPENED CONDITION AT TIME CONCRETE IS PLACED.
    - ii. COMPLY WITH ACI 301 (ACI 301M) REQUIREMENTS FOR MEASURING, MIXING, TRANSPORTING, PLACING, AND CONSOLIDATING CONCRETE.
    - iii. DEPOSIT AND SPREAD CONCRETE IN A CONTINUOUS OPERATION BETWEEN TRANSVERSE JOINTS. DO NOT PUSH OR DRAG CONCRETE INTO PLACE OR USE VIBRATORS TO MOVE CONCRETE INTO PLACE.
    - iv. SCREED PAVING SURFACE WITH A STRAIGHTEDGE AND STRIKE OFF.
    - v. COMMENCE INITIAL FLOATING USING BULL FLOATS OR DARBIES TO IMPART AN OPEN-TEXTURED AND UNIFORM SURFACE PLANE BEFORE EXCESS MOISTURE OR BLEED WATER APPEARS ON THE SURFACE. DO NOT FURTHER DISTURB CONCRETE SURFACES BEFORE BEGINNING FINISHING OPERATIONS OR SPREADING SURFACE TREATMENTS.

6. CONCRETE PROTECTION AND CURING
    - i. GENERAL: PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES.
    - ii. COMPLY WITH ACI 306.1 FOR COLD-WEATHER PROTECTION.
    - iii. EVAPORATION RETARDER: APPLY EVAPORATION RETARDER TO CONCRETE SURFACES IF HOT, DRY, OR WINDY CONDITIONS CAUSE MOISTURE LOSS APPROACHING 0.2 LB/SQ. FT. X H (1 KG/SQ. M X H) BEFORE AND DURING FINISHING OPERATIONS. APPLY ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS AFTER PLACING, SCREEDING, AND BULL FLOATING OR DARBYING CONCRETE BUT BEFORE FLOAT FINISHING.
    - iv. BEGIN CURING AFTER FINISHING CONCRETE BUT NOT BEFORE FREE WATER HAS DISAPPEARED FROM CONCRETE SURFACE.
    - v. CURING METHODS: CURE CONCRETE BY MOISTURE CURING, MOISTURE-RETAINING-COVER CURING, CURING COMPOUND, OR A COMBINATION OF THESE.
    - vi. PENETRATING, ANTI-SPALLING SEALER TREATMENT: APPLY COMPOUNDS TO CLEAN, DRY CONCRETE SURFACES FREE OF OIL, DIRT, AND OTHER FOREIGN MATERIAL ACCORDING TO MANUFACTURER'S SPECIFICATIONS. SEALER TO BE APPLIED TO ALL EXTERIOR CONCRETE PAVING AND CURBS AFTER CONCRETE HAS CURED 28 DAYS.

7. PAVING TOLERANCES
    - i. COMPLY WITH TOLERANCES IN ACI 117 AND AS FOLLOWS:
        - a. ELEVATION: 3/4 INCH (19 MM).
        - b. THICKNESS: PLUS 3/8 INCH (10 MM), MINUS 1/4 INCH (6 MM).
        - c. SURFACE: GAP BELOW 10-FOOT- (3-M-) LONG, UNLEVELED STRAIGHTEDGE NOT TO EXCEED 1/2 INCH (13 MM).
        - d. JOINT SPACING: 3 INCHES (75 MM).
        - e. CONTRACTION JOINT DEPTH: PLUS 1/4 INCH (6 MM), NO MINUS.
        - f. JOINT WIDTH: PLUS 1/8 INCH (3 MM), NO MINUS.
    - ii. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE MARKINGS OF DIMENSIONS INDICATED WITH UNIFORM, STRAIGHT EDGES. APPLY AT MANUFACTURER'S RECOMMENDED RATES TO PROVIDE A MINIMUM WET FILM THICKNESS OF 15 MILS (0.4 MM).

8. REPAIRS AND PROTECTION
    - i. REMOVE AND REPLACE CONCRETE PAVING THAT IS BROKEN, DAMAGED, OR DEFECTIVE OR THAT DOES NOT COMPLY WITH REQUIREMENTS IN THIS SECTION. REMOVE WORK IN COMPLETE SECTIONS FROM JOINT TO JOINT UNLESS OTHERWISE APPROVED BY ENGINEER.
    - ii. PROTECT CONCRETE PAVING FROM DAMAGE. EXCLUDE TRAFFIC FROM PAVING FOR AT LEAST 14 DAYS AFTER PLACEMENT. WHEN CONSTRUCTION TRAFFIC IS PERMITTED, MAINTAIN PAVING AS CLEAN AS POSSIBLE BY REMOVING SURFACE STAINS AND SPILLAGE OF MATERIALS AS THEY OCCUR.
    - iii. MAINTAIN CONCRETE PAVING FREE OF STAINS, DISCOLORATION, DIRT, AND OTHER FOREIGN MATERIAL. SWEEP PAVING NOT MORE THAN TWO DAYS BEFORE DATE SCHEDULED FOR SUBSTANTIAL COMPLETION INSPECTIONS.

DEMOLITION:

A. GENERAL

1. THE CONTRACTOR SHALL REMOVE AND DISPOSE OFF SITE, ALL EXISTING STRUCTURES, FENCES, CONCRETE AND PAVEMENT ON SITE, UNLESS NOTED TO REMAIN ON THE CONTRACT DRAWINGS.
2. THE CONTRACTOR SHALL PROTECT AND NOT DESTROY PROPERTY CORNER MONUMENTS DURING CONSTRUCTION.

B. SUMMARY

THIS SECTION REQUIRES REMOVAL AND DISPOSAL, OFF SITE, OF THE FOLLOWING:
1. ASPHALT PARKING LOT.
2. MISCELLANEOUS CONCRETE, STORM SEWER, PLANT MATERIAL, UNDERGROUND CONDUITS, SITE LIGHTS, ETC., LOCATED ON SITE.

C. SUBMITTALS

SUBMIT THE FOLLOWING IN ACCORDANCE WITH CONDITIONS OF CONTRACT AND DIVISION 1 SPECIFICATION SECTIONS.
1. A PROPOSED SCHEDULE OF OPERATIONS COORDINATION FOR SHUTOFF, CAPPING, AND CONTINUATION OF UTILITY SERVICES AS REQUIRED.
2. PROVIDE A DETAILED SEQUENCE AND SCHEDULE OF DEMOLITION AND REMOVAL WORK TO BE COMPLETED.

D. JOB CONDITIONS

1. SALVAGED MATERIALS: ITEMS OF SALVAGEABLE VALUE TO CONTRACTOR MAY BE REMOVED FROM STRUCTURE AS WORK PROGRESSES. TRANSPORT SALVAGED ITEMS FROM THE SITE AS THEY ARE REMOVED.
    - i. STORAGE OR SALE OF REMOVED ITEMS WILL NOT BE PERMITTED ON SITE.
2. EXPLOSIVES: USE OF ANY TYPE OF EXPLOSIVES WILL NOT BE PERMITTED.
3. TRAFFIC: CONDUCT DEMOLITION OPERATIONS AND REMOVAL OF DEBRIS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.
    - i. DO NOT CLOSE OR OBSTRUCT ROADS, STREETS, WALKS OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM THE LOCAL AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS, IF REQUIRED BY GOVERNING AUTHORITIES.
4. PROTECTIONS: ENSURE SAFE PASSAGE OF PERSONS AROUND AREAS OF DEMOLITION. CONDUCT OPERATIONS TO PREVENT DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, AND OTHER FACILITIES AND INJURY TO PERSONS.
5. DAMAGES: PROMPTLY REPAIR ANY DAMAGES CAUSED TO ADJACENT FACILITIES BY DEMOLITION OPERATIONS.
6. UTILITY SERVICES: MAINTAIN EXISTING UTILITIES TO STAY IN SERVICE AND PROTECT AGAINST DAMAGE DURING DEMOLITION OPERATIONS. DISCONNECT, CAP AND REMOVE UTILITY SERVICES PER LOCAL REQUIREMENTS. DO NOT START DEMOLITION WORK UNTIL UTILITY DISCONNECTIONS HAVE BEEN COMPLETED TO THE SATISFACTION OF LOCAL UTILITIES.

E. DEMOLITION

1. BELOW-GRADE CONSTRUCTION: DEMOLISH FOUNDATION WALLS AND OTHER BELOW-GRADE CONSTRUCTION, INCLUDING CONCRETE SLABS, TO A DEPTH OF NOT LESS THAN 48 INCHES BELOW LOWEST FOUNDATION LEVEL.
2. FILLING VOIDS: COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION STRUCTURES.

F. DISPOSAL OF DEMOLISHED MATERIALS

1. GENERAL: REMOVE WEEKLY FROM SITE ACCUMULATED DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM DEMOLITION OPERATIONS.
2. REMOVAL: TRANSPORT MATERIALS REMOVED FROM DEMOLITION OPERATIONS AND LEGALLY DISPOSE OF OFF-SITE.

NO.	DATE	REMARKS

MADELINE ROMEO S... REGISTERED ... NOT FOR CONSTRUCTION ... INDIANA ... PROFESSIONAL ENGINEER

SPECIFICATIONS

BUILT BLOOMINGTON
1320 S ROGERS STREET
BLOOMINGTON, INDIANA

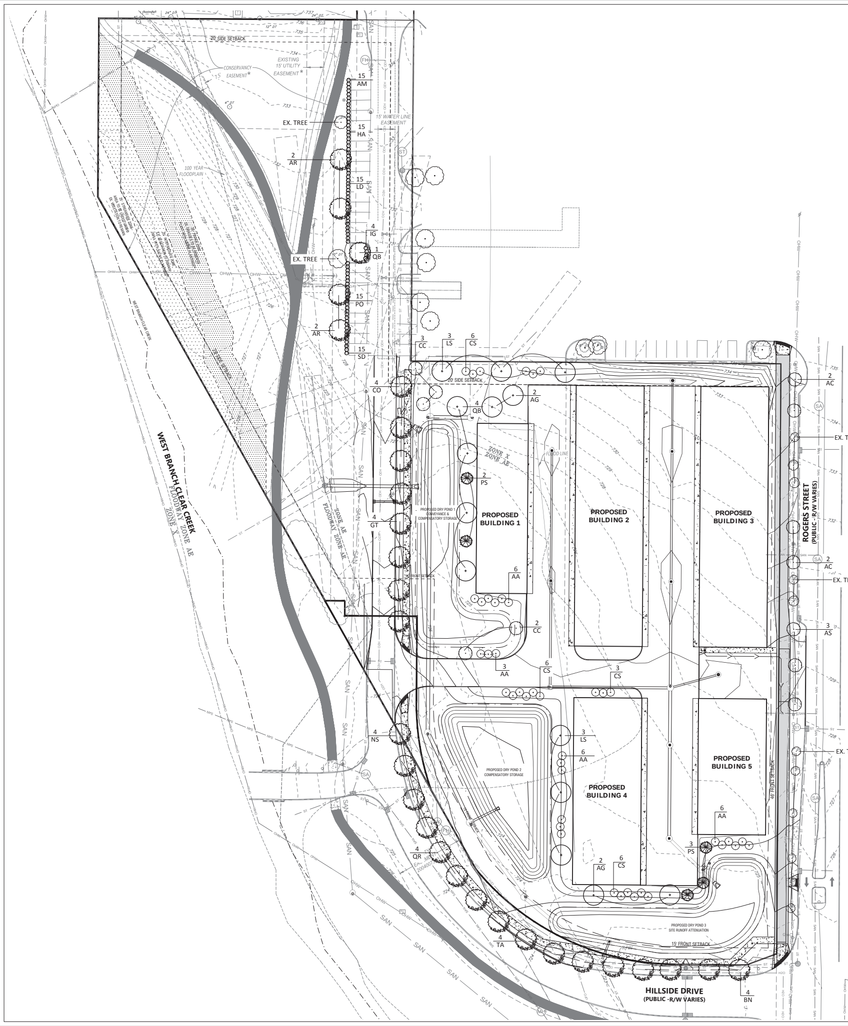
Spaceco
Civil Engineering & Surveying
Rosemont, IL – Morris, IL – Indianapolis, IN
spacecoinc.com

FILENAME: 13341_C10.0_SPEC

DATE: 09/04/2025

JOB NO. 13341

SHEET C10.0



Street Tree Requirements
1 tree per 30LF
Rogers Street: 520LF = 17 Trees
Trees Provided: 17
10 Existing, 7 Proposed
Hillside Drive: 730LF = 24 Trees
Trees Provided: 24

Non-Residential Lot Landscaping Area: 1.5 Acres
Required per Acre:
9 Large Trees (1.5) = 14 Large Trees
Trees Provided: 14
3 Evergreen Trees (1.5) = 5 Evergreen Trees
Trees Provided: 5
3 Ornamental Trees (1.5) = 5 Ornamental Trees
Trees Provided: 5
27 Shrubs (1.5) = 41 Shrubs
Shrubs Provided: 42

Parking Lot Landscaping
1 Tree per 4 spaces
3 Shrubs per space
Total Spaces: 25
Trees Required: 25/4 = 6.25 trees
Trees Provided: 6
Shrubs Required: 25*3 = 75 shrubs
Shrubs Provided: 75

NATIVE PLANTINGS - 25' INTERMEDIATE ZONE*

Andorpogon gerardii	Big Bluestem - 170
Bouteloua curtipendula	Side Oats Gramma - 170
Carex vulpinoidea	Brown Fox Sedge - 170
Elymus virginicus	Virginia Wild Rye - 170
Sorghastrum nutans	Indian Grass - 170
Coreopsis palmata	Prairie coreopsis - 170
Eurtochium maculatum	Spotted-Joe-Pyeweed - 170
Liatris pycnostachya	Prairie Blazing Star - 170
Physostegia virginiana	Obedient Plant - 170
Vernonia fasiculata	Smooth Ironweed - 170

Native planting plugs to be installed within the 25' intermediate zone at 2' on center in a triangular pattern. Total plugs: 1,870

NATIVE PLANTINGS - 25' FRINGE ZONE*

Andorpogon gerardii	Big Bluestem - 715
Bouteloua curtipendula	Side Oats Gramma - 715
Carex vulpinoidea	Brown Fox Sedge - 715
Chasmanthium latifolium	Indian Sea Oats - 715
Elymus virginicus	Virginia Wild Rye - 715
Sorghastrum nutans	Indian Grass - 715
Baptisia australis	False Blue Indigo - 715
Coreopsis palmata	Prairie coreopsis - 715
Echinacea purpurea	Purple Coneflower - 715
Eryngium yuccifolium	Rattlesnake Master - 715
Eurtochium maculatum	Spotted-Joe-Pyeweed - 715
Liatris pycnostachya	Prairie Blazing Star - 715
Physostegia virginiana	Obedient Plant - 715
Rudbeckia subtomentosa	Black Eyed Susan - 715
Solidago speciosa	Showy Goldenrod - 715
Vernonia fasiculata	Smooth Ironweed - 715

Native planting plugs to be installed within the 25' fringe zone at 1' on center in a triangular pattern. Total plugs: 11,440

PLANT SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME	QTY	SIZE	CONDITION
STREET TREES					
AC	*Amelanchier canandensis*	Shadblow Serviceberry	4	2"	B & B
AS	*Acer saccharum 'Barrett Cole'*	Apollo Maple	3	2"	B & B
BN	*Betula nigra*	River Birch	4	2.5"	B & B
CO	*Celtis occidentalis*	Common Hackberry	4	2.5"	B & B
GT	*Gleditsia triacanthos 'Impcole'*	Imperial Honeylocust	4	2.5"	B & B
NS	*Nyssa sylvatica*	Black Gum	4	2.5"	B & B
QR	*Quercus rubra*	Red Oak	4	2.5"	B & B
TA	*Tilia americana*	American Basswood	4	2.5"	B & B
INTERIOR TREES					
AG	*Aesculus glabra*	Ohio Buckeye	4	2.5"	B & B
AR	*Acer rubrum*	Red Maple	6	2.5"	B & B
CC	*Cercis canadensis*	Redbud – Single Stem	5	2"	B & B
LS	*Liquidambar styraciflua*	Sweetgum	6	2.5"	B & B
PS	*Pinus strobus*	White Pine	5	6'	B & B
QB	*Quercus bicolor*	Swamp White Oak	4	2.5"	B & B
SHRUBS					
AA	*Aronia arbutifolia*	Red Chokeberry	21	24"	#5 Cont.
AM	*Aronia melanocarpa*	Black Chokeberry	15	24"	#5 Cont.
CS	*Cornus sericea' 'Arctic Fire'*	Arctic Fire Dogwood	21	24"	#5 Cont.
HA	*Hydrangea arboresence*	Smooth Hydrangea	15	24"	#5 Cont.
IG	*Ilex glabra*	Inkberry	4	24"	#5 Cont.
LB	*Lindera benzoin*	Spicebush	15	24"	#5 Cont.
PO	*Physocarpus opulifolius ' Donna May'*	Little Devil Ninebark	15	24"	#5 Cont.
SD	*Salix discolor*	Pussy Willow	10	24"	#5 Cont.
VD	*Viburnum dentatum*	Arrowwood Viburnum	10	36"	#5 Cont.

PLANTING NOTES:

1. IN CASE OF DISCREPANCIES BETWEEN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE

2. ALL SHRUB AND TREE PLANTING AREAS TO BE COVERED WITH 3" LAYER OF SHREDDED HARDWOOD BARK MULCH THAT IS BROWN IN COLOR.

3. ALL BACKFILL FOR TREE AND SHRUB PLANTINGS SHALL BE FROM EXISTING SOILS. A 5–10–5 ANALYSIS SLOW RELEASE FERTILIZER SHALL BE INCORPORATED INTO BACKFILL AT APPROVED RATES.

4. FINAL PLACEMENT OF PLANT MATERIALS, ETC. SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING OPERATIONS. ALL TREE LOCATIONS SHALL BE MARKED WITH A WOOD STAKE INDICATING VARIETY AND SIZE OF TREE. PLANTING BED LINES SHALL BE MARKED WITH HIGHLY VISIBLE PAINT LINES WITH OCCASIONAL WOOD STAKES FOR REFERENCE. ALL STAKES SHALL BE REMOVED FOLLOWING PLANTING OPERATIONS. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST PLANT LOCATIONS ON THE SITE.

5. NO SUBSTITUTIONS OF PLANT MATERIALS WILL BE ALLOWED. IF PLANTS ARE NOT AVAILABLE, THE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT PRIOR TO BIDDING IN WRITING. PLANTS MAY BE INSPECTED AND APPROVED OR REJECTED ON THE JOB SITE BY THE LANDSCAPE ARCHITECT.

6. ALL PLANTS SHALL MEET OR EXCEED AMERICAN STANDARDS FOR NURSERY STOCK, ANSI Z60.1–2004.

7. PLANTS AND ALL OTHER MATERIALS TO BE STORED ON SITE WILL BE PLACED WHERE THEY WILL NOT CONFLICT WITH CONSTRUCTION OPERATIONS.

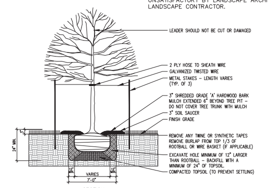
8. CONTRACTOR TO OBTAIN AND PAY FOR ALL PERMITS AND FEES THAT MAY BE REQUIRED FOR HIS PORTION OF THE WORK.

9. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IN WRITING PRIOR TO BID DATE OF ANY PLANTS THEY FEEL MAY NOT SURVIVE IN LOCATIONS AS NOTED ON THE PLANS.

10. ALL LANDSCAPE PLANTINGS TO BE MAINTAINED BY CONTRACTOR FOR 60 DAYS FOLLOWING PLANTING.. GUY WIRES, HOSE AND STAKES TO BE REMOVED ONE YEAR AFTER PLANTING.. MAINTENANCE TO INCLUDE WATERING, WEEDING, CULTIVATING, MULCHING, MOWING, AND ALL OTHER NECESSARY OPERATIONS REQUIRED FOR PROPER ESTABLISHMENT OF PLANTINGS.

11. ALL INSTALLED PLANTINGS SHALL BE APPROPRIATELY WATERED FOR A MINIMUM PERIOD OF ONE YEAR TO ALLOW FOR THEIR ESTABLISHMENT

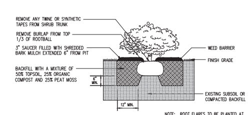
12. ALL LANDSCAPE PLANTINGS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FOLLOWING FINAL INSPECTION BY LANDSCAPE ARCHITECT. AT END OF THIS PERIOD, PLANT MATERIAL TERMED DEAD OR UNSATISFACTORY BY LANDSCAPE ARCHITECT SHALL BE REPLACED AT NO ADDITIONAL CHARGE BY THE LANDSCAPE CONTRACTOR.



NOTE: ROOT FLARES TO BE PLANTED AT OR SLIGHTLY ABOVE GRADE
GUY WIRES, HOSE AND STAKES TO BE REMOVED ONE YEAR AFTER PLANTING
SHREDDED HARDWOOD BARK MULCH TO BE BROWN IN COLOR

DECIDUOUS TREE DETAIL

NOT TO SCALE



NOTE: ROOT FLARES TO BE PLANTED AT OR SLIGHTLY ABOVE GRADE
SHREDDED HARDWOOD BARK MULCH TO BE BROWN IN COLOR

SHRUB DETAIL

NOT TO SCALE

811
Know what's below. Call before you dig.

N

SCALE 1" = 40'
0 40 80

NO.	DATE	REMARKS
1	08/15/24	PER PLANNING COMMENTS

MATTHEW S. O... REGISTERED LANDSCAPE ARCHITECT STATE OF INDIANA — NOT FOR CONSTRUCTION

LANDSCAPE PLAN

BUILT BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTN, INDIANA

Spaceco
Civil Engineering & Surveying
spacecoinc.com Rosemont, IL – Morris, IL – Indianapolis, IN

FILENAME: 13341_L1.0
DATE: 09/03/2025
JOB NO. 13341
SHEET L1.0

PROPOSED FACILITY FOR:

BUILT–BLOOMINGTON

(S-1 SELF STORAGE)

1320 S. ROGERS STREET

BLOOMINGTON, INDIANA 47403

NEW SELF STORAGE BUILDINGS

BUILDING TYPE: V–B

OCCUPANCY: S–1

BUILDING #1–6,750 S.F.
OCCUPANT LOAD: 6,750/500=13

BUILDING #2–13,800 S.F.(with area separations)
OCCUPANT LOAD: 13,800/500=28 (3 hour fire wall)

BUILDING #3–13,800 S.F.(with area separations)
OCCUPANT LOAD: 13,800/500=28 (3 hour fire wall)

BUILDING #4–9,900 S.F. (with area increase)
OCCUPANT LOAD: 9,900/500=20 (SECTION 506.2 506.2.1)

BUILDING #5–7,200 S.F.
OCCUPANT LOAD: 7,200/500=14

CODE SUMMARY

2014 INDIANA BUILDING CODE (2012 INTERNATIONAL BUILDING CODE WITH INDIANA AMENDMENTS)
2012 IND. PLUMBING CODE 2006 INT. PLUMBING CODE W/ IND. AMENDMENTS
2014 INDIANA MECHANICAL CODE (2012 INTERNATIONAL MECHANICAL CODE WITH INDIANA AMENDMENTS)
2009 INDIANA ELECTRICAL CODE (2008 NATIONAL ELECTRICAL CODE WITH INDIANA AMENDMENTS)
2014 FUEL GAS CODE (2012 INTERNATIONAL FUEL CODE WITH INDIANA AMENDMENTS)
2012 INDIANA A117.1 CODE (ICC A117.1)
2010 INDIANA ENERGY CODE consisting OF ASHRAE STANDARD 90.1 2007 edition

GENERAL NOTES

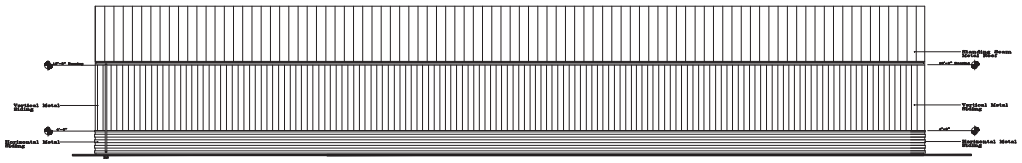
1. THE GENERAL CONTRACTOR SHALL EMPLOY ONLY LICENSED MECHANICAL, ELECTRICAL AND PLUMBING SUBCONTRACTORS. THESE SUBCONTRACTORS SHALL VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCING THEIR WORK.
2. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE BEGINNING THE WORK. ANY DISCREPENCIES SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
3. THE GENERAL CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES, PERMITS AND APPROVALS BEFORE PROCEEDING WITH THE WORK.
4. THE GENERAL CONTRACTOR SHALL KEEP THE BUILDING SITE CLEAR OF ALL HAZARDOUS CONSTRUCTION MATERIALS AND SHALL HAUL AWAY SUCH MATERIALS ON A REGULAR BASIS DURING CONSTRUCTION.
5. THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL PERFORM ALL CONSTRUCTION IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL BUILDING CODES AND REQUIREMENTS.
6. THE GENERAL CONTRACTOR SHALL PROVIDE FOR THE PROTECTION OF THE PUBLIC THE WORKMEN AND OTHERS EXPOSED THERETO, FROM INJURY AND DAMAGE DURING
7. OWNER SHALL LIMIT THE STORAGE OF ANY HAZARDOUS OR COMBUSTIBLE LIQUIDS PER TABLE 307.1 (1) IBC ALSO TO BE INCOMPLIANCE WITH CHAPTER 34 IFC.

AREA PLAN
NTS

DRAWING INDEX

PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

CV

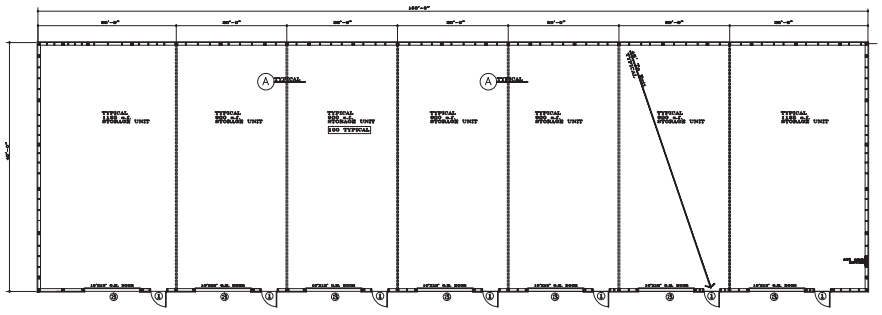


WEST ELEVATION BLDG. 4

1/8"=1'-0"

EAST ELEVATION BLDG. 1

1/8"=1'-0"

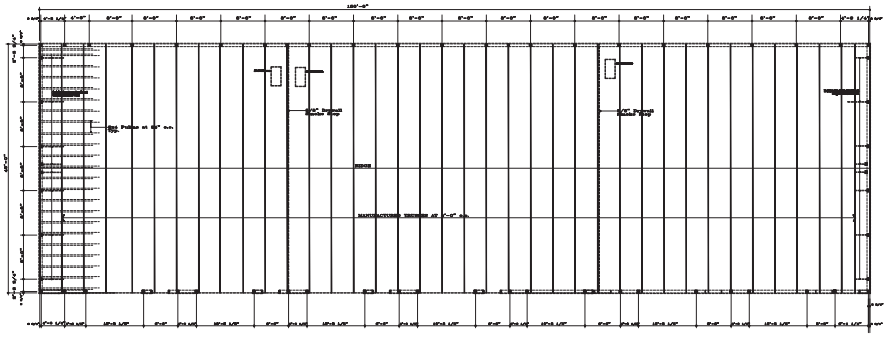


BUILDING 1

1/8"=1'-0"

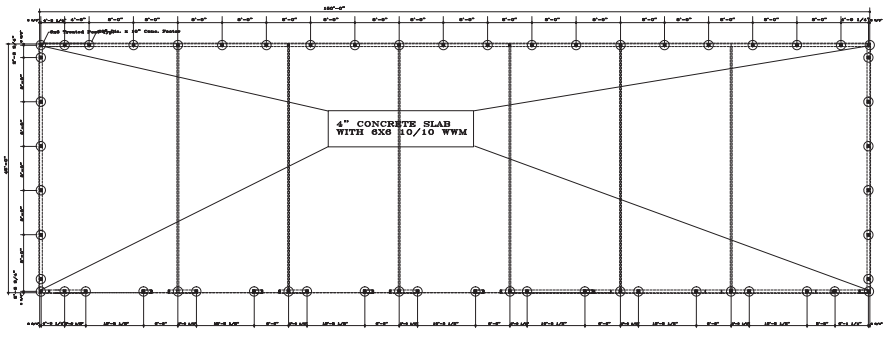
PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

A1



ROOF FRAMING PLAN BLDG 1

1/8"=1'-0"



FOUNDATION PLAN BLDG. 1

1/8"=1'-0"

PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

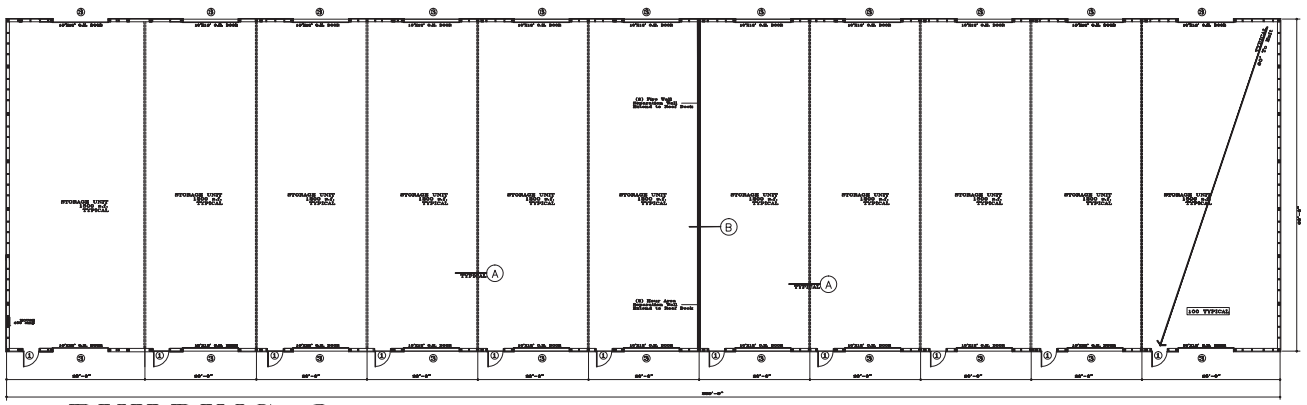
A2

WEST ELEVATION BLDG. 2

1/8"=1'-0"

EAST ELEVATION BLDG. 2

1/8"=1'-0"



BUILDING 2

1/8"=1'-0"

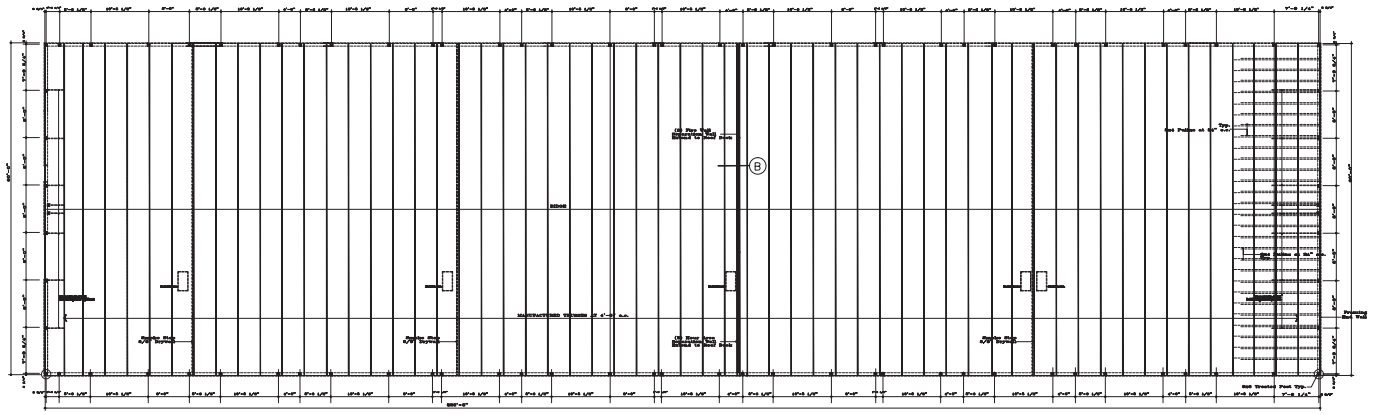
PROPOSED NEW FACILITY FOR :

BUILT–BLOOMINGTON

1320 S. ROGERS STREET

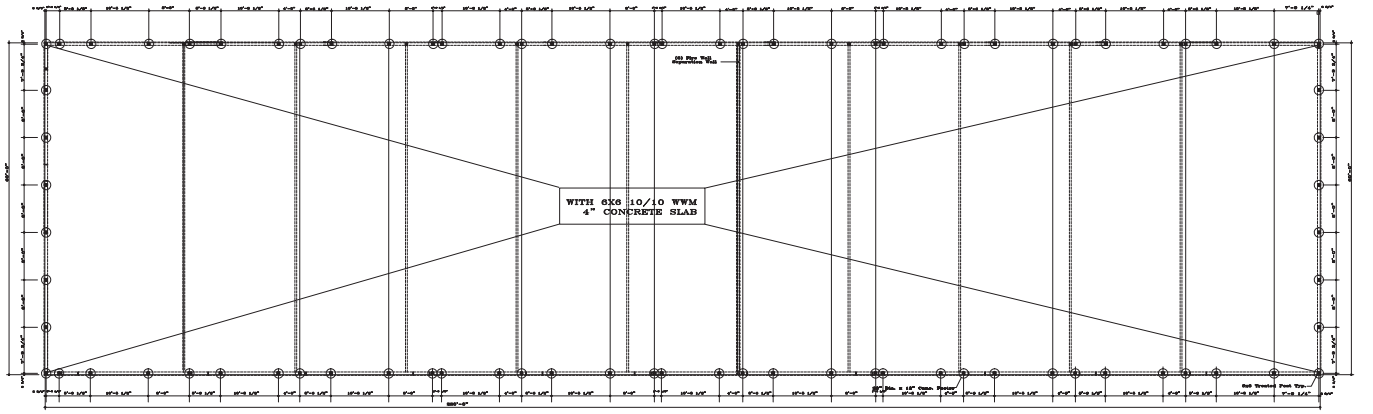
BLOOMINGTON, INDIANA

A3



ROOF FRAMING PLAN BLDG. 2

1/8"=1'-0"

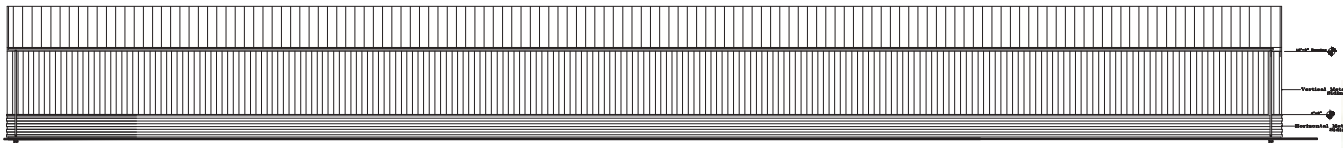


FOUNDATON PLAN BLDG. 2

1/8"=1'-0"

PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

A4

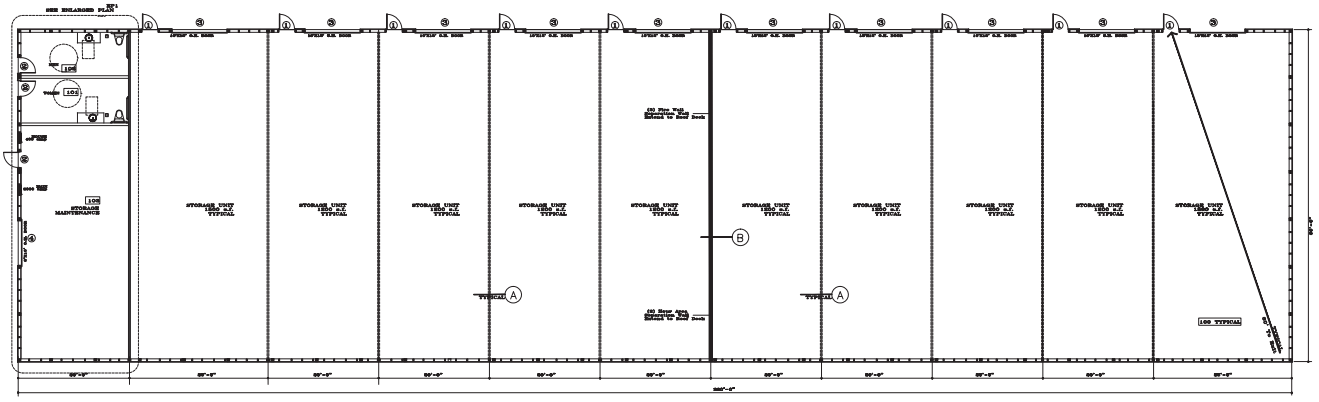


WEST ELEVATION BLDG. 3

1/8"=1'-0"

EAST ELEVATION BLDG. 3

1/8"=1'-0"



BUILDING 3

1/8"=1'-0"

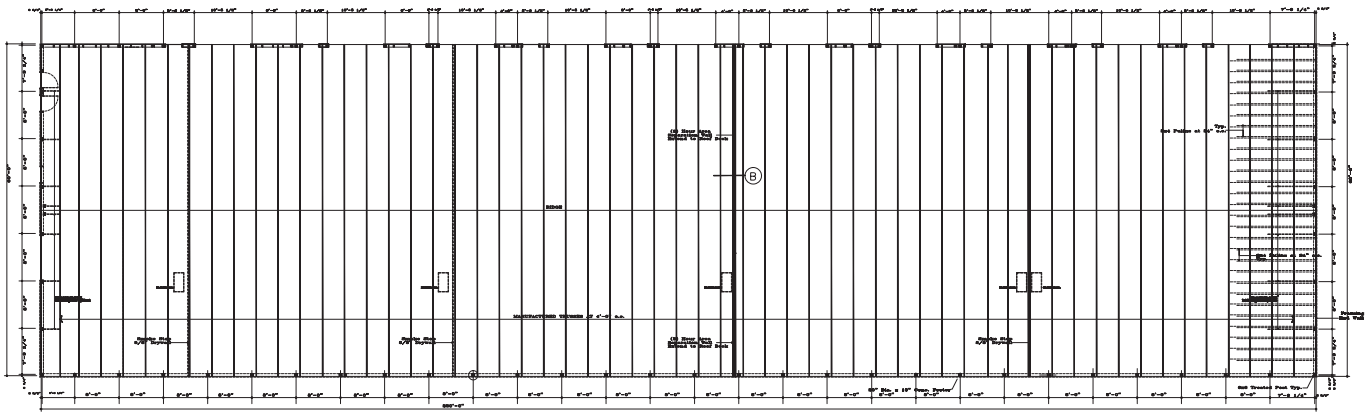
PROPOSED NEW FACILITY FOR :

BUILT–BLOOMINGTON

1320 S. ROGERS STREET

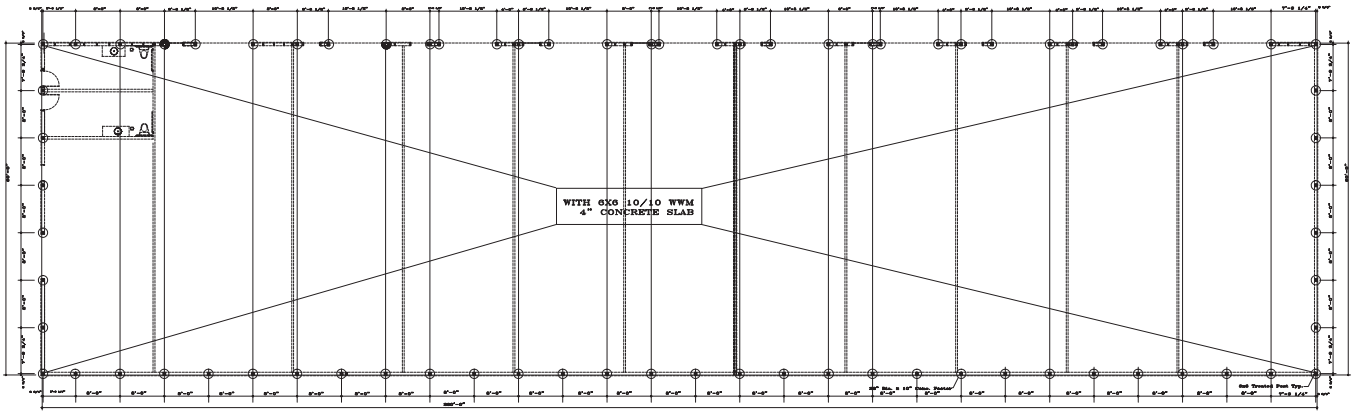
BLOOMINGTON, INDIANA

A5



ROOF FRAMING PLAN BLDG. 3

1/8"=1'-0"

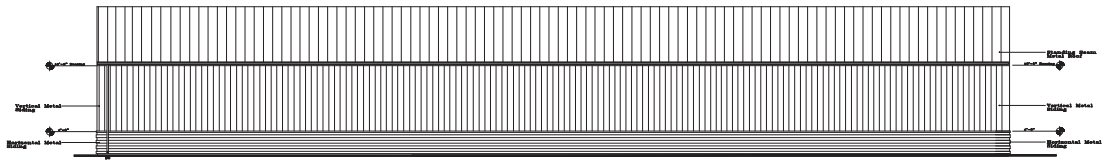


FOUNDATON PLAN BLDG. 3

1/8"=1'-0"

PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

A6

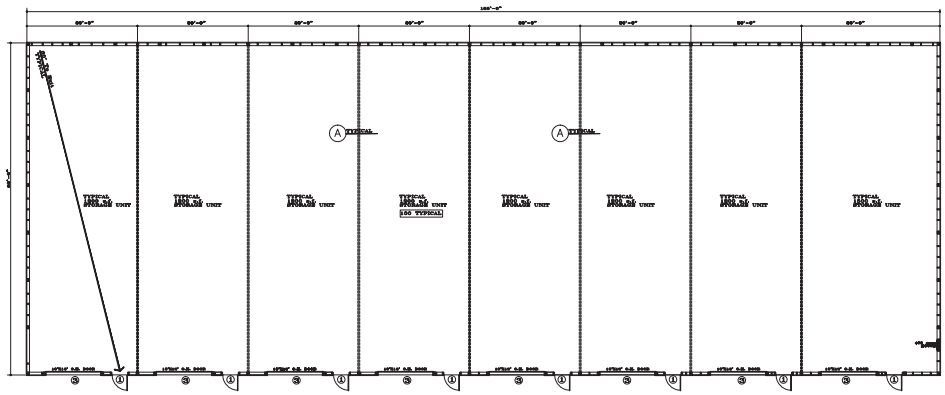


WEST ELEVATION BLDG. 4

1/8"=1'-0"

EAST ELEVATION BLDG. 4

1/8"=1'-0"

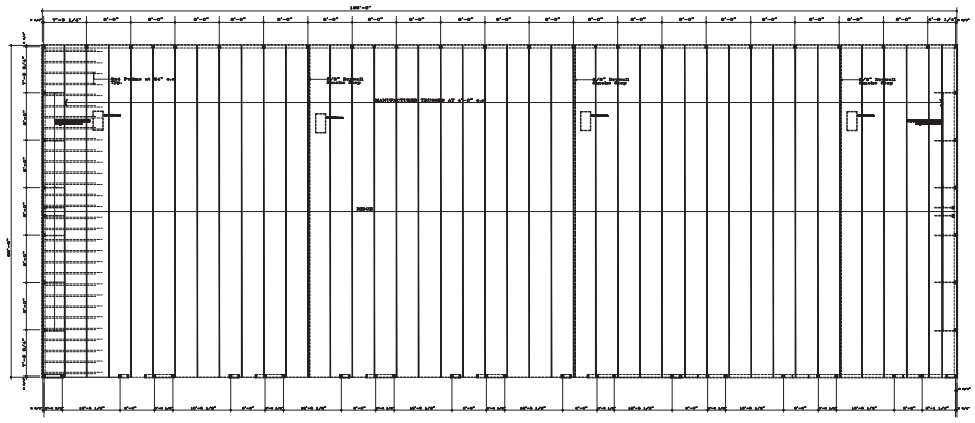


BUILDING 4

1/8"=1'-0"

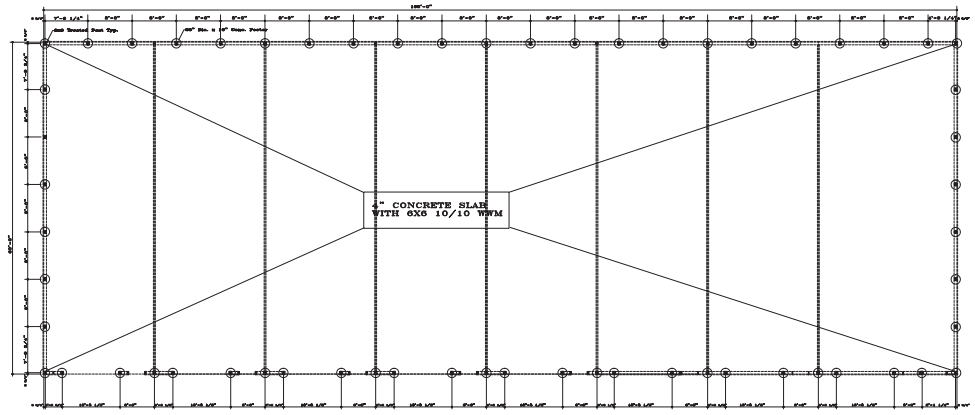
PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

A7



ROOF FRAMING PLAN BLDG 4

1/8"=1'-0"

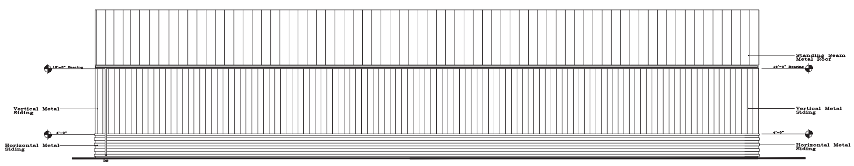


FOUNDATION PLAN BLDG. 4

1/8"=1'-0"

PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

A8

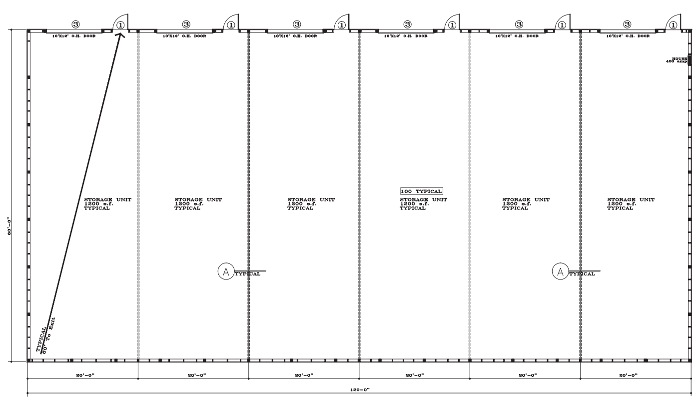


WEST ELEVATION BLDG. 5

1/8"=1'-0"

EAST ELEVATION BLDG. 5

1/8"=1'-0"



BUILDING 5

1/8"=1'-0"

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PROPOSED NEW FACILITY FOR :

BUILT–BLOOMINGTON

1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

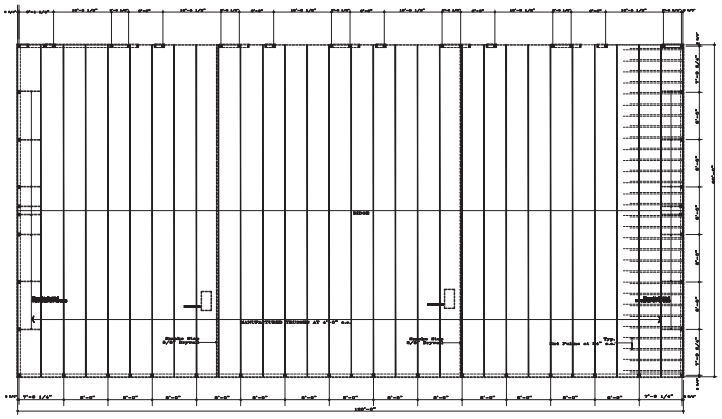
revisions:

date: 4/22/25

project:

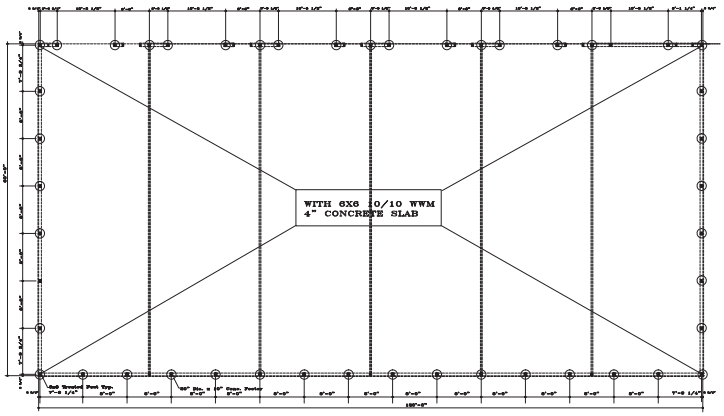
sheet:

A9



ROOF FRAMING PLAN BLDG 5

1/8"=1'-0"



FOUNDATION PLAN BLDG. 5

1/8"=1'-0"

PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

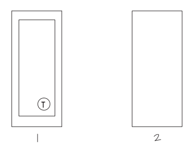
A10

DOOR SCHEDULE

#	DOOR SIZE	MATERIAL	FINISH	TYPE	HDW SET	KEY	GLASS	LOUVER	FRAME	MATERIAL	FINISH	DETAIL	REMARKS
1	3'-0"X 7'-0" X 1 3/4"	ALUM/GLASS	ANODIZED	1	1		TEMP/INSUL		2" X 5"	ALUM.	CLEAR ANODIZED		
2	3'-0"X 7'-0" X 1 3/4"	HM/INSULATED	PAINTED	2	2					HM	PAINTED		HC MEN/WOMEN
3	10'X12' OVERHAED	METAL/INSULATED	PAINTED	2	3								ELECTRIC OPERATION
4	8'X10' OVERHAED	METAL/INSULATED	PAINTED										ELECTRIC OPERATION
5													

ROOM FINISH SCHEDULE

NO.	ROOM NAME	WALLS: DRYWALL PAINTED CLASS A PAINT	WALLS: 48" CERAMIC WAINSCOT	WALLS: DRYWALL GREEN BOARD AND METAL PANELS	WALLS: METAL LINER PANEL OVER PLYWOOD (1)	WALLS: EXPOSED CONC. BLOCK PAINTED	FLOORS: CERAMIC TILE	FLOORS: SEALED CONCRETE	FLOORS: CARPET: CLASS I I astm less 450 smoke density	FLOORS: POLISHED CONCRETE	CEILING: 5/8" DRYWALL PAINTED CLASS A PAINT	CEILING: METAL PANEL	CEILING: 2X4 SUSPENDED LAY-IN	BASE: CERAMIC	BASE: RUBBER/VINYL BASE	BASE: NONE	CEILG HT
100	STORAGE UNIT (TYPICAL)				●			●				●				●	
101	HC WOMEN				●		●	●			●			●			
102	HC MEN				●		●	●			●			●			
103	MAINTENANCE				●			●				●				●	



DOOR TYPES

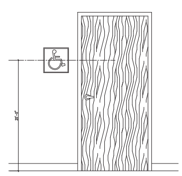
NOTE:
- COORDINATE KEYING W/ OWNER
- ALL HARDWARE TO MEET ADA STANDARDS

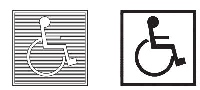
HARDWARE:

1. CLOSERS: LCN – 4040 PULL SIDE MTD. OR EQUAL
2. HINGES: HAGER BB1279 4 1/2 X 4 1/2 OR EQUAL US26 (#625)
3. LOCKSET: BEST LOCK 7K SERIES LEVERS OR EQUAL US26 (#625)
4. EXIT: BEST LOCK 7K SERIES LEVERS OR EQUAL (US32A SATIN STAINLESS STEEL)
5. STOPS:
   WALL: GLENN JOHNSON 50C OR EQUAL
   FLOOR: GLENN JOHNSON FB17 OR EQUAL

HARDWARE SCHEDULE

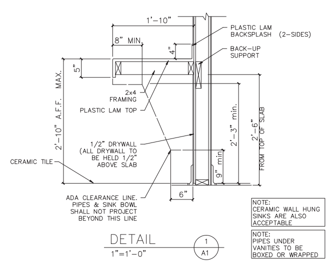
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
BUTTS 3 PAIR																
BUTTS 1 1/2 PAIR	•	•	•													
PASSAGE SET																
LOCKSET	•		•													
PRIVACY SET		•														
CYLINDER	•	•	•													
CLOSER	•	•	•													
EXIT PANIC	•		•													
PUSH	•															
PULL	•															
WALL STOP																
FLOOR STOP																
ALUM TRESHHOLD	•	•	•													
WEATHERSTRIPPING	•	•	•													
ASTRIGAL																
DOUBLE ACTING SPRING																
BALANCE BY MFR	•															
FLOOR THROW(IN. LEAF)																
KICK PLATES																





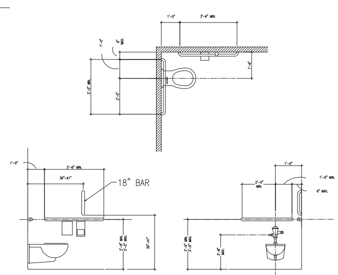
MOUNTING HEIGHTS FOR HANDICAP SIGNAGE

NTS



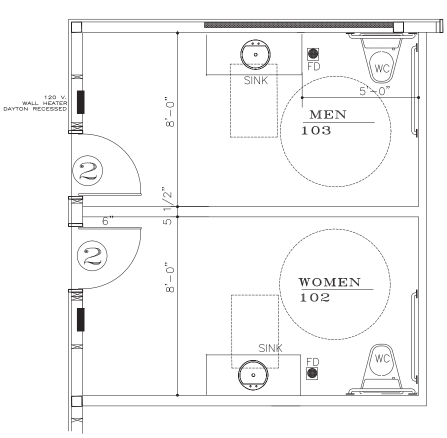
DETAIL 1/A1

1"=1'-0"



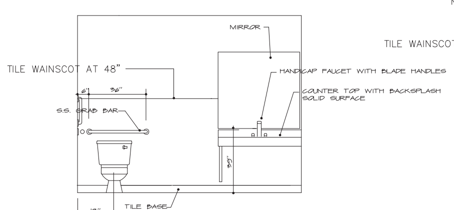
MOUNTING HEIGHTS AND CLEARANCES AT URINALS

NTS



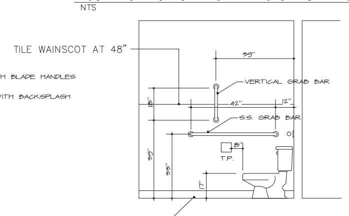
ENLARGED RESTROOM PLAN

1/2"=1'-0"



ELEVATION (B)

1/2"=1'-0"



ELEVATION (A)

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PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

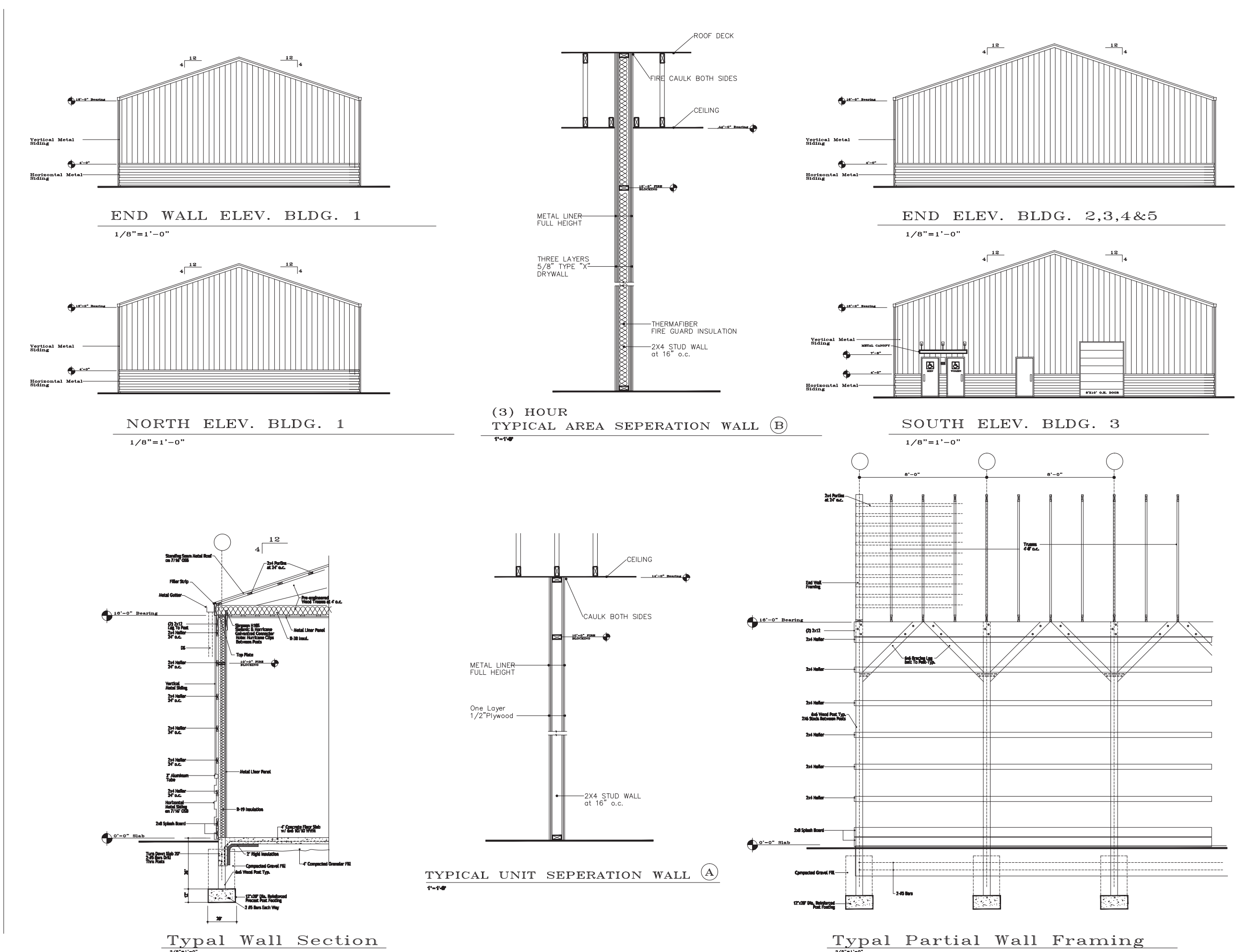
revisions:

date: 4/22/25

project:

sheet:

A11



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PROPOSED NEW FACILITY FOR :
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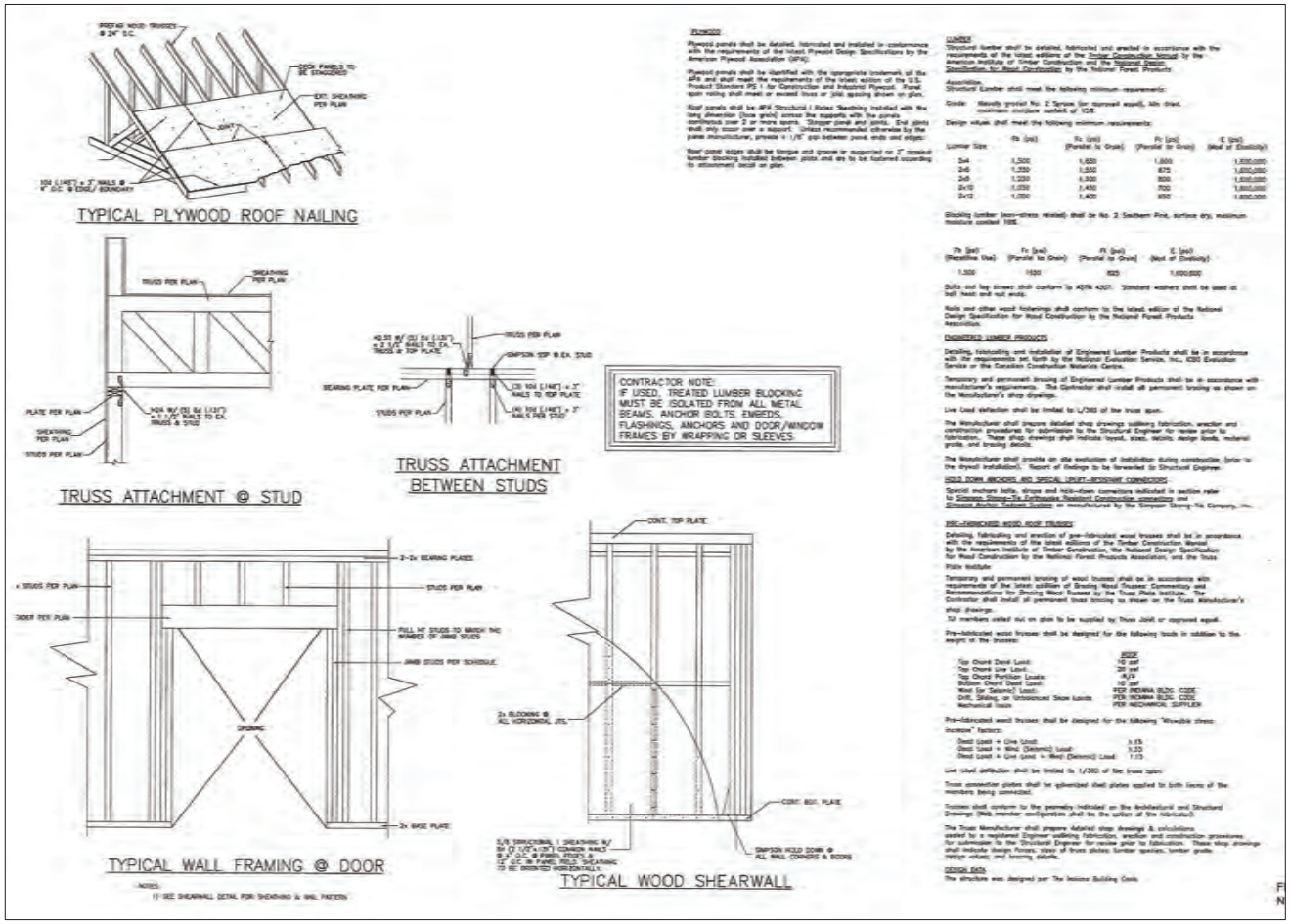
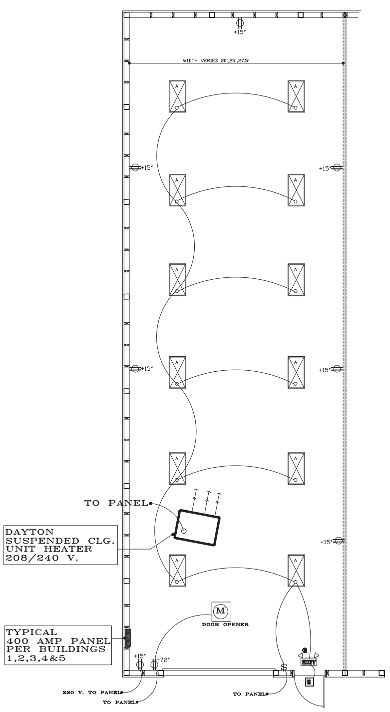
A12



STRUCTURAL NOTES

PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

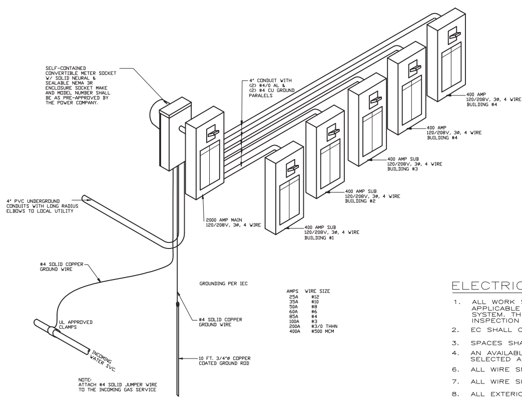
A13



TYPICAL
STORAGE UNIT

TYPICAL UNIT M–E PLAN

1/4"=1'-0"



ELECTRICAL SERVICE ENTRANCE ISOMETRIC

N.T.S.

NOTE: OVERCURRENT PROTECTION

ALL BREAKERS TO BE 10,000 A.I.C. RATED.

LEGEND

24X48 LED PANEL

EXIT/EMERGENCY LIGHT
90 MINUTE BATTERY BACK UP

EXTERIOR
EXIT/EMERGENCY LIGHT
90 MINUTE BATTERY BACK UP

ELECTRICAL SPECIFICATIONS

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH ALL LOCAL, COUNTY AND STATE CODES APPLICABLE LAWS, RULES AND REGULATIONS GOVERNING THE INSTALLATION OF THE ELECTRICAL SYSTEM. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY ALL PERMITS, LICENSES AND INSPECTION FEES AS REQUIRED FOR THE INSTALLATION OF ALL ELECTRICAL WORK.
2. EC SHALL COORDINATE WITH MC
3. SPACES SHALL BE PROVIDED IN NEW PANELS FOR FUTURE BREAKERS
4. AN AVAILABLE FAULT CURRENT COORDINATION STUDY SHALL BE MADE. ALL EQUIPMENT SHALL BE SELECTED ACCORDING TO THIS AVAILABLE SHORT CIRCUIT CURRENT.
6. ALL WIRE SMALLER THAN #8 SHALL BE THWN, LARGER THAN #10 SHALL BE THW.
7. ALL WIRE SHALL BE COPPER.
8. ALL EXTERIOR CONDUIT SHALL BE RIGID OR PVC.
9. A FLEXIBLE CONNECTION SHALL BE MADE TO ALL MOTORS.
10. EC SHALL PROVIDE ALL NECESSARY MATERIALS FOR A COMPLETE AND FUNCTIONING JOB.
11. ALL EQUIPMENT SHALL BE UL APPROVED.
12. ALL NEW BREAKERS AND BREAKER PANELS SHALL BE BOLT ON TYPE.
13. ALL SWITCHES SHALL BE 15 AMP HEAVY–DUTY TYPE.
14. MAIN SWITCHGEAR SHALL BE SERVICE ENTRANCE APPROVED.
15. EXHAUST FANS SHALL BE CONTROLLED BY LIGHT SWITCHES.
16. AFTER ALL BURNED OUT LAMPS REPLACED AND IN WORKING ORDER, AN AMMETER READING SHALL BE MADE ON ALL LIGHTING CIRCUITS. IF AMMETER READINGS ARE ABOVE 16 AMPS THEN THE CIRCUIT SHALL BE SPLIT UP TO CORRECT THE SITUATION.
17. ALL RECEPTACLES IN SERVICE AREA SHALL BE 20 AMP.
18. ONLY SINGLE HANDLE SHALL BE PERMITTED FOR MULTI–POLE APPLICATIONS.
19. ALL PANEL FEEDERS SHALL BE RIGID CONDUIT.
20. PROVIDE TYPWRITTEN PANEL SCHEDULE DIRECTORIES ENCASED IN PLASTIC AND PERMENTLY ATTACHED TO PANEL.
21. ALL WIRING SHALL BE IN ACCORDANCE WITH 2009 IEC.
22. EC TO WIRE LOW VOLTAGE CONTROL AND OVERHEAD DOOR.
23. FLOOR BOXES SHALL BE CAST IRON FLUSH POWER AND TELEPHONE– WALKERBOX 855 LCK WITH COVER PLATE.
24. INDIVIDUALLY FUSE ALL 208V LIGHTS INSIDE AND OUT.
25. ALL BREAKERS SERVING LIGHT CIRCUITS SHALL BE SWITCH TYPE.

FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	WATT	LAMP	REMARKS
A	LITHONIA	PANEL	39	LED	2 X 4 SUPENDED
E	E2 Lighting	E2–WPM–EDLLED	9	LED	Exterior Exit Light
G	LITHONIA	EP1R			EXIT LIGHT

NOTE: CONTRACTOR CONSULT WITH OWNER TO REFINE LIGHTING LAYOUT AND FIXTURE TYPE

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PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

revisions:

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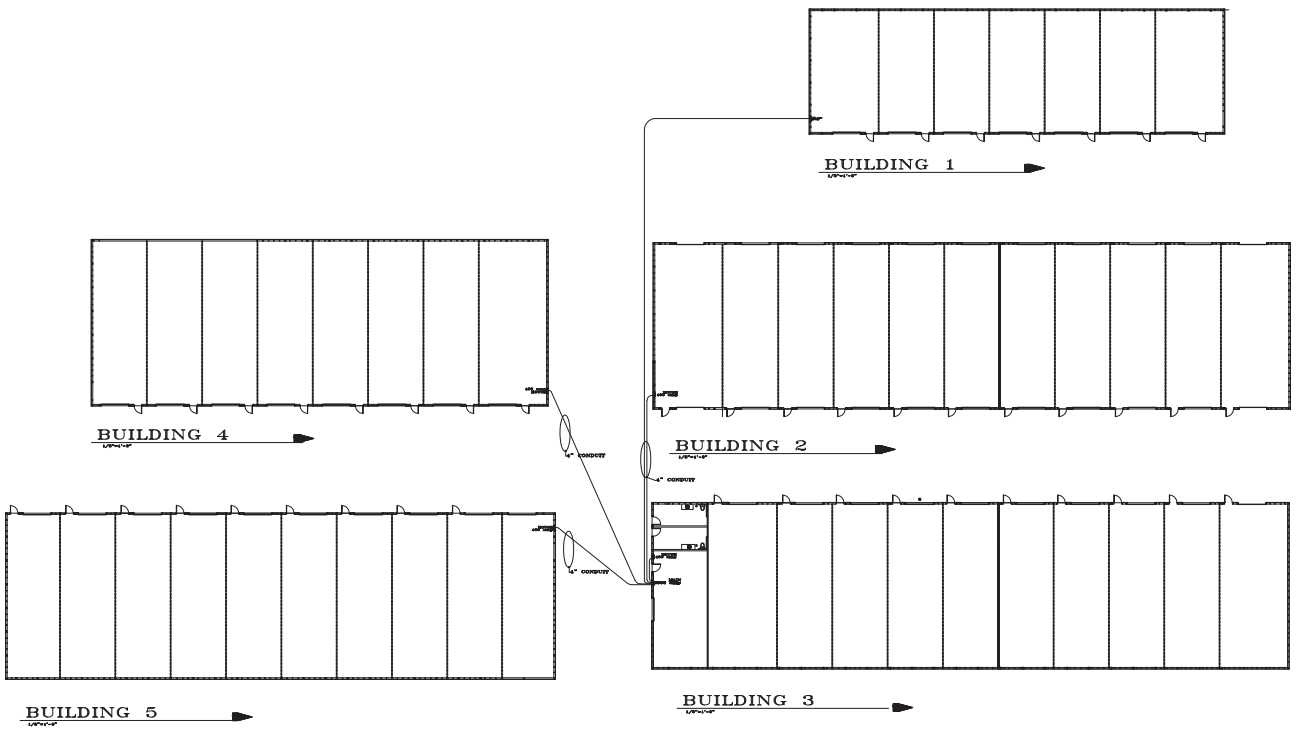
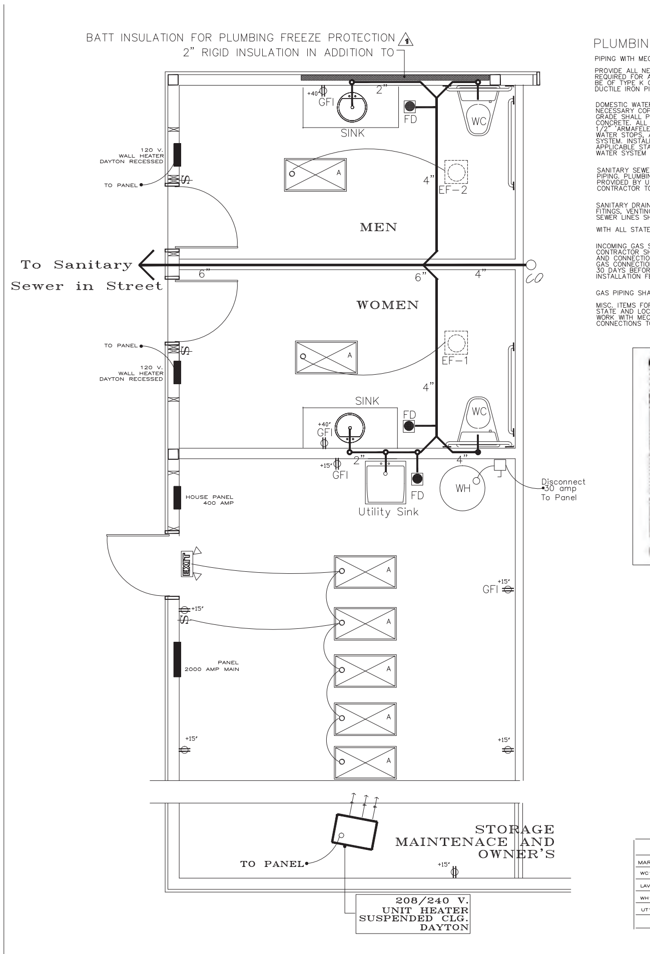
EM-1



ELECTRICAL DISTRIBUTION PLAN

PROPOSED NEW FACILITY FOR :
BUILT–BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

E-1



ENLARGED PLUMBING & ELEC PLAN

1/2"=1'-0"

PLUMBING

PIPING WITH MECHANICAL JOINTS OF THE SIZE STATED ON ARCHITECTURAL

PROVIDE ALL NECESSARY FITTINGS, HARNESSES, SHUT-OFFS, ETC. AS REQUIRED FOR A COMPLETE JOB. WATER SERVICE OF 2" OR SMALLER SHALL BE OF TYPE K COPPER, ALL PIPING LARGER THAN 2" SHALL BE OF DUCTILE IRON PIPING WITH MECHANICAL JOINTS.

DOMESTIC WATER LINES SHALL BE OF TYPE L COPPER PIPING WITH ALL NECESSARY COPPER FITTINGS AND BALL VALVES. ALL PIPING BELOW GRADE SHALL PENETRATE FLOOR THRU A SLEEVE TO ISOLATE PIPING FROM CONCRETE. ALL COPPER PIPING ABOVE GRADE SHALL BE WRAPPED WITH 1/2" 'ARMAFELEX INSULATION'. PROVIDE ALL NECESSARY FITTINGS, VALVES, WATER STOPS, ANCHORS, HANGERS AND MISC. ITEMS FOR A COMPLETE SYSTEM. INSTALLATION OF ALL PIPING SHALL CONFORM TO ALL APPLICABLE STATE AND LOCAL CODES. CHLORINATE ENTIRE DOMESTIC WATER SYSTEM PRIOR TO USE OF POTABLE WATER.

SANITARY SEWER SERVICE SHALL BE PVC SCHEDULE SDR-35 SEWER PIPING. PLUMBING CONTRACTOR TO PROVIDE PIT FOR METER TO BE PROVIDED BY UTILITY. METER PIT TO BE LOCATED AS SHOWN ON DRAWINGS CONTRACTOR TO PAY ANY AND ALL FEES TO TAP INTO CITY

SANITARY DRAIN LINES SHALL BE PVC PIPING WITH ALL NECESSARY FITINGS, VENTING, AND OTHER MISC. ITEMS FOR A COMPLETE JOB. ALL SEWER LINES SHALL PITCH ON A STRAIT AND EVEN GRADE SO AS NOT TO

WITH ALL STATE AND LOCAL CODES.

INCOMING GAS SERVICE SHALL BE INSTALLED BY GAS COMPANY. CONTRACTOR SHALL COORDINATE AND BE RESPONSIBLE FOR INSTALLATION AND CONNECTION OF GAS SERVICE TO BUILDING GAS SUPPLY SYSTEM. ANY GAS CONNECTION CHARGES SHALL BE PAID BY OWNER. NOTIFY OWNER 30 DAYS BEFORE INSTALLATION OF ANY ADDITIONAL GAS INSTALLATION FEES.

GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH BM

MISC. ITEMS FOR A COMPLETE SYSTEM. ALL PIPING SHALL CONFORM TO STATE AND LOCAL PLUMBING CODES. CONTRACTOR SHALL COORDINATE ALL WORK WITH MECHANICAL TRADESMEN TP PROVIDE ALL NECESSARY CONNECTIONS TO EQUIPMENT REQUIRING GAS SERVICE.

WATER HEATER

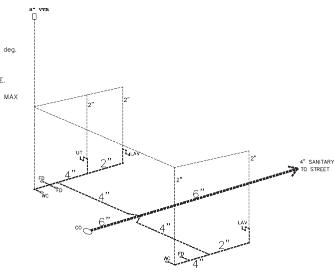
WATER HEATER PIPING TO BE INSULATED.

TEMPERATURE CONTOL PROVIDED MAX. 120 deg.

AUTOMATIC TIME SWITCH FOR HEAT TRACE.

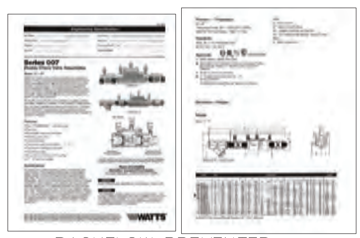
HEAT TRAP TO BE INSTALLED AS PER CODE.

LAVATORY FAUCETS WATER TEMP. 110 deg. MAX



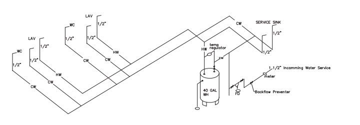
PLUMBING RISER

NO SCALE



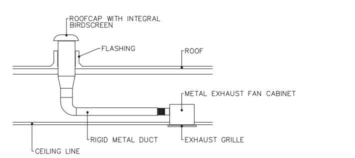
BACKFLOW PREVENTER

SIMILAR OR EQUAL



WATER RISER

NO SCALE



EXHAUST FAN ROOF CAP DETAIL

NTS

PLUMBING SCHEDULE

MARK	FIXTURE	MAN/MOD. NO.	FITTINGS	MOD. NO.	CONNECTION H	CONNECTION C	CONNECTION D	REMARKS
WC1	WATER CLOSET	AM. ST. 2108.408				3/8	3	OPEN FRONT SEAT
LAV	COUNTER TOP	AM. ST. 3001.013			3/8	3/8	1 1/4	
WH1	WATER HEATER	AO SMITH 40 GAL.						ELECTRIC
UT1	UTILITY SINK	TEHILA 040 US6510GRYSS			3/8	3/8	1 1/4	

EXHAUST FANS

MARK	SERVICE	LOCATION	MANUFACTURER MODEL NO.	CFM	ESP. S.P.	DRIVE TYPE	ELECTRICAL DATA HP	ELECTRICAL DATA VOLT/PHASE	ELECTRICAL DATA AMP	SONES	REMARKS
EF-1	EXHAUST	RESTROOM	NUTONE QT130	120	0.1	DIRECT	---------	120/1/60	0.6	1.0	
EF-2	EXHAUST	RESTROOM	QT130	120	0.1	DIRECT	---------	120/1/60	0.6	1.0	

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revisions:

date: 4/22/25

project:

sheet:

EP-1

ELECTRICAL SPECIFICATIONS

1. MATERIALS FURNISHED SHALL BE NEW, MATERIALS SHALL BE A MANUFACTURER'S STANDARD AND ESTABLISHED PRODUCT LINES, AND SHALL BE LISTED AND LABELED FOR THE APPLICATION BY UNDERWRITER'S LABORATORIES (U.L.), OR SHALL BE CERTIFIED BY OTHER APPROVED LABORATORY OR BE THE BUILDING OFFICIAL HAVING JURISDICTION.

2. THE PLANS ACCOMPANYING THESE SPECIFICATIONS ARE GENERALLY DIAGRAMMATIC AND DO NOT SHOW ALL DETAILS REQUIRED FOR THE COMPLETE WORK. ESTABLISH DETAILS OF THE WORK AS NECESSARY TO PROVIDE FOR THE COMPLETE INSTALLATION OF SYSTEMS AD MATERIAL. ARRANGE THE WORK SO AS TO AVOID INTERFERENCE WITH OTHER BUILDING COMPONENTS OR SYSTEMS AS ACTUALLY INSTALLED.

3. COMPLY WITH APPLICABLE OR NECESSARY JOB SAFETY PROVISIONS.

4. PROVIDE FOR SYSTEM RACEWAYS, OUTLET BOXES, PULL"WIRES" OR "CORDS", OUTLET BOX OPENINGS, BOX EXTENSIONS, DEDICATED RECEPTACLES, BACKBOARDS, ETC. AS SPECIFIED AND INDICATED. TELEPHONE CABLE SHALL BE FURNISHED AND INSTALLED BY OTHERS.

5. ELECTRICAL SYSTEMS, EQUIPMENT, AND SUPPORTING STRUCTURES SHALL BE COMPLETELY AND EFFECTIVELY GROUNDED. BONDING JUMPERS SHALL BE PROVIDED WHERE NECESSARY. METAL ELECTRICAL RACEWAYS AND FITTINGS, JOINTS AND CONNECTIONS AT EQUIPMENT SHALL BE MECHANICALLY AND ELECTRICALLY SECURED TO PROVIDE ON APPROVED EQUIPMENT OR ENCLOSURES GROUNDING MEANS, EVEN WHEN NO OTHER SEPARATE GROUNDING MEANS ARE ALSO PROVIDED EITHER INHERENTLY OR BY BONDING.

6. WHERE GREEN GROUNDING CONDUCTORS ARE NOT INDICATED SPECIFICALLY FOR EACH BRANCH CIRCUIT BY THE DRAWINGS. PROVIDES FOR EACH RACEWAY A GREEN #12 GROUNDING CONDUCTOR IN ADDITION TO BRACH CIRCUIT CONDUCTORS INDICATED.

7.UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ARCHITECT FOR SPECIAL APPLICATIONS. WIRING DEVICES SHALL BE INSTALLED WITH TOP-OF-BOX MOUNTING HEIGHTS ABOVE FINISHED FLOORS BETWEEN 18 INCHES AND 48 INCHES, AS REQUIRED BY HANDICAPPED CODES. MOUNTING HEIGHTS FOR SPECIFIC DEVICES SHALL BE AS SCHEDULED BY THE PLANS.

8. ELECTRICAL CONDUCTORS SHALL BE COLOR CODED AS REQUIRED BY CODE. PHASE CONDUCTORS: RED: BLUE, BLACK; NEUTRAL: WHITE; EQUIPMENT GROUND: GREEN.

9. NOTIFY THE OWNER'S REPRESENTATIVE OF ANY NON FUNCTIONING MATERIAL OR POTENTIALLY UNSAFE CONDITION WITHIN THIS PROJECT SYSTEMS THAT IS OBSERVED DURING THE CONDUCT OF THE WORK.

10. WORK SHALL BE FURNISHED AND INSTALLED AS A MINIMUM IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS AND RECOMMENDATIONS OF THE LATEST LOCALLY ADOPTED EDITION OF CODES AND STANDARDS OF THE FOLLOWING:
(1). NATIONAL ELECTRICAL CODE (NEC)-NFPA 70.
(2). ENERGY CODE - ASHRAE/IESNA 90.1.
(3). LIFE SAFETY CODE-NEFPA 101.
(4). OTHER NFPA STANDARDS: 90A AND 99.
(5). GAC 120-3-20.
(6). U.L. STANDARDS AND LISTING REQUIREMENTS AND NEMA STANDARDS.
(7). FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, CODES, AND RULINGS OF BUILDING OFFICIALS HAVING JURISDICTION IN INDIANA AND THE CITY OF BLOOMINGTON..

11. THE WORK COVERED BY THIS SPECIFICATION SHALL INCLUDES PROVIDING SUPERVISION, LABOR, SUPPLIES, MATERIALS (TO INCLUDE EQUIPMENT), TOOLS, SERVICES, DOCUMENTATION, TEST AND DEMONSTRATIONS, CERTIFICATES, AND DOLLAR COSTS REQUIRED TO CONSTRUCT THE COMPLETE SYSTEMS AS SPECIFIED HEREIN AND AS SHOWN BY THE PLANS AND OTHER RELEVANT DOCUMENTS.

13. SERVICE EQUIPMENT SHALL BE PROVIDED RATED FOR BUILDING LOADS, INCLUDING INTERRUPTING RATINGS. SERVICE EQUIPMENT SHALL BE SERVED USING THE TYPE SERVICES ENTRANCE EQUIPMENT AS INDICATED BY THE PLANS.

16 SWITCHES SHALL AS A MINIMUM BE "HEAVY-DUTY" RATED, QUICK MAKE AND BREAK, SPECIFICATION GRADE, SINGLE THROW DEVICES.

17. DISTRIBUTION EQUIPMENT USING CIRCUIT BREAKER TYPE PROTECTIVE DEVICES SHALL USE BOLTED-ON OR "SQUARE D" I-LINE DEVICES.

18. DISTRIBUTION EQUIPMENT SHALL BE AS INDICATED AND AS MANUFACTURED BY GENERAL ELECTRIC, CUTLER/HAMMER, SQUARE-D, SEIMENS.

19. PANEL BOARD MANS, SHALL BE COPPER WITH BRANCH DEVICE CONNECTIONS ARRANGED IN A VERTICALLY DISTRIBUTED CONSECUTIVE PHASE SEQUENCES SUCH THAT ONE OR MULTIPLE POLES BREAKERS CAN BE MOUNTED IN ANY POSITION. A SOLID NEUTRAL BUS SHALL BE PROVIDED WITH FEEDER LUG AND WITH A SEPARATE SET-SCREW W TERMINAL FOR EACH BRACH CIRCUIT POLE.

20. STARTERS AND DISCONNECT SWITCHES SHALL HAVE QUICK-MAKE AND QUICK-BREAK MECHANISMS, AND BE FULLY ENCLOSED.

21. FIXTURE SUPPORTS AND HARDWARE SHALL BE SUITABLE METAL UNLESS OTHERWISE INDICATED. SUPPORT STUDS USED FOR INDOOR FIXTURE OR COMPONENT SUPPORT SHALL BE GALVANIZED STEEL OR MALLEABLE IRON.

23. CONDUCTORS SHALL BE OF SOFT DRAWN, ANNEALED COPPER HAVING A CONDUCTIVITY OF NOT LESS THAN 98 PERCENT BY "ASTM" STANDARDS.

24. UNLESS OTHERWISE REQUIRED BY CODE OR INDICATED:
A. CONDUCTORS NO. 12 AWG AND NO. 10 AWG SIZE SHALL BE SOLID.
B. CONDUCTORS NO. 8 AWG SIZE AND LARGER SHALL BE STRANDED.

25. RIGID STEEL AND IMC STEEL CONDUIT SHALL BE HOT DIP GALVANIZED. STEEL EMT SHALL BE HOT DIP GALVANIZED OUTSIDE, AND ENAMEL OR GALVANIZED FINISHED INSIDE.

26. EMT COUPLINGS AND CONNECTORS SHALL BE METAL AND SET-SCREW TYPE.

30. FIXTURES SHALL BE INSTALLED IN ACCORDANCE WITH UL LISTING RESTRICTIONS AND LOCAL CODES AND ORDINANCES.

31. FIXTURES SHALL BE LOCATED IN A MANNER COORDINATED WITH ANY SUSPENDED ACOUSTIC CEILING PATTERN, AND IN ACCORDANCE WITH PATTERNS AS SHOWN ON THE ARCHITECTURAL DRAWINGS.

32 UNLESS OTHERWISE REQUIRED BY CODE OR FUNCTION OR INDICATED BY THE PLANS, CONDUCTORS FOR POWER AND LIGHTING BRANCH CIRCUITS SHALL BE #12 AWG. MINIMUM.

33. CONDUCTORS SHALL BE CONNECTED BY U.L. APPROVED CONNECTORS. BRANCH CIRCUIT WIRING TO SIZE #8 SHALL BE CONNECTED BY CONNECTORS WITH LIVE SPRING TENSION.

34. WIRING SHALL BE INSTALLED IN METALLIC, RIGID TYPE RACEWAYS, UNLESS OTHERWISE INDICATED, SIZED PER "NEC".

35. RACEWAYS AND CABLE SHALL BE RUN CONCEALED, EXCEPT THAT RACEWAYS DESIGNED ONLY FOR SURFACE MOUNTING AND RACEWAYS AND CABLE IN EQUIPMENT ROOMS SHALL BE RUN EXPOSED; UNLESS OTHERWISE INDICATED. CONCEALED CONDUIT RUN ABOVE THE CEILING LINE SHALL BE SUPPORTED INDEPENDENTLY OF CEILING CONSTRUCTION. WHERE CEILINGS OF THE LAY-IN TYPE MAY BE USED. CONDUITS MUST BE INSTALLED HIGH ENOUGH TO PERMIT REMOVAL OF CEILING PANELS OR EQUIPMENT.

36. RACEWAY OR CABLE, ETC. THAT PENETRATES A FIRE BARRIER, SUCH AS FIRE OR SMOKE RATED SLAB, WALL, CEILING, OR OTHER ELEMENT, SHALL BE INSTALLED WITH MATERIALS AND METHODS APPROVED FOR THE APPLICATION BY LOCAL BUILDING OFFICIALS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING EACH FIRE BARRIER FORM THE AR HITECTURAL PLANS, AND FOR SECURING APPROVAL OF MATERIALS AND METHODS TO BE USED FOR EACH TYPE PENETRATION.
\pt3952.02;
37. UNLESS OTHERWISE INDICATED, RACEWAYS SHALL BE AS FOLLOWS:
A. CONCEALED INSIDE WHERE NOT IN WET OR DAMP LOCATIONS AND NOT EXPOSED TO MECHANICAL INJURY. AND USED FOR 120V/20A BRANCH CIRCUITS, TYPE MC CABLE; OTHERWISE ELECTRICAL METALLIC TUBING (EMT).

B. THROUGH TWO-HOUR RATED FIRE BARRIERS OR BUILDING EXTERIOR; GALVANIZED RIGID STEEL (GRS) CONDUIT MADE UP WATER TIGHT.

C. FINAL CONNECTION RACEWAYS IN DRY LOCATIONS SERVING LIGHTING FIXTURES, OR OTHER NON-MOTOR EQUIPMENT LIKELY TO REQUIRE MOVEMENT FOR ADJUSTMENT OR LIKELY TO TRANSMIT SHOCK OR VIBRATION INTO THE RACEWAY SYSTEM, BUT NOT REQUIRING FLEXIBILITY FOR OPERATION, AND WHERE APPROVED FOR THE APPLICATION SHALL BE FLEXIBLE METAL TUBING (FLEX) WHERE APPROVED FOR THE APPLICATION.

38. BOXES SHALL NOT BE INSTALLED BACK-TO-BACK AND THRU-WALL TYPE BOXES SHALL NOT BE USED DUE TO TRANSMISSION OF SOUND OR HEAT AND SMOKE. OFFSET TO MAINTAIN FIRE RATING PER UL REQUIREMENTS.

39. SUSPENDED CEILING CONSTRUCTION SHALL NOT BE USED TO SUPPORT RACEWAYS, BOXES OR OTHER ITEMS, EXCEPT AS ALLOWED BY CODE, ACCEPTED BY THE ENGINEER, AND ACCEPTED BY THE ARCHITECT IN WRITING FOR THE SPECIFIC ITEMS TO BE SUPPORTED.

40. COVER PLATES FOR FLUSH, DRY, ORDINARY LOCATIONS SHALL BE STANDARD CONFIGURATION, ONE PIECE, STANDARD SIZE PLATES WITH MATCHING SCREWS, AND HAVING MATERIALS, STYLES, AND FINISHES AS SELECTED BY ARCHITECT.

41. CONDUIT SYSTEM SHALL BE INSTALLED CONCEALED ABOVE CEILING, ABOVE LOWEST POINT OF STRUCTURAL STEEL SYSTEM LOWER CHORD FOR HORIZONTAL RUNS. INSTALL PARALLEL OR PERPENDICULAR TO STRUCTURAL MEMBERS.

MECHANICAL NOTES:

1. THE CONTRACTOR SHALL EXAMINE ALL OTHER SPECIFICATIONS, DRAWING AND ALL OTHER FEATURES OF BUILDING CONSTRUCTION WHICH MAY AFFECT HIS WORK AND BE GOVERNED BY THESE SPECIFICATIONS, INCLUDING THE GENERAL CONDITIONS AND PARTICULAR INSTRUCTIONS TO ALL BIDDERS AND SUPPLIERS.
2. ALL WORK SHALL BE EXECUTED AND INSPECTED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND/ OR STATE CODES, LAWS, ORDANCES, RULES, AND REGULATIONS APPLICABLE TO THIS PARTICULAR CLASS OF WORK, AND EACH CONTRACTOR SHALL INCLUDE IN HIS PRICE ALL SERVICE CHARGES, FEES, PERMITS, ROYALTIES, TAXES, AND OTHER SIMILAR COST IN CONNECTION THEREWITH.
3. PRIOR TO FABRICATION OF DUCTWORK, CONTRACTOR SHALL EXAMINE AND VERIFY ALL CONDITIONS ABOVE AND BELOW THE CEILING WHICH MAY INTERFERE WITH THE DUCT SYSTEM AND NOTIFY THE ARCHITECTS OF ANY CONFLICT ENCOUNTERED. CONTRACTOR SHALL PROVIDE ALL OFFSETS ETC. WHICH MAY BE REQUIRED.
4. ALL SHEET METAL CONSTRUCTION SHALL BE IN STRICT ACCORDANCE WITH "SMACNA" LOW PRESSURE DUCT CONSTRUCTION STANDARDS.
5. TURNING VANES SHALL BE INSTALLED IN ALL BENDS GREATER THAN 30 DEGREES.
6. ALL DUCTS SHALL BE SUPPORTED WITH 1" WIDE, 16 GAUGE GALVANIZED STEEL BANDS.
7. ALL RECTANGULAR DUCT SHALL BE INSULATED WITH A MINIMUM OF 1" INTERNAL LINER, 2 LB. DENSITY. ALL ROUND DUCT AND DIFFUSER TOP SHALL HAVE A MINIMUM OF 2" FOIL BACKED BLANKET TYPE INSULATION WITH ALL JOINTS BUTTED AND TAPPED. INSULATION "R" VALUES SHALL COMPLY WITH GOVERNING ENERGY EFFICIENCY REQUIREMENTS.
8. ALL DUCT DIMENSIONS SHOWN ON PLANS ARE SHEET METAL DIMENSIONS. ALL OWANCE HAS BEEN MADE FOR LINER.

14. MECHANICAL CONT'R SHALL CONFER W/ ELECTRICAL CONT'R & COORDINATE ALL POWER REQUIREMENTS POINTS OR CONNECTION ETC. COORDINATE W/ PLBG. CONTRACTOR TO INSURE PROPER CONDENSATE DRAINS.

GENERAL PLUMBING NOTES

1. ALL PLUMBING WORK SHALL COMPLY WITH THE 2006 INTERNATIONAL PLUMBING CODE WITH APPLICABLE STATE AND LOCAL AMENDMENTS.
ALL WORK SHALL BE EXECUTED AND INSPECTED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND/ OR STATE CODES, LAWS, ORDANCES, RULES, AND REGULATIONS APPLICABLE TO THIS PARTICULAR CLASS OF WORK. EACH CONTRACTOR SHALL INCLUDE IN HIS PRICE, ALL SERVICE CHARGES, FEES, PERMITS, ROYALTIES, TAXES, AND OTHER SIMILAR COSTS IN CONNECTION THEREWITH.

2. ALL PIPING SHALL BE CONCEALED IN WALLS AND BEHIND FIXED FURNISHINGS UNLESS OTHERWISE INDICATED.

3. EXPOSED TRIM PIPING TO FIXTURES INCLUDING CW, HW, DRAIN, AND DRAIN TRAPS, SHALL BE PVC WITH PVC ESCUTCHEONS AT WALL PENETRATION. ALL OTHER EXPOSED PIPING TO BE INSTALLED PER SPECIFICATIONS WITH ESCUTCHEONS.

4. SLEEVE OR CORE-DRILL FLOOR SLABS, WALLS, ETC. AS REQUIRED FOR PIPING AND FIRE-STOP OPENING AROUND PIPE. VERIFY LOCATION OF STRUCTURAL BEAMS, JOISTS, ETC. BEFORE DRILLING.

5. ALL OPENINGS IN DRAINAGE AND/OR VENT SYSTEMS AS A RESULT OF INSTALLATION ROUGH-IN SHALL BE PROTECTED WITH A TEST PLUG THAT IS SECURELY LOCKED IN PLACE UNTIL FINAL FINISHED CONNECTIONS ARE INSTALLED.

7. PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE.

8. ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES, VALVES, ETC. ARE CONCEALED WITHIN WALLS. WHERE ACCESS FOR ADJUSTMENT AND MAINTENANCE IS POSSIBLE THROUGH LAY-IN SUSPENDED CEILINGS, ACCESS PANELS, ARE NOT REQUIRED.

9. ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION.

10. INSTALL ALL PIPING AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALL FOR INSTALLATION OF OTHER WORK INCLUDING DUCTS AND ELECTRICAL CONDUIT.

11. PROVIDE AN ISOLATING, DIELECTRIC UNION AT ALL CONNECTIONS BETWEEN FERROUS AND NONFERROUS PIPING.

12. PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

13. FIELD VERIFY LOCATION OF EXISTING SERVICES TO BE REUSED OR CONNECTED TO AND REPORT TO ARCHITECT/ENGINEER IF OTHER THAN THAT WHICH IS INDICATED ON DRAWINGS.

15. COORDINATE ELECTRICAL VOLTAGES WITH ELECTRICAL DRAWINGS PRIOR TO ORDERING ANY EQUIPMENT.

16. COORDINATE FIXTURE TYPES WITH THE ARCHITECTURAL DRAWINGS. AREAS DESIGNATED FOR USE BY THE HANDICAPPED SHALL BE SUPPLIED WITH FIXTURES AND TRIM AS SET FORTH IN THE "AMERICANS" WITH DISABILITIES ACT"(ADA).

17. WHEN WATER HEATERS ARE PLACE ABOVE THE CEILING, THE CONTRACTOR SHALL PROVIDE A 1-½" PTRAP WITH A TRAP PRIMER AT THE NEAREST WASTE OR VENT LINE ABOVE THE CEILING FOR P&T DISCHARGE.

18. WHEN ADDING ON TO OR MAKING AN ADDITION TO AN EXISTING FACILITY. CONTRACTOR SHALL FIELD VERIFY EXISTING EQUIPMENT (FIXTURE, TRIM, PUMPS ETC.) MANUFACTURER AND USE SAME MANUFACTURER FOR NEW EQUIPMENT. CONTRACTOR SHALL ATTAIN WRITTEN APPROVAL OF OWNER/OWNER REPRESENTATIVE FOR USE OF DIFFERENT MANUFACTURER.

19. ALL PIPING SHALL BE ROUTED ABOVE CEILING UNLESS OTHERWISE INDICATED. ALL PIPING EXPOSED TO VIEW SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO THE UNDERSIDE OF STRUCTURE.

20. ALL WATER PIPING SHALL BE ROUTED ABOVE THE CEILING UNLESS NOTED OTHERWISE. COLD AND HOT WATER PIPING ABOVE GRADE SHALL BE TYPE L HARD DRAWN COPPER TUBING CONFORMING TO ASTM B-88 WITH SWEAT JOINTS AND COST OR WROUGHT FITTINGS. JOINTS SHALL BE MAKE WITH LEAD FREE SOLDER. COLD WATER PIPING BELOW GRADE SHALL BE TYPE K COPPER TUBING WITH CAST OR WROUGHT FITTINGS AND JOINTS AS DESCRIBED ABOVE. JOINTS SHALL NOT BE PERMITTED UNDER FLOOR SLABS. WATER PIPING BELOW GRADE THROUGH CONCRETE SHALL BE PROTECTED WITH PLASTIC SLEEVES.

21. SANITARY WASTE & VENT, AND STORM DRAIN PIPING ABOVE GROUND SHALL BE PVC WITH SOLVENT JOINTS.

22. SANITARY WASTE & STORM DRAIN PIPING BELOW GROUND SHALL BE SCHEDULE 40 DWV PVC WITH SOLVENT JOINTS.

23. SANITARY STACKS SHALL HAVE CLEAN OUTS AT THE BASE OF ALL STACKS.

24. ALL HOT WATER AND COLD WATER PIPING ABOVE GRADE SHALL BE INSULATED WITH ½" NOMINAL THICKNESS FIBERGLASS PIPE INSULATION WITH VAPOR BARRIER JACKET, OWENS-CORNING AS J/SSLII OR EQUAL.

25. WASTE, COLD WATER AND HOT WATER PIPING AT HANDICAPPED LAVATORIES SHALL BE INSULATED WITH TRUEBRO "LAV-GUARD" #103.

26. ALL PIPING PENETRATING CEILINGS, WALLS, AND CASEWORK SHALL BE INSTALLED WITH MATCHING ESCUTCHEONS AT THE PENETRATION. ALL PIPING PENETRATING EXTERIOR WALLS AND ROOFS SHALL BE FLASHED IN AN APPROVED MANNER AND SHALL BE PROTECTED AS REQUIRED BY THE ARCHITECT.

27. TOPS OF ALL FLOOR DRAINS AND CLEANOUTS SHALL BE SET FLUSH WITH FINISHED FLOOR.

28. ROUTE RELIEF VALVE DISCHARGE FROM WATER HEATER TO NEAREST HUB DRAIN OR TO GRADE OUTDOORS.

29. ROUTE RELIEF VENTS ON ALL BACKFLOW PREVENTERS TO NEAREST FLOOR DRAIN OR CODE APPROVED DRAINAGE RECEPTACLE.

30. SHOP DRAWINGS SHALL BE SUBMITTED TO AND REVIEWED BY THE ARCHITECT PRIOR TO ORDERING EQUIPMENT OR INSTALLING ANY PIPING FOR ALL EQUIPMENT. FIXTURES, AND PIPING.

31. CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS. ALL PLUMBING EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE WITH THE ELECTRICAL CONTRACTOR.

32. WATER PIPING ROUTED ABOVE CEILINGS AND IN EXTERIOR WALLS SHALL BE ROUTED ON HEATED SIDE OF CEILING INSULATION AND WALL INSULATION.

33. ALL PLUMBING EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

34. ALL PLUMBING EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION.

35. ANY EXISTING WALL, FLOOR, OR CEILING SURFACE THAT IS DISTURBED DURING THE COURSE OF THE WORK SHALL BE REPAIRED.

36. PRIOR TO PURCHASING ANY MATERIALS OR STARTING ANY WORK, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS. PIPING SIZES AND LOCATIONS, EQUIPMENT, ETC. SHOWN ON THE DRAINS OR AFFECTING THIS WORK AND SHALL REPORT ANY DEVIATIONS TO THE ARCHITECT.

Kenneth Ogden Weiss Architect
1919 N Norfolk Street
Speedway, Indiana 46224
Phone • 317-[illegible]
Fax • 317-[illegible]

AR-[illegible]

PROPOSED NEW FACILITY FOR :
BUILT-BLOOMINGTON
1320 S. ROGERS STREET
BLOOMINGTON, INDIANA

revisions:

date: 4/22/25

project:

sheet:

MEP

BLOOMINGTON BOARD OF ZONING APPEALS **CASE#: CU-V-38-25**
STAFF REPORT **ZR2025-08-0092/0093**
LOCATION: 111 S. Jefferson Street **DATE: September 18, 2025**

PETITIONER: Todd Sacksteder
10101 Brookhill Dr
Brookville, IN 47012

REQUEST: The petitioner is requesting Conditional Use approval to allow a "Dwelling, duplex" use in the Residential Small Lot (R3) zoning district. The petitioner is also requesting a Variance from the front building setback standards to allow a "Dwelling, duplex" in the Residential Small Lot (R3) zoning district.

REPORT: The property is located on S. Jefferson Street between E. 5th Street and E. 4th Street. This site and the surrounding properties to the north, east, and south are zoned Residential Small Lot (R3), and the properties across the street to the west are zoned Residential Urban (R4). The site is surrounded by a mix of single family residences. The property currently contains a single family residence and is within the Green Acres Neighborhood Association area.

The petitioner is proposing to remove the existing residence and develop the site with a new "Dwelling, duplex". The residence has been designed with each unit having a separate exterior entrance facing Jefferson Street to the west. The proposed duplex includes a new 2-story structure with two 3-bedroom, 3-bath dwelling units. Moreover, the plan features a traditional home found in the Green Acres neighborhood with matching roof and porch styles, and the exterior building materials primarily include engineered wood siding and dimensional asphalt shingles. An 18' x 30' concrete driveway connecting to Jefferson Street is shown on the site plan. Two street trees are required with the new construction and have been shown. Water and sewer connections are shown along Jefferson Street. New electrical service will also be separate for each unit and coordinated with Duke Energy.

This petition was presented to the Green Acres Neighborhood Association. The main request expressed by the Neighborhood Association is that the duplex is setback 8' more than the house at 109 S. Jefferson Street, which is located to the north to create a more consistent block face. The Neighborhood Association emphasized the importance of the new duplex not visually overwhelming the other houses on that side of the block and ensuring that the mass of the new duplex is compatible with the existing character of the neighborhood. Based on this feedback from the Green Acres Neighborhood Association, the petitioner revised their plans to build the duplex farther back on the property which necessitated a variance from the front build-to requirement of 15' from the property line.

The petitioner is requesting conditional use approval to allow the establishment of a "Duplex, dwelling" use on the property as well as a variance from the front building setback standards.

CRITERIA AND FINDINGS FOR CONDITIONAL USE PERMIT

20.06.040(d)(6)(B) General Compliance Criteria: All petitions shall be subject to review and

pursuant to the following criteria and shall only be approved if they comply with these criteria.

i. Compliance with this UDO
ii. Compliance with Other Applicable Regulations
iii. Compliance with Utility, Service, and Improvement Standards
iv. Compliance with Prior Approvals

PROPOSED FINDING: There are use-specific standards outlined in 20.03.030(b)(3) that apply to the use "Dwelling, duplex" within the R3 zoning district, and this petition meets those standards. The property owner does not have any Notices of Violation on file, and occupancy of each dwelling unit is subject to the definition of "Family". Each duplex unit has a separate exterior entrance facing Jefferson Street, and the proposed design elements are similar in general shape, size, and design with the majority of existing single-family or duplex structures on the same block. Each dwelling unit has 3 bedrooms which meets the maximum 6 bedroom limitation. The petitioner did attend the Green Acres Neighborhood Association meeting and presented this petition as required. There are no known other applicable regulations for this petition. Water and sewer services are available along Jefferson Street and will be coordinated with the City of Bloomington's Utilities and Engineering Departments. There are no known prior land use approvals for this site.

20.06.040(d)(6)(C) ADDITIONAL CRITERIA APPLICABLE TO CONDITIONAL USES

i. Consistency with Comprehensive Plan and Other Applicable Plans

The proposed use and development shall be consistent with and shall not interfere with the achievement of the goals and objectives of the Comprehensive Plan and any other applicable adopted plans and policies.

PROPOSED FINDING: This proposal is in line with the goals of the Comprehensive Plan. In the Future Land Use Map, this area is identified as the "Mixed Urban Residential" land use category. The Comprehensive Plan states that the Mixed Urban Residential land use category is largely in older neighborhoods and that redevelopment should be compatible with the surroundings. Additionally, Policy 5.3.1 encourages opportunities for infill and redevelopment across the City of Bloomington with consideration for increased residential densities, complementary design, and underutilized housing types such as duplexes.

ii. Provides Adequate Public Services and Facilities

Adequate public service and facility capacity shall exist to accommodate uses permitted under the proposed development at the time the needs or demands arise, while maintaining adequate levels of service to existing development. Public services and facilities include, but are not limited to, streets, potable water, sewer, stormwater management structures, schools, public safety, fire protection, libraries, and vehicle/pedestrian connections and access within the site and to adjacent properties.

PROPOSED FINDING: As stated by the petitioner, new water and sewer services will be coordinated with the City of Bloomington's Utilities and Engineering Departments and no problems have been noted for connecting to those service lines. For new electrical service, this will be coordinated with Duke Energy.

iii. Minimizes or Mitigates Adverse Impacts

1. *The proposed use and development will not result in the excessive destruction, loss or damage of any natural, scenic, or historic feature of significant importance.*
2. *The proposed development shall not cause significant adverse impacts on surrounding properties nor create a nuisance by reason of noise, smoke, odors, vibrations, or objectionable lights.*
3. *The hours of operation, outside lighting, and trash and waste collection shall not pose a hazard, hardship, or nuisance to the neighborhood.*
4. *The petitioner shall make a good-faith effort to address concerns of the adjoining property owners in the immediate neighborhood as defined in the pre-submittal neighborhood meeting for the specific proposal, if such a meeting is required.*

PROPOSED FINDING: There are no regulated natural or scenic features that will be impacted. The property is not located within a historic district. No significant adverse impacts are expected from the creation of the proposed duplex. No changes to trash and waste collection service are expected. At the Green Acres Neighborhood Association meeting, the main concern expressed was about the placement of the duplex. The build-to line for this zoning district is 15' from the front property line. However, the Green Acres Neighborhood Association requested that the duplex is setback 8' more than the house to the north at 109 S. Jefferson Street. As a result, the petitioner revised their plans and is requesting a variance to build the duplex with a 33.47' front setback.

iv. Rational Phasing Plan

If the petition involves phases, each phase of the proposed development shall contain all of the required streets, utilities, landscaping, open space, and other improvements that are required to comply with the project's cumulative development to date and shall not depend upon subsequent phases for those improvements.

PROPOSED FINDING: No phasing is proposed with this plan.

CRITERIA AND FINDINGS FOR DEVELOPMENT STANDARDS VARIANCE

20.06.080(b)(3)(E)(i) Standards for Granting Variances from Development Standards: A variance from the development standards of the Unified Development Ordinance may be approved only upon determination in writing that each of the following criteria is met:

1) *The approval will not be injurious to the public health, safety, morals, and general welfare of the community.*

PROPOSED FINDING: The approval of the requested setback variance is not expected to be injurious to the general welfare of the neighborhood and community. There will be no impact to the overall safety of the duplex as a result of the requested variance. The need for the front setback variance was the result of input from the Green Acres Neighborhood Association so that the new duplex does not visually overwhelm the other houses on that side of the block on Jefferson Street.

2) *The use and value of the area adjacent to the property included in the Development Standards Variance will not be affected in a substantially adverse manner.*

PROPOSED FINDING: The granting of the variance is not expected to impact the use and value of the area adjacent to the property in a substantially adverse manner. Given the condition of the existing house, the Green Acres Neighborhood Association has no issues with the demolition of the single-family home. The petitioner designed the new duplex plans to be compatible with the neighborhood.

3) *The strict application of the terms of the Unified Development Ordinance will result in practical difficulties in the use of the property; that the practical difficulties are peculiar to the property in question; that the Development Standards Variance will relieve the practical difficulties.*

PROPOSED FINDING: The strict application of the terms of the Unified Development Ordinance will result in practical difficulties in the use of the property in that it would require the building to be constructed at a location that would not be consistent with the established block face of other residences along this section of Jefferson Street. Peculiar condition in this case is that the adjacent properties are non-conforming and not built at the 15’ build-to line as required by the Unified Development Ordinance (UDO). In order to best fit with the existing character of the Green Acres neighborhood, a variance is necessary for the new duplex to be setback 33.47’ from the front property line instead of 15’ as specified in the UDO.

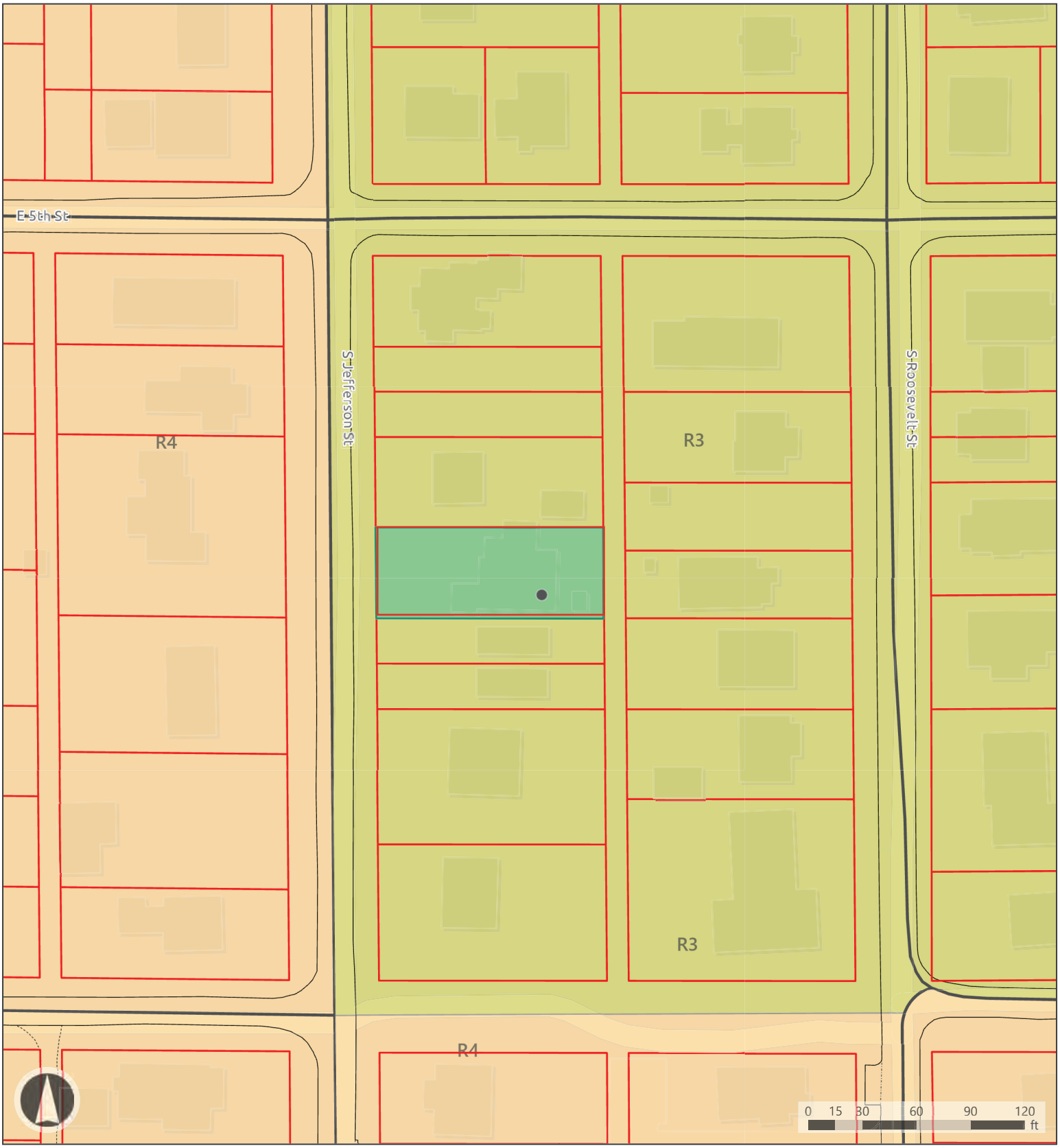
RECOMMENDATION: The Department recommends that the Board of Zoning Appeals adopt the proposed findings and approve of CU-V-38-25/ZR2025-08-0092/0093 with the following conditions:

1. The conditional use/variance approval is limited to the design shown and discussed in the packet.
2. Two large street trees are required to be planted as shown on the plan.

City of Bloomington
GIS Map

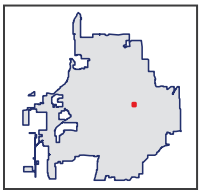
Planning and Transportation Department

1301
111 S. Jefferson St



Map Legend

- Board of Zoning Appeals
- Parcels
- Pavement
- Alley
- Lane
- Current
- Bloomington Municipal Boundary
- Residential Small Lot
- Residential Urban



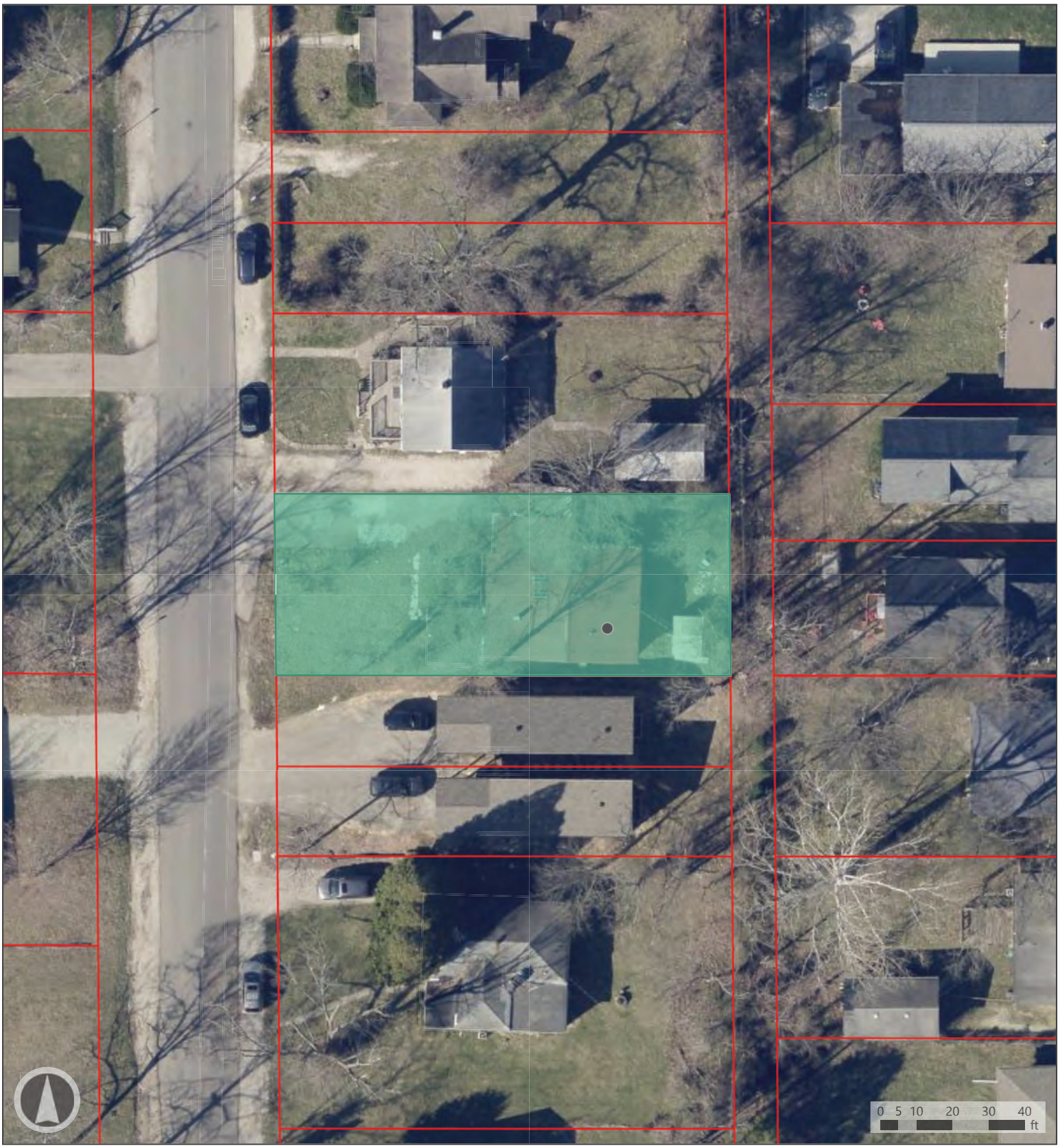
Created: 9/12/2025 *Map By:*

For use as map information only, information is NOT warranted.

City of Bloomington
Aerial Map

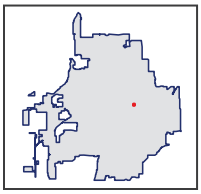
Planning and Transportation Department

111 S. Jefferson St



Map Legend

- Board of Zoning Appeals
- Parcels
- Bloomington Municipal Boundary



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For use as map information only, information is NOT warranted.

Sacksteder Properties, LLC

3243 Quailwood Run Lane, Indiana

Petitioner’s Statement

111 S Jefferson St, Bloomington, IN 47408 Residence

Petitioner: Sacksteder Properties, LLC

Property Description

111 S Jefferson St, Bloomington, IN 47408 is near the intersection of FifthStreet and North Jefferson Street in the Green Acres Neighborhood. The property is zoned R3 (Residential Small Lot) and is surrounded by a mix of single family residential and multifamily homes. The zoning on all three sides of the property is R3. Across Jefferson is zoned R 4.

Conditional Use Request

Sacksteder Properties, LLC, is requesting a Conditional Use permit per the UDO for the construction of a duplex in R3 Zoning. We are also asking for a variance from the front setbacks to set the duplex more inline with the properties next to it. The proposal meets the design requirements and development standards outlined in the UDO. It includes a new 2-story structure with two 3-bedroom, 3-bath dwelling units. Each unit will have a separate exterior entrance off Jefferson. The plan features a traditional home found in this neighborhood with matching roof styles and porch styles. The exterior will primarily include engineered wood siding and dimensional asphalt shingles. The building setback will sit 15 ft behind the right of way line off Jefferson St. Vehicular access will be from the north side of the lot off of Jefferson St with 2 spots proposed for this build. New water and sewer services, separate for each unit, will be coordinated with City of Bloomington Utilities and Engineering, and new electrical service, separate for each unit, will be coordinated with Duke Energy. Upon approval, construction is expected to begin in November 2025, with completion anticipated in the Summer of 2026.

SITE NOTES:

ZONED: R3

BUILDING SETBACKS: FRONT BUILD TO LINE 15 FT OR THE MEDIAN FRONT SETBACK OF ABUTTING RESIDENTIAL STRUCTURES, WHICHEVER IS LESS
SIDE YARD SETBACK FIRST FLOOR = 6 FT , EACH STORY ABOVE THE GROUND FLOOR=10 FEET
REAR YARD SETBACK 15' IF ADJACENT TO PLATTED ALLEY
PARKING SETBACKS: 10 FT BEHIND THE PRIMARY STRUCTURE'S FRONT BUILDING WALL

IMPERVIOUS SURFACE COVERAGE CALCULATIONS: LOT AREA: 6,300 SFT ALLOWED IMPERVIOUS 45% = 2,835 SFT
BUILDING FOOTPRINT INCLUDING PORCH: 1,604 SFT
PAVEMENT PATIOS AND WALK & CARPORT: 770 SFT
TOTAL: 2,374 SFT

IMPERVIOUS SURFACE PROPOSED: 37.7 % PROPOSED

SCALE: 1"=10'

NOTES

THIS EXHIBIT WAS PREPARED BASED UPON DOCUMENTS OBTAINED FROM THE OFFICE OF THE RECORDER OF MONROE COUNTY, AND OTHER SOURCES AND IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-382-5544 CALL TOLL FREE
PER INDIANA STATE LAW IC8-1-26.
IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTIFYING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

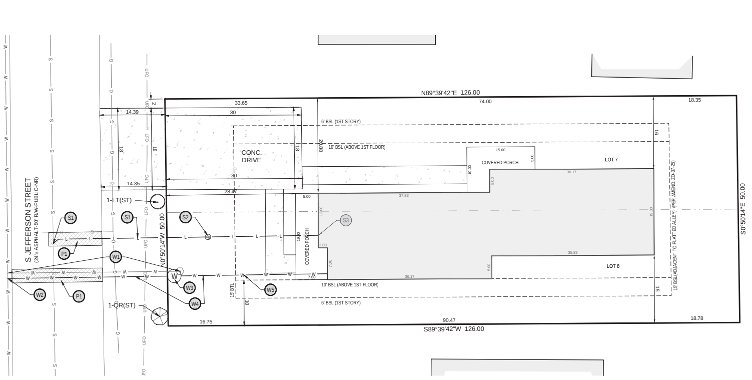
LEGEND

(S)	SANITARY MANHOLE		CURB INLET
(CO)	CLEAN OUT		INLET ROUND
(W)	WATER METER PIT		INLET SQUARE
	EXISTING FIRE HYDRANT	(G)	GAS MANHOLE
WV	EXISTING WATER VALVE	G	GAS VENT/RISER
	PROPOSED WATER VALVE	FO	FIBER OPTIC RISER/BOX

SANITARY SEWER	S
SANITARY LATERAL	L
UNDERGROUND ELECTRIC LINE	E
OVERHEAD WIRE	OHW
WATER LINE	W
STORM SEWER	ST
FENCE	X X X X

B.S.L. BUILDING SETBACK LINE
P.S.L. PARKING SETBACK LINE

BASIS OF BEARINGS: INDIANA STATE PLANE, WEST ZONE



LANDSCAPE NOTES

ROAD FRONTAGE = 50.00 FT
STREET TREE REQ'D = 1 TREE/ 30 FT. OF FRONTAGE = 2 TREES
2 LARGE TREES
(1) - (LT) Tulip Tree (*Liriodendron tulipifera*)
(1) - (QR) Red Oak (*Quercus rubra*)
OR
TREES TO BE MIN. 2" CALIPER FROM THE CITY OF BLOOMINGTON UDO PERMITTED MEDIUM/SMALL STREET TREE TABLE

CONTRACTOR TO SUBMIT A TREE WORK PERMIT TO THE CITY OF BLOOMINGTON URBAN FORESTER PRIOR TO PLANTING THE PROPOSED STREET TREES.

LAWN NOTES

1. GROUND COVER - AREAS DISTURBED THAT ARE NOT INTENDED AS HARD SURFACE (BUILDING, SIDEWALKS, AND DRIVEWAYS) SHALL BE LAWN WITH SEED MIX PERMITTED WITHIN THE CITY OF BLOOMINGTON UDO.

SITE KEY NOTES

(P1) PAVEMENT PATCH PER CITY OF BLOOMINGTON PAVEMENT PATCH DETAIL. MATCH EXISTING GRADING.

UTILITY KEY NOTES

WATER LINE NOTES (W)

1. CUT CAP AT WATER MAIN AND ABANDON IN PLACE EXISTING WATER SERVICE AND RETURN WATER METER TO CBU.
2. NEW SERVICE TAPP AND SINGLE OR DOUBLE WATER METER AND SERVICE CONNECTION TO BE DETERMINED BY CBU . FINAL SIZE AND LOCATION TO BE DETERMINED BY CBU.
3. NEW WATER SERVICE SIZE TO BE DETERMINED BY CBU.
4. NEW METER PIT. SIZE AND LOCATION TO BE DETERMINED BY CBU.
5. CONNECT TO BUILDING, SEE ARCHITECTURAL/PLUMBING PLANS.

SANITARY SEWER NOTES (S)

1. 6" SDR-35 PVC SANITARY SEWER LATERAL (SLOPE @ 1.00% MIN). BACKFILL PER CBU DETAIL 11. EXCAVATION IN RIGHT-OF-WAY AND ALLEY REQUIRES A RIGHT-OF-WAY USE PERMIT FROM THE CITY OF BLOOMINGTON ENGINEERING DEPARTMENT.
2. SANITARY CLEANOUT PER CBU STANDARD DETAIL 19.
3. CONNECT TO BUILDING SANITARY WASTE LINE (SEE PLUMBING PLANS). SANITARY SEWER PIPE TO BE 6" MINIMUM DIAMETER OUTSIDE OF BUILDING.
4. CONNECT SANITARY LATERAL TO 8" SANITARY MAIN AT EXISTING PLASTIC WYE OR LATERAL. APPROXIMATE LOCATION OF THE EXISTING LATERAL CONNECTION POINT ON THE MAIN HAS BEEN PROVIDED BY CBU FOR THE CONTRACTOR'S REFERENCE. CONTRACTOR TO REPLACE CONNECTION, COORDINATE WITH CBU. OWNER TO PROVIDE EXCAVATION. LOCATE AND TELEVISE EXISTING LATERAL FOR POSSIBLE REUSE OR REPLACE TO THE MAIN.

UTILITY NOTES

1) NO WATER/SEWER UTILITY CONNECTIONS ARE TO BE MADE UNTIL CBU HAS VERIFIED THE SERVICES FOR EACH UNIT, AND APPLICATIONS ARE APPROVED ACCORDINGLY.
2) CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES.
3) ALL PROJECTS WILL REQUIRE A PRE-CONSTRUCTION` MEETING WITH THE CITY OF BLOOMINGTON UTILITIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR AND/OR DEVELOPER MUST CONTACT THE UTILITIES TECHNICIAN AT (812) 349-3676 TO SCHEDULE THE MEETING.
4) CONTRACTOR SHALL NOTIFY THE CITY OF BLOOMINGTON UTILITIES ENGINEERING DEPARTMENT ONE (1) WORKING DAY PRIOR TO CONSTRUCTION OF ANY WATER, STORM OR SANITARY SEWER UTILITY WORK. A CBU INSPECTOR MUST HAVE NOTICE SO WORK CAN BE INSPECTED, DOCUMENTED, AND A PROPER AS-BUILT MADE. WHEN A CONTRACTOR WORKS ON WEEKENDS, A CBU DESIGNATED HOLIDAY, OR BEYOND NORMAL CBU WORK HOURS, THE CONTRACTOR WILL PAY FOR THE INSPECTOR'S OVERTIME. FOR CBU WORK HOURS AND HOLIDAY INFORMATION, PLEASE CONTACT THE CITY OF BLOOMINGTON UTILITIES ENGINEERING DEPARTMENT AT (812)349-3660.
5) IN ACCORDANCE WITH SECTION 4.5.2.1.5.1. OF THE CBU CONSTRUCTION SPECIFICATIONS ALL SEWER LATERALS SHALL HAVE A CLEAN-OUT AT LEAST EVERY 90 FEET. ALL CLEAN-OUTS, WETHER IN GRASSY AREAS OR IN PAVEMENT, SHALL BE SUB-SURFACE AND PROTECTED BY A SUITABLE METAL CASTING SUCH AS EAST JORDAN CATALOGUE NO. 2975 OR NEENAH CATALOGUE NO. R-1974-A. IN GRASSY AREAS, THE CASTING SHALL BE PROVIDED WITH A CIRCULAR CONCRETE COLLAR FLUSH WITH THE TOP OF THE CASTING AND THE GROUND SURFACE. THE COLLAR SHALL BE MINIMUM 6" THICK AND SHALL EXTEND AT LEAST 8" BEYOND THE OUTSIDE OF THE CASTING ON ALL SIDES. IN PAVEMENT, THE TOP OF THE CASTING SHALL BE FLUSH WITH THE SURROUNDING PAVEMENT. TOP OF CLEAN-OUT SHALL BE NO MORE THAN 3" BELOW THE TOP OF THE CASTING. A #10 INSULATED SOLID COPPER LOCATOR WIRE SHALL BE WRAPPED AROUND ALL NON-METALLIC PIPES SO THAT ONE REVOLUTION IS MADE AT LEAST EVERY PIPE JOINT. SPLICES ARE TO BE MADE WITH AN APPROVED CONNECTOR, AND ARE TO BE SUITABLY PROTECTED AGAINST CORROSION. THE WIRE IS TO BE BROUGHT TO THE SURFACE WITH A CLEAN-OUT IN A CASTING. ALSO SEE THE CBU CONSTRUCTION SPECIFICATIONS FOR THE "STANDARD SANITARY LATERAL CLEAN-OUT DETAIL #19".
6) WHEREVER C900 PIPE IS USED FOR SEWER, ALL WYES SHALL BE HARCO, SIZED FOR C900 ON THE RUN AND SDR-35 ON THE BRANCH. TRANSITION FROM C900 TO SDR-35 PIPE SHALL BE MADE BY USE OF A HARCO C900 TO SDR-35 ADAPTER WYES.
7) ALL D.I.P. USED FOR SANITARY SEWER SHALL HAVE CERAMIC EPOXY LINING, MINIMUM THICKNESS 40 MILS, AND SHALL BE PROTECTO 401, AS MANUFACTURED BY INDURON PROTECTIVE COATINGS. WYES FOR D.I.P. SHALL BE HARCO D.I.P. TO SDR-35 ADAPTER WYES.
8) ALL DUCTILE IRON PIPE (DIP) WILL REQUIRE POLYETHYLENE ENCASEMENT SLEEVES AND SHALL BE 8-MIL LINEAR LOW-DENSITY (LLD) POLYETHYLENE ENCASEMENT OR 4-MIL HIGH-DENSITY CROSS-LAMINATED (HDCL), POLYETHYLENE ENCASEMENT MATERIAL, INCLUSIVE OF VALVES AND FITTINGS. THE MATERIAL SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH ANSI/AWWA C-105/A21.5, USING PLASTIC TIE STRAPS OR CIRCUMFERENTIAL OR ADHESIVE TAPE PROVIDING THE PIPE WOTH A SECURE PROTECTIVE ENCLOSURE.
9) ALL GRATES AND CASTINGS WITHIN THE PUBLIC RIGHT OF WAY MUST BE EJ (FORMERLY EAST JORDAN IRON WORKS).
10) NOTE: ANY SERVICES REQUIRED TO BE CUT/CAPPED AT THE MAIN ARE THE RESPONSIBILITY OF THE OWNER/CONTRACTOR, AND MUST HAVE A VISUAL INSPECTION COMPLETED BY A CBU INSPECTOR PRIOR TO COVERING/BURY. CONTACT CBU TO SCHEDULE THIS INSPECTION.
11) ALL EXCAVATION, SITE PREP AND RESTORATION FOR ALL SERVICE-RELATED WORK IS THE RESPONSIBILITY OF THE OWNER/CONTRACTOR; TAPS WILL BE COMPLETED BY CBU.
12) ANY EXCAVATION IN RIGHT-OF-WAY AND ALLEY REQUIRES A RIGHT-OF-WAY USE PERMIT FROM THE CITY OF BLOOMINGTON ENGINEERING DEPARTMENT.

NOTES

1. ALL DIMENSIONS SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF UNLESS OTHERWISE LABELED
2. BUILDER/CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE BUILDING PRIOR TO CONSTRUCTION.
3. BUILDER TO GRADE LOT TO PROVIDE ADEQUATE DRAINAGE AWAY FROM BUILDING.
4. BUILDER TO GRADE LOT TO PROVIDE ADEQUATE DRAINAGE AWAY FROM NEIGHBORING LOTS UNLESS THERE IS AN EXISTING DRAINAGE EASEMENT.
5. SEDIMENT DISCHARGE AND TRACKING FROM LOT WILL BE MINIMIZED THROUGHOUT LAND DISTURBING ACTIVITIES UNTIL PERMANENT STABILIZATION HAS BEEN ACHIEVED.
6. ADJACENT LOTS DISTURBED BY AN INDIVIDUAL LOT OPERATOR MUST BE REPAIRED AND STABILIZED WITH TEMPORARY OR PERMANENT SURFACE STABILIZATION.
7. SEDIMENT TRACKED OR WASHED ONTO ROADS SHALL BE CLEANED UP.
8. THE SILT FENCE AND APPROPRIATE EROSION CONTROL SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION. LOCATION OF SILT FENCE TO BE APPROVED BY THE CITY OF BLOOMINGTON.
9. ANY DISTURBED AREAS TO REMAIN IDLE FOR MORE THAN 7 DAYS SHALL BE TEMPORARY MULCH SEEDED.
10. CONTRACTOR TO CONTACT CBU UTILITIES (812)349-3676 PRIOR TO START OF CONSTRUCTION TO HAVE A CBU INSPECTOR ASSIGNED TO THE PROJECT.

VICINITY MAP
★ PROJECT LOCATION

SMITH DESIGN GROUP
CIVIL ENGINEERING - LAND SURVEYING

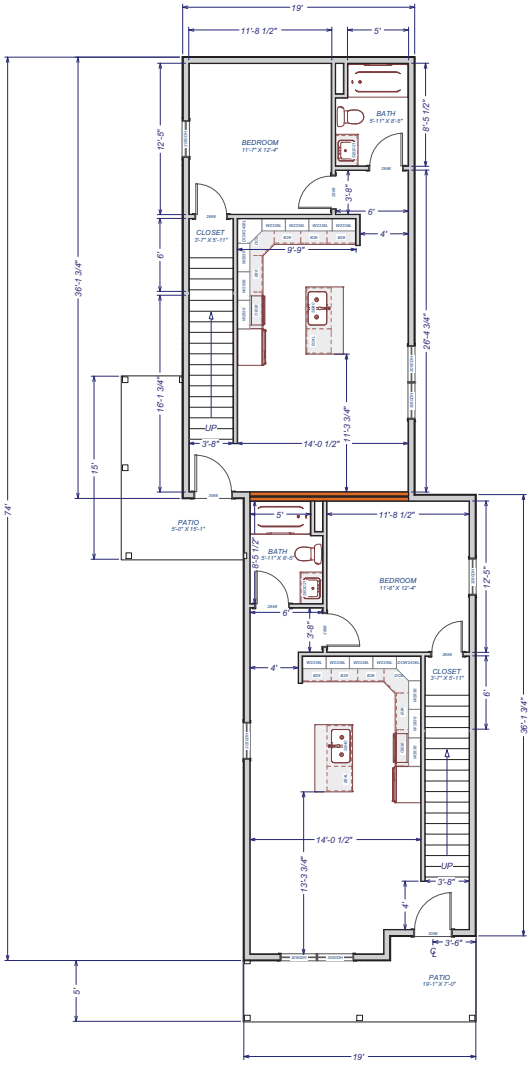
SCOTT P. PARDUE
REGISTERED No. LS22300016
STATE OF INDIANA
LAND SURVEYOR
Scott P. Pardue
08/25/2025

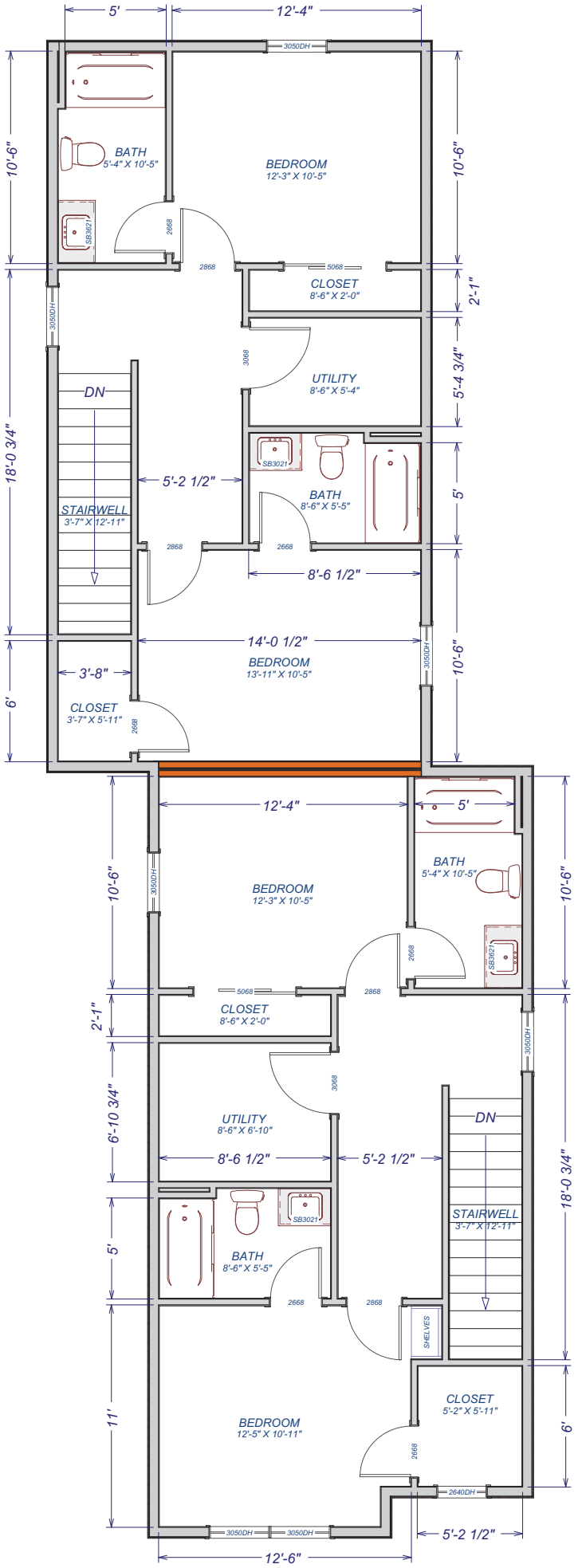
JOB TITLE
111 S JEFFERSON ST
BLOOMINGTON, INDIANA
HIGHLAND HOMES, BLOCK Q
LOTS 7 & 8

REVISIONS	BY	DATE
MOVED HOUSE & EXTENDED DRIVE/WALKS	SPP	08/25/25

DESIGN SPP | DRAFTED SPP | CHECKED SPP

JOB NUMBER 7204
SHEET 1 OF 1
DATE 08/25/25
SITE PLAN


19'
11'-8 1/2"
5'
BEDROOM
11'-7" X 12'-4"
BATH
5'-11" X 8'-5"
8'-5 1/2"
12'-5"
3'-8"
6'
4'
CLOSET
5'-7" X 5'-11"
9'-9"
6'
36'-1 3/4"
26'-4 3/4"
16'-1 3/4"
UP
3'-8"
14'-0 1/2"
11'-3 3/4"
15'
74'
PATIO
5'-0" X 15'-1"
5'
11'-8 1/2"
BATH
5'-11" X 8'-5"
8'-5 1/2"
BEDROOM
11'-8" X 12'-4"
12'-5"
6'
3'-8"
4'
CLOSET
5'-7" X 5'-11"
6'
36'-1 3/4"
14'-0 1/2"
13'-3 3/4"
UP
3'-8"
4'
3'-6"
PATIO
19'-1" X 7'-0"
5'
19'


5'
12'-4"
3050DH
BATH
5'-4" X 10'-5"
BEDROOM
12'-3" X 10'-5"
10'-6"
SB3021
2668
2868
5068
CLOSET
8'-6" X 2'-0"
2'-1"
3050DH
3068
UTILITY
8'-6" X 5'-4"
5'-4 3/4"
DN
18'-0 3/4"
SB3021
5'-2 1/2"
BATH
8'-6" X 5'-5"
5'
STAIRWELL
3'-7" X 12'-11"
2868
2668
8'-6 1/2"
14'-0 1/2"
3050DH
10'-6"
BEDROOM
13'-11" X 10'-5"
3'-8"
6'
CLOSET
3'-7" X 5'-11"
2668
12'-4"
5'
BATH
5'-4" X 10'-5"
10'-6"
3050DH
BEDROOM
12'-3" X 10'-5"
10'-6"
SB3021
2668
5068
2868
CLOSET
8'-6" X 2'-0"
2'-1"
3050DH
3068
6'-10 3/4"
UTILITY
8'-6" X 6'-10"
DN
8'-6 1/2"
5'-2 1/2"
18'-0 3/4"
SB3021
STAIRWELL
3'-7" X 12'-11"
5'
BATH
8'-6" X 5'-5"
2668
2868
SHELVES
CLOSET
5'-2" X 5'-11"
11'
BEDROOM
12'-5" X 10'-11"
6'
2668
2640DH
3050DH
3050DH
5'-2 1/2"
12'-6"

Eric Greulich <greulice@bloomington.in.gov>

Fw: 111 S. Jefferson

Todd Sacksteder <toddsacksteder@sbcglobal.net> Fri, Aug 22, 2025 at 1:46 PM
Reply-To: Todd Sacksteder <toddsacksteder@sbcglobal.net>
To: Ann Kreilkamp <arkcrone@gmail.com>
Cc: Margaret Menge <margaretmenge@yahoo.com>

Todd Sacksteder
S & W Real Estate LLC
www.sackstederproperties.com
Cell: (317)523-5533

On Wednesday, August 20, 2025 at 08:36:31 PM EDT, Ann Kreilkamp <arkcrone@gmail.com> wrote:

---------- Forwarded message ---------
From: **Margaret Menge** <margaretmenge@yahoo.com>
Date: Wed, Aug 20, 2025 at 6:08 PM
Subject: 111 S. Jefferson
To: Ann Kreilkamp <arkcrone@gmail.com>

Hello -- Here is a list of things we'd like to communicate to the developer, **Todd Sacksteder of S & W Real Estate LLC**, to consider in his application for Conditional Use for **111 S. Jefferson Street** in Green Acres.

1. We have no issue with the demolition of the house now at this address given its condition.
- Thanks for the support

2. The most important request is that the duplex that is built in its place be set back from the street eight feet more than 109 S. Jefferson, to the north of it. This is so that it does not visually overwhelm the other houses on that side of the block with its mass.
- I will work with Eric to change the variance to move the build further back if possible.

3. The second most important request is to make sure that the overall mass of the building be not more than twice the mass of the other homes on the east side of the block, on average. This is essential to making sure that the new duplex is somewhat compatible with the neighborhood -- does not stick out like a sore thumb.
- This house sits within the side setbacks and is not very large as we have it built

4. Trees -- Please preserve any medium to large trees, as far as possible. This includes the large tree that is now immediately south of the current home. This tree is tall and stately and provides shade to two properties. Trees are what make Green Acres green!
- I will do my best to keep the trees that I can while building the structure. We will also be adding trees as seen on the site plan.

5. Exterior -- We'd like to request that the builder use materials that have a natural look...wood or hardie board as opposed to vinyl siding or another cheaper material.
- Will be using 80-90% LP Siding (Wood) and rock Veneer. The sofitt, facia, and gutters will be vinyl and aluminum which is standard.

6. Front lawn -- Please retain significant green space in the front of the duplex. The entire front lawn should not be paved, in other words.
- I will work to keep the paving to the left side of the house as shown in the site plan.

Thanks for the input.

Thank you for considering these requests,

Green Acres Neighborhood Association

_____

I sent out the above message to neighborhood folks and only one responded by the time I told them, 8:30 this evening: Bill Schaich, who says he agrees with all the suggestions.

[Quoted text hidden]