

CITY OF BLOOMINGTON



PLAT COMMITTEE

November 4, 2024 @ 4:00 p.m.

401 N. Morton Street
Kelly Conference Room #155 & via Zoom:

<https://bloomington.zoom.us/j/86714253039?pwd=SXJ2bmNwRFhLeVZSRW44TVl0T3hZUT09>

Meeting ID: 867 1425 3039

Passcode: 064896

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401 N. Morton Street, City Hall
Kelly Conference Room #155

HYBRID MEETING:

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Meeting ID: 867 1425 3039

Password: 064896

PETITION MAP: <https://arcg.is/1DWavm0>

ROLL CALL

MINUTES TO BE APPROVED:

REPORTS, RESOLUTIONS, AND COMMUNICATIONS:

PETITIONS:

DP-37-24/PLAT2024-09-0038

Latitude 39 North Properties, LLC

1217 N. Madison Street

Parcel: 53-05-32-101-009.000-005

Request: Primary plat approval of a two-lot subdivision of 0.27 acres in the Residential Small Lot (R3) zoning district. Case Manager: Eric Greulich

DP-39-24 / PLAT2024-09-0039

Sherry Myers

3615 E. Post Road

Parcel: 53-05-35-400-062.000-005

Request: Secondary plat approval to allow a two-lot subdivision of 4.21 acres in the Residential Medium Lot (R2) zoning district. Case Manager: Gabriel Holbrow

**Next Meeting Date: December 9, 2024

Updated: 11/1/2024

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BLOOMINGTON PLAN COMMISSION
STAFF REPORT
Location: 1217 N. Madison Street

CASE #: DP-37-24 / PLAT2024-09-0038
DATE: November 4, 2024

PETITIONER: Latitude 39 North Properties, LLC
 PO Box 67, Bloomington

CONSULTANTS: Smith Design Group
 1467 W. Arlington Road, Bloomington

REQUEST: The petitioner is requesting primary plat approval for a 2-lot subdivision of 0.27 acres in the Residential Small Lot (R3) zoning district.

BACKGROUND:

Area:	0.27 acres
Current Zoning:	Residential Small Lot (R3)
Comp Plan Designation:	Neighborhood Residential
Existing Land Use:	Dwelling, Single Family (detached)
Proposed Land Use:	Dwelling, Single Family (detached)
Surrounding Uses:	North – Dwelling, Single family` West – Restaurant East – Dwelling, Single family and multifamily South – Dwelling, Single family

REPORT: The property is located at 1217 N. Madison Street and is zoned Residential Small Lot (R3). Surrounding land uses include single family residences to the north and south, single and multi-family residences to the east, and a restaurant to the west. There are no known regulated environmental features on this property. While there are three trees along the south property line, these are not considered closed canopy or required to be preserved. The property currently contains a single family dwelling unit, but this was approved for demolition.

The petitioner is proposing to subdivide the property to create two lots and develop each lot with a single family residence. As part of this petition, the petitioner is proposing to use the Sustainable Development or Affordable Housing incentives, which allows for a maximum 40% reduction in the required minimum lot width. At this time, the petitioner is anticipating to pursue the Sustainable Development Incentives and each house would be LEED Certified. The minimum lot width in the R3 district is 50' and the petitioner is proposing a lot width of 42.97' which is only a 15% reduction and would therefore be allowed within the 40% allowable reduction. Both lots meet the minimum 5,000 sq. ft. lot size of the R3 district and are approximately 5,155 square feet each.

Access for the two lots would be through a private drive along the west side of the lots that connects through adjacent properties to 16th Street to the south. No driveway connections to Madison Street are proposed. There is an existing 5' wide concrete sidewalk and 5' tree plot with street trees along Madison Street that would be remaining.

20.06.060(b)(3)(E) PRIMARY PLAT REVIEW: The Plan Commission or Plat Committee shall review the primary plat subdivision petition and approve, approve with conditions, or deny the

petition in accordance with Section 20.06.040(g) (Review and Decision), based on the general approval criteria in Section 20.06.040(d)(6) (Approval Criteria) and the following standards:

- i. All subdivision proposals shall be consistent with the need to minimize flood damage.
- ii. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- iii. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards
- iv. Base flood elevation data shall be provided for subdivision proposals and other proposed development (including manufactured home parks and subdivisions), which is greater than the lesser of 50 lots or five acres.
- v. All subdivision proposals shall minimize development in the SFHA and/or limit intensity of development permitted in the SFHA
- vi. All subdivision proposals shall ensure safe access into/out of SFHA for pedestrians and vehicles (especially emergency responders).

PROPOSED FINDING: The site currently drains to the west and no on-site storm water detention has been required by City of Bloomington Utilities (CBU). Individual drainage plans for each lot will be reviewed at the time of a building permit. Water and sanitary sewer connections will be connected to existing infrastructure on Madison Street. Minor improvements to the lines and connections have been brought to the attention of the petitioner by CBU and will be finalized with the building permits. There are no portions of this site that lie within the 100-year regulatory special flood hazard area.

20.06.040(d)(6)(B) General Compliance 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: Through the use of the allowed incentives to allow a reduced lot width, all of the proposed lots meet the minimum lot area and lot width standards of the UDO. There are no other known applicable regulations that would apply to this property or subdivision. Approval from the City of Bloomington Utilities Department is required prior to the issuance of any building permits. Preliminary plans for sewer and water connections have been submitted to CBU for review and no major obstacles besides minor upgrades have been identified. There are no other known prior approvals for this property.

20.06.040(d)(6)(D) Additional Criteria Applicable to Primary Plats and Zoning Map Amendments (Including PUDs)

- 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 adopted plans and policies.
- ii. Consistent with Intergovernmental Agreements
The proposed use and development shall be consistent with any adopted intergovernmental agreements and shall comply with the terms and conditions of any intergovernmental agreements incorporated by reference into this UDO.

- iii. **Minimization or Mitigation of Adverse Impacts**
 - 1. The proposed use and development shall be designed to minimize negative environmental impacts and shall not cause significant adverse impacts on the natural environment. Examples of the natural environment include water, air, noise, stormwater management, wildlife habitat, soils, and native vegetation.
 - 2. The proposed use and development shall not result in the excessive destruction, loss or damage of any natural, scenic, or historic feature of significant importance.
 - 3. The proposed use and development shall not result in significant adverse fiscal impacts on the city.
 - 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.
- iv. **Adequacy of Road Systems**
 - 1. Adequate road capacity must exist to serve the uses permitted under the proposed development, and the proposed use and development shall be designed to ensure safe ingress and egress onto the site and safe road conditions around the site, including adequate access onto the site for fire, public safety, and EMS services.
 - 2. The proposed use and development shall neither cause undue traffic congestion nor draw significant amounts of traffic through residential streets.
- v. **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.
- vi. **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: The proposed plat and use of the property as a “Dwelling, Single Family” use is consistent with Comprehensive Plan designation of the property as Neighborhood Residential. There are not any Interlocal Agreements that would pertain to this subdivision. There are no expected adverse impacts as a result of this plat. The proposed plat allows the creation of 2 single family lots that are consistent with the requirements of the UDO with access to existing road system, public services, and public facilities. As mentioned previously, access to the lots will come through driveways to 16th Street to the south. The petitioner would be preserving the existing 5’ wide sidewalk and 5’ tree plot with street trees. The street trees were recently planted by the City. There are no known regulated environmental features that must be addressed with the plat. All adjacent facilities and infrastructure are adequate to support the proposed use. No phasing of the plat is expected or approved.

PLAT REVIEW: The proposed subdivision is following the Infill Subdivision (IS) design standards.

Subdivision Standards:

Parent tract size (minimum): None
Parent tract size (maximum): 3 acre
Open space required: Not required
Lots served by alleys: Not required
Block length: Not required
Cul-de-sac length: Not permitted.

Transportation facilities: Madison Street is classified as a General Urban typology and requires a 10' wide concrete sidewalk and 8' tree plot. A total of 84' of right-of-way is required based on the Transportation Plan. The Planning and Transportation Director has approved the preservation of the existing sidewalk and tree plot. There are existing street trees in the tree plot, however one additional tree is required along this frontage to meet UDO requirements are met. A condition of approval has been included to that effect.

On-street parking: There is existing on-street parking along this section of Madison Street and no changes are proposed or approved with this subdivision.

Tree plot width: The minimum tree plot width required for the General Urban typology is 8' and the petitioner is proposing to maintain the existing 5' wide tree plot. The City recently installed street trees along this section of Madison Street and are in good condition. The Planning and Transportation Director has approved the preservation of the existing sidewalk and tree plot due to the adjacent slope challenges with relocating the sidewalk further into the property. Street trees are required not more than 30' from center and one additional tree is needed to meet the UDO requirements.

Lot Establishment Standards:

Lot area and lot width: The minimum lot width in the R3 district is 50' and the minimum lot area is 5,000 square feet. With the use of the Incentives allowed within the UDO to allow a reduced lot width from the required 50' to 42.97', all of the proposed lots meet the UDO standards.

Lot shape: Both of the proposed lots meet the UDO requirement for regular lot size and a depth-to-width ratio not to exceed four to one.

Lot access: Both of the proposed lots have frontage on a public street with direct frontage on Madison Street. As mentioned previously, no drive cuts on Madison Street are proposed.

Stormwater Standards: No on-site stormwater detention has been required by CBU. Individual drainage plans for each lot will be reviewed by CBU with the building permit.

Right-of-Way Standards:

ROW width: Madison Street should have a total of 84' of right-of-way. The petitioner will be dedicating approximately 15' of right-of-way along this frontage to meet the total 42' of right-of-way required from centerline.

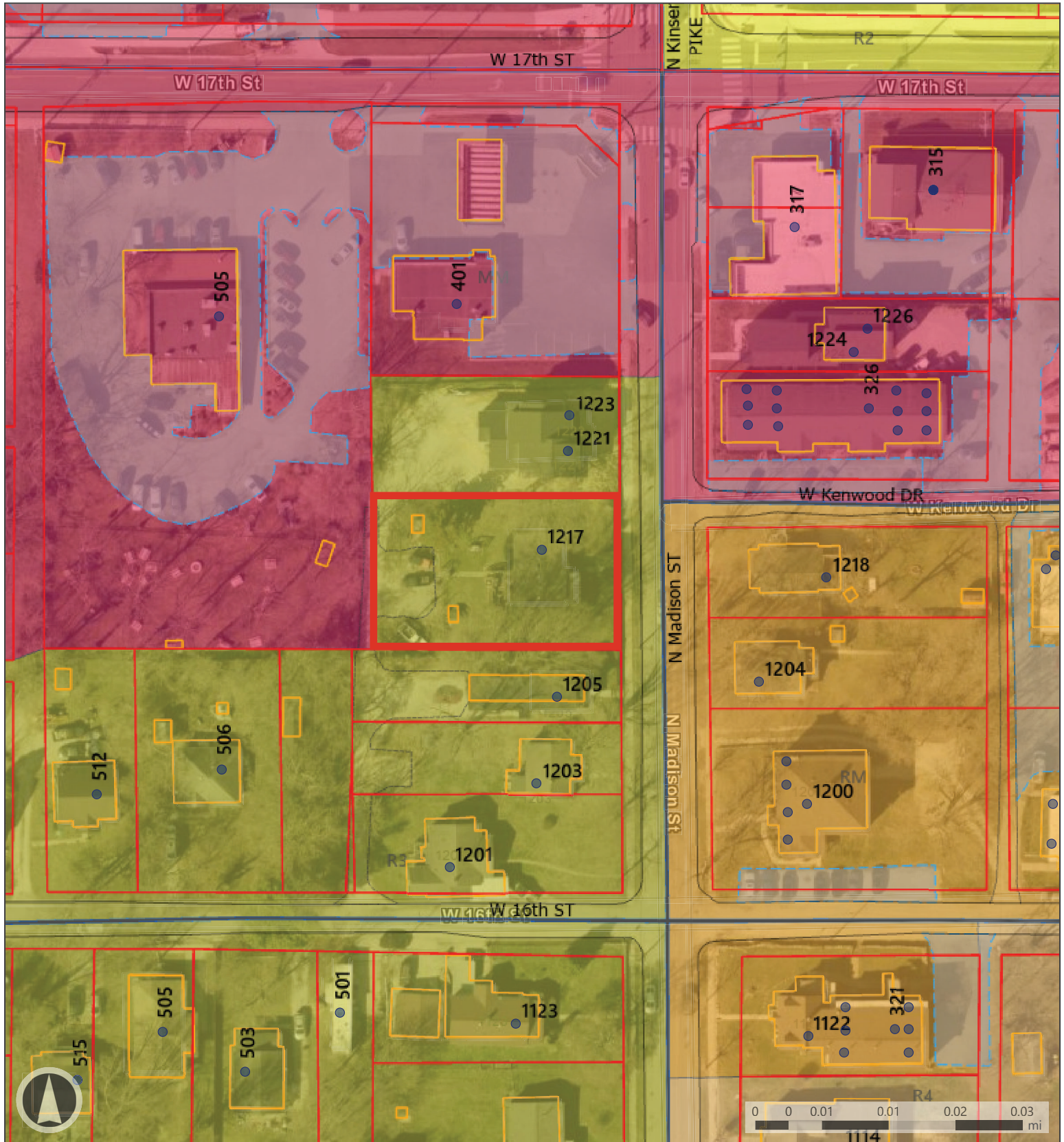
Environmental Considerations: There are no known steep slopes, karst features, or wetlands on the site.

Utilities: Utility service and facilities are located within Madison Street to the east and this development is proposing to connect to those facilities. City of Bloomington Utilities has indicated that minor improvements might be required to facilitate those connection.

CONCLUSION: This development would provide 2 single family lots that have the potential to be owner occupied and would fulfill many goals of the Comprehensive Plan and Housing Study that identifies the need for owner occupied housing and creation of new dwelling units and lots. In addition, this petition would utilize the Sustainable Development Incentives or Affordable Housing Incentives to further many of the goals of the Comprehensive Plan.

RECOMMENDATION: The Planning and Transportation Department recommends that the Plat Committee adopt the proposed findings and approve the primary plat with the following conditions of approval:

1. Individual drainage plans will be submitted to CBU for approval with the building permits for each lot.
2. Each lot must be constructed to the either the Sustainable Development or Affordable Housing Incentives through a Zoning Commitment.
3. Street trees are required not more than 30' from center along the entire property frontage.
4. All easements on the plat must be defined per UDO requirements.



Map Legend

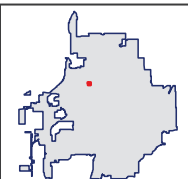
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- ▭ Parcels
- ▭ Buildings

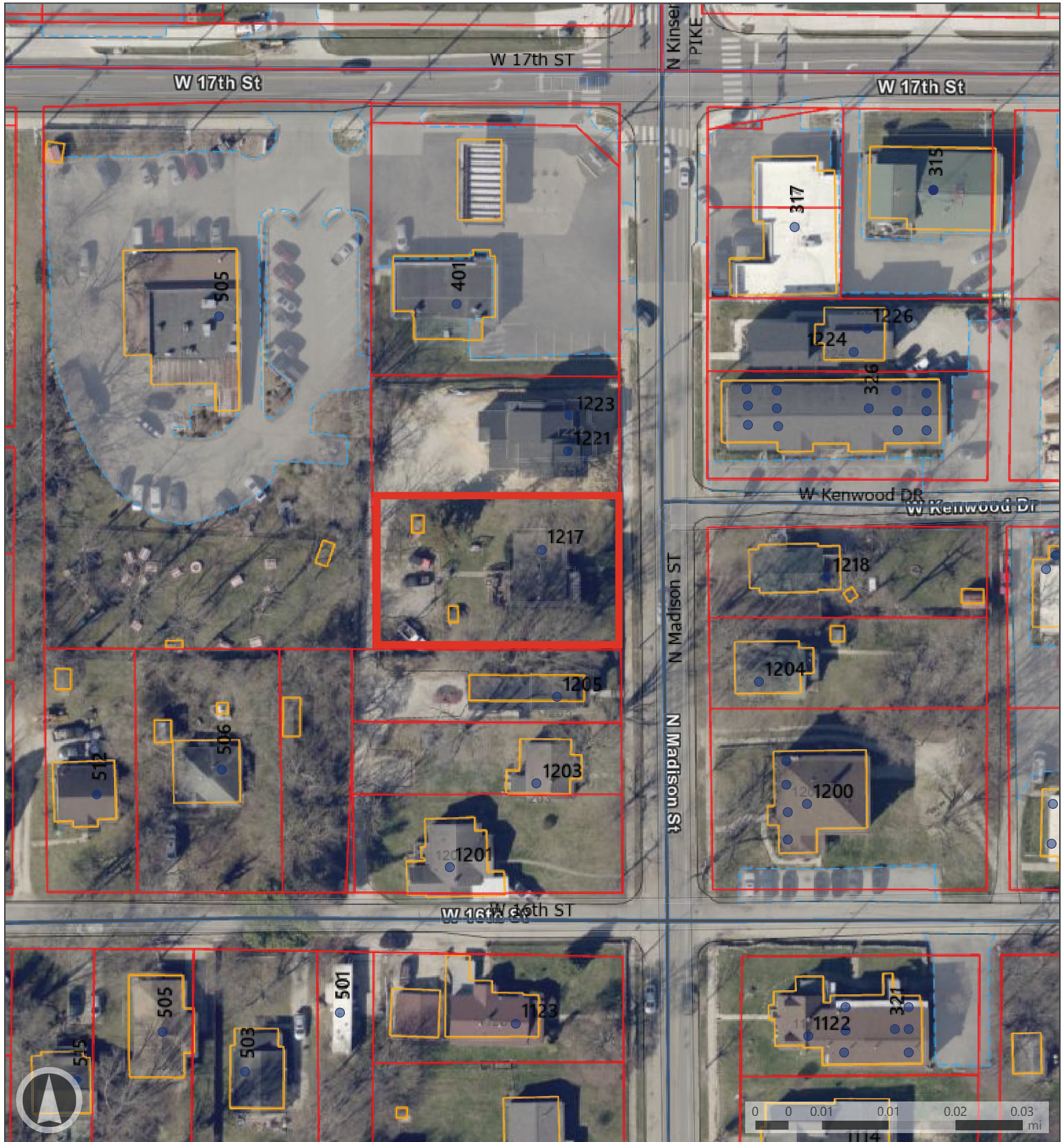
- Pavement
- Drive
- Alley

Parking Lot Type

- ▭ Paved Parking Lot
- Current

- City Maintained Streets
- Street Typology**
- General Urban





Map Legend

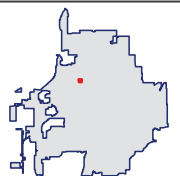
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Latitude 39 North Properties, LLC

PO Box 67, Bloomington, Indiana

Petitioner's Statement

1217 North Madison Street Infill Subdivision

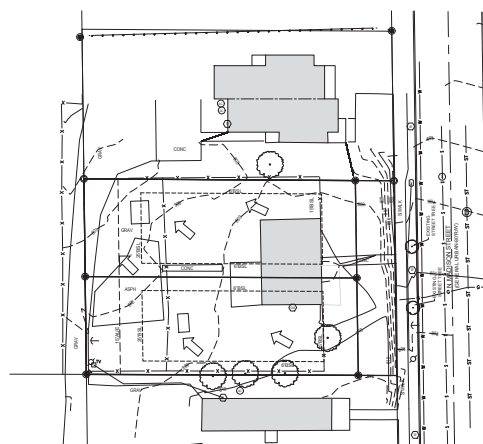
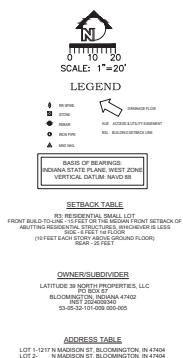
Petitioner: Latitude 39 North Properties, LLC, Bloomington, Indiana

Property Description

1217 North Madison Street is a vacant, residential lot near the intersection of East 17th Street and North Madison St. The property is zoned R3 (Residential Small Lot). The property is bound by commercial uses to the North and West, multifamily apartments to the East, and a single-family residence to the South. Adjacent Zoning is R3 Residential to the South and MM Mixed-Use Medium Scale to the East, West, and North.

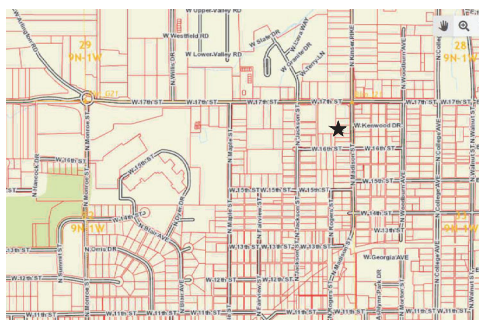
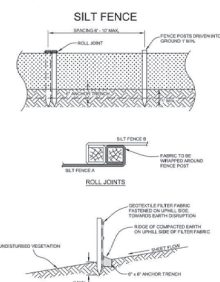
Infill Subdivision Request

Latitude 39 North Properties, LLC, is filing a request for a newly created infill subdivision. The proposal meets the development standards in the UDO. The existing lot at 1217 North Madison would be subdivided into two lots per the preliminary plat submitted with this application. However, the proposed plat does not meet the dimensional standards for R3 zoning. The minimum lot width for newly created lots in the R3 Zoning is fifty feet. The proposed lot width for the newly created lots is approximately forty-three feet. However, the Affordable Housing and Sustainable Development Standards & Incentives (UDO Chapter 20.04.110) allow for reduced dimensional standards in single family construction in the R3 Zoning. Specifically, Lot Width minimums can be reduced by up to 40%. At forty-three feet wide, the newly created lots would represent a 16% reduction of the minimum lot width of fifty feet. As such, the petitioner will follow the affordable housing or sustainable development incentive standards for future development of each lot.



NOTES

1. BUILDING CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE BUILDING PRIOR TO CONSTRUCTION.
2. BUILDER TO GRADE LOT TO PROVIDE ADEQUATE DRAINAGE AWAY FROM BUILDING.
3. BUILDER TO GRADE LOT TO PROVIDE ADEQUATE DRAINAGE AWAY FROM BUILDING LOTS UNLESS THERE IS AN EXISTING DRAINAGE EASEMENT.
4. CURRENT AND PROPOSED DRAINAGE FLOW IS SOUTHWEST TO NORTHEAST.
5. DOWNSPOUTS ARE TO BE DISCHARGED AWAY FROM NEIGHBORING STRUCTURES. IT IS RECOMMENDED THEY ARE DISCHARGED INTO LANDSCAPING AREAS.
6. SEDIMENT DISCHARGE AND TRACKING FROM LOT WILL BE MINIMIZED THROUGHOUT LAND DISTURBING ACTIVITIES UNTIL PERMANENT STABILIZATION HAS BEEN ACHIEVED.
7. ADJACENT LOTS DISTURBED BY AN INDIVIDUAL LOT OPERATOR MUST BE REPAIRED AND STABILIZED WITH TEMPORARY OR PERMANENT SURFACE STABILIZATION.
8. SEDIMENT TRACKED OR WASHED ONTO ROADS SHALL BE CLEANED UP.
9. THE SILT FENCE AND APPROPRIATE EROSION CONTROL SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION. LOCATION OF SILT FENCE TO BE APPROVED BY THE COUNTY.
10. ANY DISTURBED AREAS TO REMAIN CUL FOR MORE THAN 7 DAYS SHALL BE TEMPORARY MAINTAINED.
11. STOCKPILE ON-SITE IS NOT PROHIBITED. MATERIALS WILL BE HAULED OFF-SITE. STOCKPILE A STOCKPILE IS NECESSARY, CONSTRUCTION SHALL USE APPROPRIATE EROSION CONTROL METHODS.

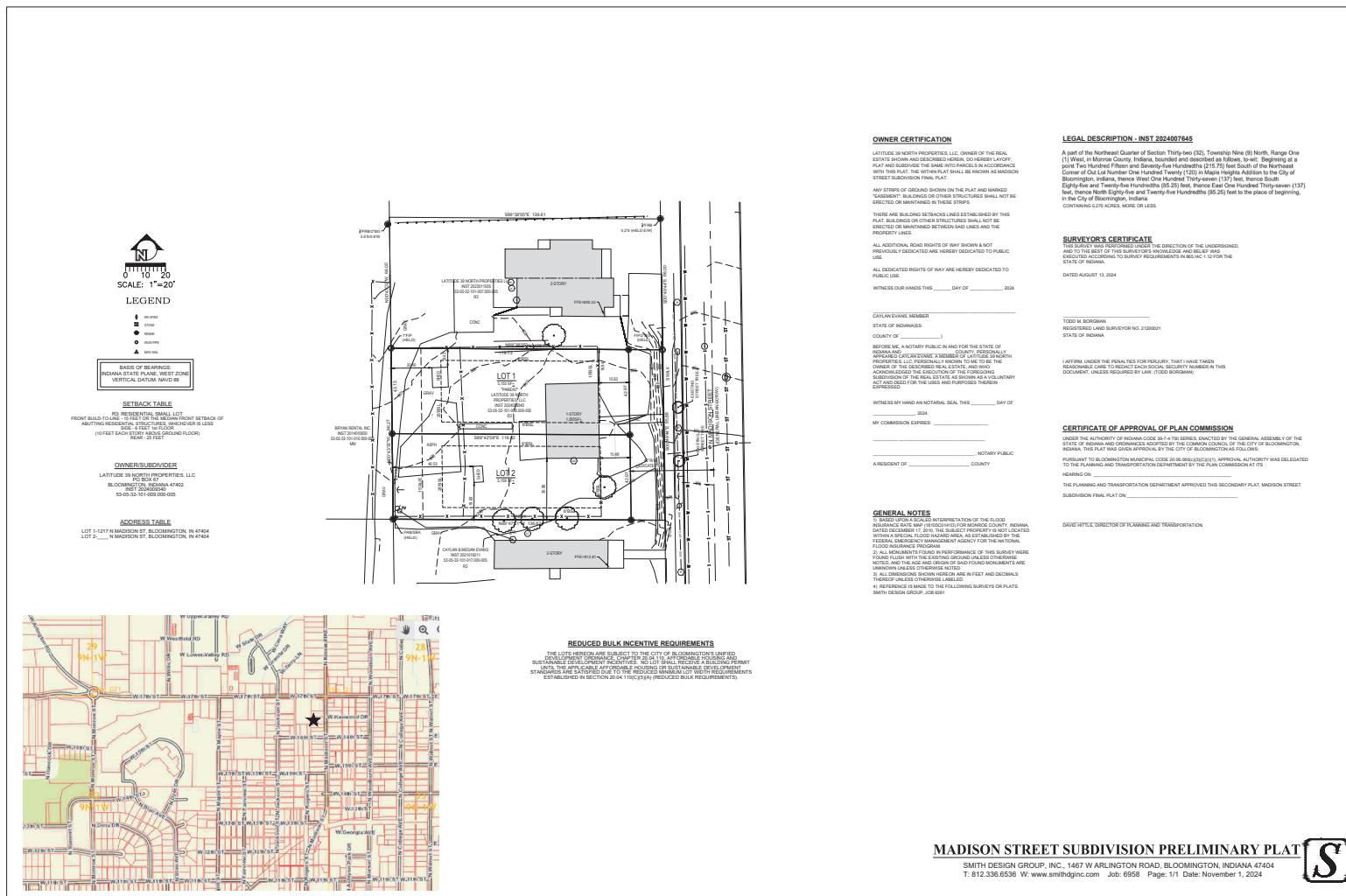


MADISON STREET SUBDIVISION PRELIMINARY PLAT

SMITH DESIGN GROUP, INC. 1467 W ARLINGTON ROAD, BLOOMINGTON, INDIANA 47404
T: 812.336.6536 W: www.smithdgc.com Job: 6956 Page: 11 Date: November 1, 2024



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BLOOMINGTON PLAT COMMITTEE**STAFF REPORT****Location: 3615 East Post Road****CASE #: DP-39-24****/ PLAT2024-09-0039****DATE: November 4, 2024**

PETITIONER/OWNER: John and Sherry Myers
 3615 East Post Road
 Bloomington, IN

CONSULTANT: Deckard Land Surveying
 1604 South Henderson Street
 Bloomington, IN

REQUEST: The petitioner is requesting secondary plat approval to allow a two-lot subdivision of 4.21 acres in the Residential Medium Lot (R2) zoning district.

BACKGROUND:

Area: 4.21 acres
Current Zoning: Residential Medium Lot (R2)
Comprehensive Plan Designation: Neighborhood Residential
Existing Land Use: Single-family dwelling
Proposed Land Use: Single-family dwelling and Vacant
Surrounding Uses: North – Single-family dwellings
 South – Single-family dwellings
 East – Single-family dwellings
 West – Single-family dwellings

REPORT:

The property is located off Post Road and Hollywood Drive in the Grandview Hills neighborhood, extending to the north from Post Road, west of properties on Meadowlark Lane, toward but not reaching 10th Street (State Route 45). The property and all surrounding properties are located in the Residential Medium Lot (R2) zoning district. Surrounding properties contain detached single-family dwellings, with a small number of vacant undeveloped lots.

The property is bisected roughly from northwest to southeast by an unconstructed portion of the Hollywood Drive corridor that was shown on an unrecorded plat for Grandview Hills 3rd Addition in 1967. The plat was never recorded, and this portion of Hollywood Drive was never dedicated nor constructed nor accepted as public right-of-way. Because of this history, some maps, including the Monroe County property GIS viewer (former branded as Elevate, recently rebranded as Beacon), show a continuation of Hollywood Drive across the property, but those maps are not correct, as confirmed by a letter from the Monroe County Auditor included in the packet. That portion of land remains privately owned and a part of this petition site.

The petitioner proposes to subdivide the property into two lots by separating the land around the existing house at 3615 East Post Road (proposed lot 2) from the remaining land (proposed lot 1). Lot 1 is proposed to contain 3.55 acres with frontage on Post Road and at the stub end of the right-of-way of Hollywood Drive. After subdivision, lot 1 would be vacant land, but could be developed with one detached single-family dwelling or any of the other land uses allowed in the R2 district. In the future, there is the possibility that lot 1 could be further subdivided, but that would require

construction and dedication of a public street to provide access to further lots, and the petitioner is not proposing any such further subdivision at this time.

The existing property contains three lot frontages. In front of the existing house at 3615 East Post Road, the property has a 149.90-foot frontage on Post Road. This is proposed to become the front lot line of lot 2. A second frontage on Post Road is located where the unconstructed Hollywood Drive corridor forms a “leg” of the property extending southeast to Post Road. This is proposed to become a front lot line of lot 1. The third frontage is located to the northwest, where the existing public right-of-way of Hollywood Drive has a stub end on the property. This is proposed to become a second front lot line of lot 1.

Several prior approvals affect the design of this secondary plat. First, the property was granted variance V-12-24 / VAR2024-04-0029 by the Hearing Officer on May 8, 2024 to allow the 56.73-foot lot width of Lot 1’s Post Road frontage, where the 60 feet would otherwise be required by the minimum lot width standard in the R2 zoning district. With the variance, the lot width of lot 1’s frontage on Post Road is considered compliant.

Additionally, the Plan Commission approved six subdivision waivers as part of primary plat approval DP-17-24 / PLAT2024-04-0026 on August 12, 2024.

Subdivision waiver 1: Waiver from the requirement to provide pedestrian facilities per the Transportation Plan

- The Plan Commission approved a plan with no new sidewalks on Post Road.

Subdivision waiver 2: Waiver from the minimum parent tract size standard

- The Plan Commission approved using the infill subdivision type even though the 4.21-acre parent tract is larger than the 3-acre maximum which would otherwise apply.

Subdivision waiver 3: Waiver from side lot line angle standards

- The Plan Commission approved side lot lines at the Post Road frontage and the Hollywood Drive frontage of lot 1 that are greater than 15 degrees from a right angle to the street.

Subdivision waiver 4: Waiver from prohibition on through-lots

- The Plan Commission approved lot 1 having two frontages, one on Post Road to the southeast and a second on the stub end of Hollywood Drive to the northwest.

Subdivision waiver 5: Waiver from the requirement to place required tree preservation easements in common area

- The Plan Commission approved locating the entire tree preservation easement on lot 1.

Subdivision waiver 6: Waiver from the lot depth-to-width ratio standard

- The Plan Commission approved lot 1 having a depth-to-width of more than 13-to-one, where the maximum would otherwise be four-to-one.

Finally, there were four conditions on the primary plat approval.

Primary Plat condition 1: *With a petition for secondary plat approval, the petitioner shall submit designs for all required improvements in the public right-of-way as well as a performance bond estimate to the City of Bloomington Engineering Department for review and approval.*

- As a result of the waiver to allow no new sidewalks, the only required improvements in the public right-of-way were street trees to meet street tree planting requirements. These planting requirements have been met by trees—some in the public right-of-way and some in the front yard of the properties, as allowed by the UDO—which are existing as October 30. Because the trees are existing, no performance bond is required, although the Engineering Department will require a maintenance bond with a minimum two-year duration.

Primary Plat condition 2: *With a petition for secondary plat approval, the petitioner shall provide a street tree planting plan, either on the proposed secondary plat or with public improvement design plans or on a separate plan sheet, that includes measurements of the proposed distance between any public utility lines in the public right-of-way and street tree planting locations in order to ensure compliance with UDO requirements for utility/tree separation.*

- A street tree planting plan is provided on sheet 2 of the secondary plat. Several existing large trees are less than the minimum 10-foot separation from public water lines, but are all at least five feet from water lines. The Planning and Transportation Department has approved these planting locations as an authorized alternative per section 20.04.080(c)(4) of the Unified Development Ordinance (UDO).

Primary Plat condition 3: *Final approval by the City of Bloomington Utilities Department of utility and drainage easements shown on the plat and of a drainage plan for the subdivision is required prior to secondary plat approval.*

- City of Bloomington Utilities (CBU) accepted the drainage plan on August 1, 2024. CBU has not yet confirmed final acceptance of subdivision plans as of November 1, 2024 (when this staff report was drafted) but the most recent plan review response from CBU issued on October 23, 2024 did not mention any request revisions related to the utility or drainage easements. The only requested revision in the October 23 plan review response was related to the separation between street trees and water lines near Post Road. Strictly construed, this condition has been met because CBU has accepted the utility and drainage easements and the drainage plan.

Primary Plat condition 4: *The Planning and Transportation Department shall prepare a zoning commitment indicating that the Plan Commission approved a waiver from the subdivision requirement to install sidewalks at this time, and that future installation of the sidewalk may be required. The zoning commitment shall apply to the current owner and all future owners of lots 1 and 2. Coinciding with recording of the secondary plat, the property owner shall record the zoning commitment in the Office of the Monroe County Recorder and submit a copy of the recorded document to the Planning and Transportation Department.*

- This step will be taken care of after this secondary plat approval. Staff recommends repeating this condition on secondary plat approval.

20.06.060(c)(3)(D) SECONDARY PLAT REVIEW AND DECISION: The Plan Commission or Plat Committee shall review the secondary subdivision petition and approve, approve with conditions, or deny the petition in accordance with Section 20.06.040(g) (Review and Decision), based on the general approval criteria in Section 20.06.040(d)(6)(B) (General Compliance Criteria).

20.06.040(d)(6)(B) General Compliance 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: This plat, with subdivision waivers and adopted conditions, complies with the requirements of the UDO. The City of Bloomington Utilities Department (CBU) accepted the drainage plan on August 1, 2024. CBU has accepted the proposed drainage and utility easements as of CBU's plan review response on October 23, 2024. The plat is complies with variance approval V-12-24 / VAR2024-04-0029 and with primary plat approval DP-17-24 / PLAT2024-04-0026.

PLAT REVIEW: The proposed subdivision follows the Infill Subdivision (IS) design standards.

Infill Subdivision Standards:

Parent tract size: No minimum parent tract size. Maximum parent tract size is 3 acres. The parent tract is 4.21 acres. The Plan Commission granted a waiver with primary plat approval to allow the parent tract size to exceed the maximum. A larger parent tract size would be allowed for a subdivision of traditional subdivision type, but the proposed subdivision is most property classified as an infill subdivision type because it contains a small number of lots and no new public streets or rights-of-way within an existing developed neighborhood.

Open space: Not required. The plat sets aside 1.32 acres within a tree preservation easement as well as an overlapping area of steep slopes within a conservancy easement as required by environmental standards and open space standards in the UDO.

Lots served by alleys: Not required. The proposal does not include any lots served by alleys.

Block length: Not required. No new blocks are created by the proposal.

Cul-de-sac length: Not permitted. No new culs-de-sac are proposed.

Transportation facilities: Required to meet Transportation Plan guidance. The Transportation Plan calls for a 60-foot-wide right-of-way for Post Road. The proposed plat dedicates additional new public right-of-way width along both Post Road frontages to bring north side of Post Road up to the proposed width. No new right-of-way width dedication is required on stub end of Hollywood Drive.

On-street parking: Not required, but where provided shall comply with City standards. On-street parking is not prohibited on Post Road or Hollywood Drive adjacent to the proposed subdivision. No site improvements for on-street parking are proposed or required.

Tree plot width: Required per Transportation Plan. The Transportation Plan calls for a minimum five-foot-wide tree plot along Post Road. No tree plot is required across the stub end of Hollywood Drive. Because there is neither sidewalk nor curb along Post Road, there is nothing to define the tree plot. However, there is more than five feet of public right-of-way between the edge of the pavement and the edge of the public right-of-way and this area is planted with street trees.

Sidewalk/multiuse path width: Required per Transportation Plan. The Transportation Plan calls for a minimum six-foot-wide sidewalk along Post Road. The Plan Commission granted a waiver with primary plat approval to allow the Post Road frontages to remain in their current state without sidewalks. No sidewalk or other pedestrian improvements are required across the stub end of Hollywood Drive.

Easement Standards:

Utility Easements: The proposed plat references four exiting easements for electric pole lines. The plat also creates five new utility and drainage easements. First, the plat establishes a utility easement which crosses the site east-west roughly in line with the proposed boundary lot line between lots 1 and 2. This utility easement, which varies in width from 8 feet to 10 feet to 16 feet, is shown on a 2003 survey referenced in the plat, but appears to be formally established for the first time with this proposed plat. Second, a 20-foot-wide utility easement is established centered on an existing CBU-owned stormwater line that runs the length of the unconstructed Hollywood Drive corridor across the property. The north end of this utility easement connects to, third, a 25-foot-wide drainage easement, established by the plat to contain the water way in the existing natural ravine that takes the outflow from the CBU stormwater line and a parallel private stormwater line. The drainage easement overlaps with and is completely contained within a conservancy easement and tree protection easement. Most drainage easements allow CBU to construct drainage improvements within the easement, but because this easement is completely contained within a conservancy easement, atypically this drainage easement does not authorize CBU to construct improvements. It does, however, authorize CBU to “to enter upon the easement for the purpose of maintenance [and] to charge the costs of such maintenance to the responsible parties.” Fourth, a 15-foot-wide utility easement is established along the west side of lot 2 to provide utility access for lot 1. Finally fifth, a 15-foot-wide waterline easement is established along all of the lot line segments on the east side of lot 1, from Post Road to the northeast corner of the property, for an existing CBU-owned 6-inch water line which serves all of the existing houses on the west side of Meadow Lark Lane.

Access Easements: The proposed plat references an existing non-exclusive access easement for the Hollywood Drive corridor across the property. The plat also creates an ingress and egress easement at the southeastern end of the “leg” on Post Road, allowing the two abutting properties on either side to across the easement area. The ingress/egress easement legitimizes the access for the existing driveways for these two properties, which connect to Post Road through this area of the property.

Environmental Easements: The proposed plat establishes a 1.32-acre tree preservation easement for existing wooded areas at the northern end of the property as well as a conservancy easement, contained completely within the tree preservation easement, for areas of excessive slope along the natural ravine in the northwest corner of the property.

Lot Establishment Standards:

Lot area and lot width: In the R2 zoning district, the minimum lot size 7,200 square feet and the minimum lot width is 60 feet. Proposed lot 1 is 3.55 acres (approximately 154,600 square feet) in area with 56.73 feet of lot width on Post Road and more than 60 feet of lot frontage on the stub end of Hollywood Drive. (Per the UDO definition of lot width, lot width is measured not on the front lot line but instead at the minimum front setback distance. Although the undedicated and unimproved corridor of Hollywood Drive is 50 feet wide, the lot width of lot 1's frontage on the stub end of Hollywood Drive measures far more than 60 feet because the property widens out behind (south of) the front lot line.) Proposed lot 2 is approximately 0.63 acres (approximately 27,400 square feet) in area with 149.90 feet of lot width on Post Road. Although the Post Road frontage of lot 1 is less than 60 feet, this is allowed by variance V-12-24 / VAR2024-04-0029 granted by the Hearing Officer on May 8, 2024. With the variance, the proposed lots comply with standards for lot area and lot width.

Side lot line angles: Residential lots are required to have side lot lines that are within 15 degrees of a right angle to the street and right-of-way. Side lot lines of the existing property at the Post Road frontage of the "leg" to the southeast and at the stub end of Hollywood Drive to the northwest, which will become side lot lines of lot 1, do not comply with this standard. Both side lot lines at the "leg" to Post Road are approximately 30 degrees from perpendicular to the street. Additionally, the side lot line immediately south of lot 1's frontage across the stub end of Hollywood Drive, labelled as L1 on the primary plat, is parallel to the street direction. The angles of these side lot lines are existing features of the property, which would not be possible to alter without acquiring additional land from the abutting developed properties. The Plan Commission granted a waiver with primary plat approval to allow these side lot lines to remain. Both side lot lines of proposed lot 2 are compliant with this standard.

Through lot: Through lots are not allowed except on arterial frontages. Proposed lot 1 meets the definition of a through lot because it has two frontages, one on Post Road to the southeast and a second on the stub end of Hollywood Drive to the northwest. Post Road is not an arterial road. The Plan Commission granted a waiver with primary plat approval to allow lot 1 to be a through lot.

Lot shape: All lots shall be designed with a depth-to-width ratio not to exceed four to one. For lot 1, the Post Road frontage is 56.73 feet, while the lot depth from the southernmost lot line to the northernmost lot line is approximately 764 feet, for a depth-to-width ratio of more than 13-to-one. The Plan Commission granted a waiver with primary plat approval to allow the depth-to-width ratio of lot 1 to exceed four-to-one. For lot 2, the frontage is 149.90 feet, while the lot depth is 181.72 feet, for a depth to width of approximately 1.2.

Lot access: All new residential lots shall have frontage on a public street right-of-way. Both proposed lots have frontage on Post Road. The proposed plat establishes a 20-foot-wide utility easement centered on an existing CBU-owned stormwater line that runs the length of the unconstructed Hollywood Drive corridor, including the “leg” of the property. The plat also establishes a 15-foot-wide waterline easement for an existing CBU-owned water line running along the east side of the “leg” of the property. These easements prohibit the placement of any obstruction within the easement area unless authorized by CBU, and would give CBU or any other utility the right to remove and not replace driveway paving or any other improvement within the easement area if necessary to access the utility infrastructure. These easements significantly limit, but would not prohibit, the construction or use of an access driveway from Post Road to the remainder of the property.

Stormwater Standards: All proposed subdivisions shall provide for the collection and management of all surface water drainage, and all subdivision requests shall include the submittal of a drainage plan to CBU. The petitioner submitted a revised drainage report to CBU on July 30, 2024, including a proposed plan for no new stormwater infrastructure beyond what already exists on the site. CBU accepted the drainage plan on August 1, 2024.

Right-of-Way Standards:

ROW width: No new public streets or rights-of-way are proposed. Existing streets are required to meet guidance in the Transportation Plan. Post Road is designated as the Neighborhood Residential street typology in the Transportation Plan, requiring a 60-foot-wide right-of-way (30 feet from centerline). The proposed plat dedicates additional new public right-of-way width along both Post Road frontages to bring north side of Post Road up to the proposed width. No new right-of-way dedication is required on the stub end of Hollywood Drive.

Pedestrian facilities and tree plot: Public improvements in the public right-of-way, including newly dedicated right-of-way, are required to comply with the standards in the Transportation Plan. Post Road is designated as the Neighborhood Residential street typology in the Transportation Plan. The design parameters in table 5 of the Transportation Plan call for a six-foot-wide sidewalk and a five-foot-wide greenscape (tree plot) between the sidewalk and the curb (or edge of pavement) on Neighborhood Residential Streets. The Plan Commission granted a waiver with primary plat approval to allow the two Post Road frontages to remain in their current state without sidewalks. Even without sidewalks, there remains more than five feet of width for a tree plot within the public right-of-way along these frontages.

Street Trees: The minimum number of required street trees to be planted shall be one large canopy tree for every 30 feet of property that abuts a public right-of-way. Two large street trees or four medium or small street trees are required along the Post Road frontage of lot 1, and five large street trees or ten medium or small street trees are required along the Post Road frontage of lot 2. There are existing public utility lines, one water main and one gas main, running in the public right-of-way roughly parallel to the street along the Post Road frontages of lots 1 and 2. The UDO requires at least ten feet of separation between large canopy trees and public utility lines. The UDO allows medium and small trees to be planted as close as five feet from public utility lines, or closer if approved by the Planning and Transportation Director. Required street trees may be located in the front yard immediately

adjacent to the street when there is not room within the public right-of-way. The planting plan included with the plat shows two large street trees along the Post Road frontage of lot 1, and five large street trees along the Post Road frontage of lot 2. For lot 1, both street trees are marked as existing because they were planted on October 29, 2024. The trees deviate from UDO planting standards for species (Heritage Oak *Quercus x macdanielii* is not included in the UDO list of permitted street tree species because it is a hybrid with the non-native English Oak *Quercus robur*), size (1-½"-caliper where the standard is 2"-caliper), and location (9.17', 7.19', and 5.05' from public water lines where the minimum is 10'). For lot 2, four of the street trees have existed on the site for many years, although they deviate from UDO planting standards for species (Cedar and Fir are not included in the UDO list of permitted street tree species) and location (2.30', 5.58', and 2.10' from the public water line and 2.47' and 9.78' from the public gas line where the minimum is 10'). The fifth street tree for lot 2 is marked as existing because it was planted on October 29, 2024. This tree deviates from UDO planting standards for species (Heritage Oak *Quercus x macdanielii*), size (1-½"-caliper where the standard is 2"-caliper), and location (5.07' from the public water line where the minimum is 10'). The Planning and Transportation Department has approved these tree plantings as an authorized alternative per section 20.04.080(c)(4) of the Unified Development Ordinance (UDO).

Street Lighting: No street lighting is proposed.

Environmental Considerations:

Steep Slopes: The site contains steep slopes of 25 percent and greater along a natural ravine in the northwest corner of the property as well as slopes between 12 percent and 25 percent elsewhere on proposed lot 1. Indiana Public Law 52 of 2024, known as HB 1108 before enactment, which came into effect on July 1, 2024, prohibits jurisdictions from preventing development exclusively on the basis of slope if slope is less than 25 percent. In accordance with this state law and the excess slope provisions of the UDO, the proposed plat places all areas with 25 percent or greater slope, and only areas with 25 percent or greater slope, in a conservation easement. The conservation easement overlaps with the tree and forest preservation easement and also serves as an easement for the riparian feature.

Tree and forest preservation: The site contains approximately 1.64 acres of existing closed canopy wooded area, constituting 39 percent of the total area of the property. For a baseline canopy cover of 20 to 39 percent, at least 80 percent of the existing canopy cover must be preserved. At least 1.31 acres of wooded area must be preserved within a tree preservation easement. The proposed plat establishes a 1.32-acre tree preservation easement for existing wooded areas at the northern end of the property. The tree preservation easement overlaps with the conservancy easement established for excessive slopes.

Riparian Buffers: The site contains an existing waterway within a natural ravine in the northwest corner of the property, running south to north. This waterway takes surface flow from both the CBU-owned stormwater line running along the unconstructed portion of the Hollywood Drive corridor and a parallel private stormwater line, as well as ground water flow from surrounding land to the south. It appears that this waterway may not be subject to riparian buffer standards in the UDO because it does not have sufficient ground water flow to meet the UDO definition of an intermittent stream or perennial stream. However,

even if riparian buffer standards did apply to this stream, the entire potential buffer area is contained within the conservancy easement and tree and forest preservation easements established by the proposed plat.

Others: There are no known karst features or wetlands on the site.

Utilities: Lot 2 has existing water and sanitary sewer service from mains running under Post Road. Lot 1 will have access to the existing public 6-inch water main that runs along the east side of the property. In addition, the proposed plat establishes a new utility easement along the west side of lot 2, providing access for lot 1 to the water and sanitary sewer mains running under Post Road. After secondary plat approval and recording, CBU approval will be required before any permits for development on lot 1 are issued.

CONCLUSION: The secondary plat, with subdivision waivers and adopted conditions, complies with the requirements of the UDO. Although the two-lot subdivision will result in a small change, it sets the stage for a future thoughtful use of this large property within a developed neighborhood.

RECOMMENDATION: The Planning and Transportation Department recommends that the Plat Committee adopt the proposed findings and approve the secondary plat of DP-39-24 /PLAT2024-09-0039 with the following condition:

1. The Planning and Transportation Department shall prepare a zoning commitment indicating that the Plan Commission approved a waiver from the subdivision requirement to install sidewalks at this time, and that future installation of the sidewalk may be required. The zoning commitment shall apply to the current owner and all future owners of lots 1 and 2. Coinciding with recording of the secondary plat, the property owner shall record the zoning commitment in the Office of the Monroe County Recorder and submit a copy of the recorded document to the Planning and Transportation Department.



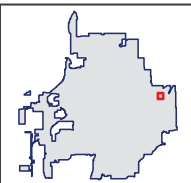
Map Legend

- Parcels
- Buildings
- Pavement

Parking Lot Type

- Paved Parking Lot
- Current

- Mixed-Use Corridor
- Mixed-Use Student Housing
- Residential Medium Lot





Map Legend

- Parcels
- Contributing
- Notable

Rating

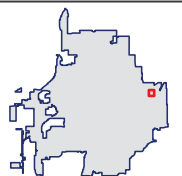
- Notable

- Contributing
- Pavement

Parking Lot Type

- Paved Parking Lot
- Current

- Zoning District Boundary





Eric L. Deckard, LS

1604 S. Henderson St.
Bloomington, IN 47401
Ph. 812.961-0235
Fax 812.323-7536

September 27th, 2024

To: Members of the Plan Commission:

RE: Myers Minor Subdivision

I have been asked by Sherry Myers to request several waivers for the project located at 3615 E. Post Road.

The waiver requests and statements are discussed below.

1). Request: Plat Committee Approval for Secondary Plat

2). Request: Street Trees

Petitioner's Statement: The subject property Lot (1) has +/- 149.92 feet of road frontage along E. Post Road. This requires 5 large street trees to be planted along said frontage. The subject property (Lot 2) has +/- 57.55 feet of road frontage along said E. Post Road as well. This requires 2 large street trees to be planted along said frontage. An existing water main line is running +/- 5.5 – 10.0 feet from the new right-of-way for E. Post Road into the existing tree plot on Lot 1. Several existing trees are also located along the road frontage for Lot 1. A street tree planting plan detail is shown on page 2 of the plat with 1 street tree being planted at the existing stump on Lot 1 and 2 street trees being planted on Lot 2. Due to the factors mentioned above, we respectfully request staff's approval for variation from the UDO requirements for Street Trees.

3). Request: Bond Reduction

Petitioner's Statement: The Petitioner will submit a 2-year Maintenance Bond for the proposed street trees. We are proposing that the required bond amount of \$10,000 (Minimum), as stated in the code, be reduced to \$1,000 or less. We respectfully request consideration by the Plan Commission to grant a Bond Reduction for the subject property.

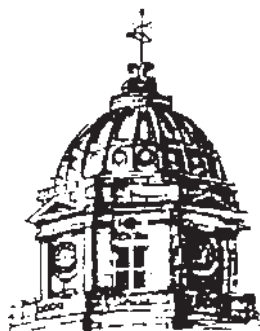
If there are any questions, please contact this office at (812) 961-0235

Sincerely,

Eric L. Deckard L.S.

Brianne Gregory
Monroe County Auditor

100 W Kirkwood Ave
 Courthouse, Room 209
 Bloomington, IN 47404
 Office (812) 349-2510
 March 5, 2024



To whom it may concern,

On Elevate for Monroe County, there are parcel lines drawn for what appears to be at one time planned roadway for Hollywood Dr through the parcel located at 3615 E Post Rd connecting E Hollywood Dr to E Post Rd and these lines currently reflect as “roadway” within the subdivision roadways of the area.



These lines for this specific area are based on documents presented to the Auditor’s Office from a 1967 unrecorded plat (attached) for Grandview Hills 3rd Addition. Since this unrecorded plat, we find any further additions, amendments or subdivisions addressing the roadway aside from the survey included in the 2012 and 2015 deeds for 3615 E Post Rd in which it reflects as a 50 ft nonexclusive easement and a 2023 deed in which the previous owner quit claimed any interest in unimproved roadway for Hollywood Dr. To the best of my knowledge, aside from the previously mentioned documentation-there is no dedicated, deeded, or platted roadway and the GIS for this area is reflecting what was intended per the 1967 unrecorded plat.

If you have any questions at all, please let me know.

Warm regards,

Stephanie Carter
 Property Director
scarter@co.monroe.in.us
 812-349-2839

MYERS MINOR SUBDIVISION - SECONDARY PLAT
A PART OF THE NORTHEAST QUARTER AND A PART OF THE
SOUTHEAST QUARTER OF SECTION 35, TOWNSHIP 9 NORTH, RANGE 1
WEST MONROE COUNTY, INDIANA

27

AREA FOR COUNTY
RECORDER

BLOOMINGTON TWP.
TOWNSHIP 9 N
RANGE 1 W
SECTION 35

DEVELOPER, APPLICANT &/OR OWNER
JOHN & SHERRY MYERS
3516 E POST ROAD
BLOOMINGTON, INDIANA, 47408
812-340-2618

Standards for Specific Easement Types:

1). Waterline Easement

- Shall allow the City Utilities Department exclusive access for installation, maintenance, repair, or removal of potable water facilities.
- Encroachment by other utilities is prohibited, unless such encroachment is approved by the City Utilities Department in conjunction with the primary plat. Upon written permission from the City Utilities Department, encroachments may be permitted after the recording of the secondary plat.
- Trees and structures including, but not limited to, buildings, fences, retaining walls, signs, and light fixtures, shall not be located within waterline easements.
- Grading activity shall be prohibited within waterline easements without written permission from the City Utilities Department.

2). Drainage Easement

- Shall be required for any surface swales or other minor drainage improvements that are intended to serve the lots on which they are located.
- Shall prohibit any alteration within the easement that would hinder or redirect flow.
- Shall provide that the owner of the lot on which the easement is placed shall be responsible for maintenance of the drainage features within such easement.
- Shall be enforceable by the City Utilities Department and by owners of properties that are adversely affected by conditions within the easement.
- Shall allow the City Utilities Department to enter upon the easement for the purpose of maintenance, to charge the costs of such maintenance to the responsible parties, and to assume responsibility for the drainage features at its discretion.

3). Utility Easement

- Shall allow both private and public utility providers access associated with the installation, maintenance, repair, or removal of utility facilities.
- Prohibits the placement of any unauthorized obstruction within the easement area unless authorized by the City Utilities Department and the easement holder(s).

4). Ingress and Egress Easement

- The right to use the existing gravel drive coming from E. Post Road as shown on the plat.
- Grantees of the easement include: Instrument Numbers 2021009407, 2016013298, and City of Bloomington Utilities.
- Dimensions are shown on the plat.

5). Tree Preservation Easement

- Prohibits the removal of any tree over six inches dbh within the easement area.
- 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.
- 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.
- 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.

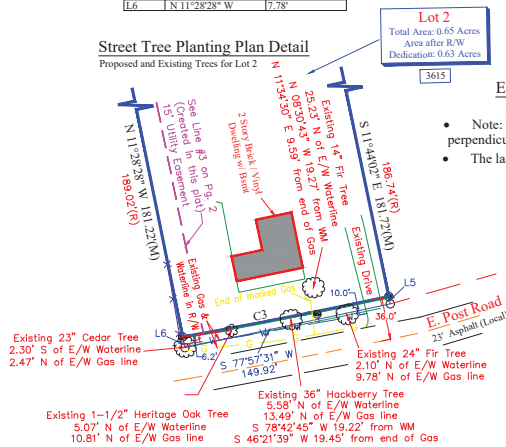
6). Conservancy Easement

- Prohibits the placement of a fence, or alteration of any vegetative cover, including mowing, within the easement area.
- Allows the removal of dead or diseased trees that pose a safety risk or impede drainage as well as allowing the removal of exotic or invasive species, only after first obtaining written approval from the Planning and Transportation Department.
- All conservancy 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.
- 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.

Curve Table					
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C-3	4783.67'	149.90'	149.89'	S 78°54'11" W	1°47'43"

Line Table		
LINE	BEARING	DISTANCE
L-5	S 11°44'02" E	5.31'
L-6	N 11°28'28" W	7.78'

Street Tree Planting Plan Detail
Proposed and Existing Trees for Lot 2



EASEMENT DETAIL

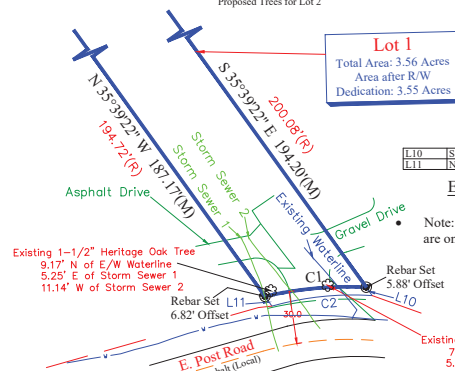
Detail : N.T.S.

- Note: North and South Measurements shown are perpendicular to the existing water and gas lines
- The last marked gas line is shown on the exhibit.

LEGEND

- REBAR SET
- PIPE FOUND
- PROPOSED STREET TREE (SPECIES ON PLAT)
- EXISTING STREET TREE (SPECIES ON PLAT)
- G — UNDERGROUND GAS LINE
- W — UNDERGROUND WATERLINE
- E/W — EAST AND WEST RUNNING WATER METER (WM)
- (C) CALCULATED
- (R) RECORD
- (M) MEASURED
- ADDRESS

Street Tree Planting Plan Detail
Proposed Trees for Lot 2



Line Table		
LINE	BEARING	DISTANCE
L-10	S 35°39'22" E	15.88'
L-11	N 35°39'22" W	6.82'

EASEMENT DETAIL

Detail : N.T.S.

- Note: The SE and SW corners of Lot 1 are on the new dedicated R/W

Curve Table					
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C-1	209.61'	58.30'	58.06'	S 84°49'17" W	15°44'33"
C-2	109.11'	29.49'	29.26'	S 84°49'17" W	15°44'33"
C-3	4783.67'	149.90'	149.89'	S 78°54'11" W	1°47'43"

DECKARD
LAND SURVEYING
1000 N. STATE ST.
BLOOMINGTON, IN 47408
TEL: 812-340-2618
WWW.DECKARDLANDSURVEY.COM



MYERS
MINOR SUBDIVISION
A PART OF SECTION 35, T9N, R1W

SECTION	TOWNSHIP	RANGE
35	9 N	1 W

23-137
2
4
10/30/24
BNDRY.SHT

SURVEYOR'S REPORT

In accordance with Title 865, IAC, 1-12 sections 1-30 of the Indiana Administrative Code, the following observations and opinions are submitted regarding the various uncertainties in the location of lines and corners established on this survey as a result of:

- A). (Variances) in the reference monuments
B). (Discrepancies) in the record description and plats
C). (Inconsistencies) in lines of occupation and;
D). (Relative Positional Accuracy) "RPA"

The relative positional accuracy (due to random errors in measurement) of this survey is within that allowable for a Suburban survey (0.137 plus 100 PPM) as defined I.A.C. Title 865 ("relative positional accuracy" means the value expressed in feet or meters that represents the uncertainty due to random errors in measurements in the location of any point on a survey relative to any other point on the same survey at the 95 percent confidence level.")

SUBJECT PROPERTY:

A boundary retracement survey was performed on the properties now or formerly owned by John Myers and Sherry Myers as found in Instrument Numbers 2015013362 & 2023009446 in the Office of the Monroe County Recorder. The purpose of this survey is to retrace the boundary lines of the subject property as located in Section 35, Township 9 North, Range 1 West of the Second Principal Meridian, Monroe County, Indiana.

REFERENCE MONUMENTS:

A). A 3/4 inch diameter pipe was found flush with grade marking the Southwest corner of the subject property (Lot 2). The origin of this pipe is unknown, however was found to be referenced in a survey performed by Eric L. Deckard for Staats dated October 16th, 2003. This pipe was found to agree with other monuments in the area and was accepted and held as said corner. The record versus measured distance between this monument and the monument described in line "J" is 149.92 feet versus 149.92 feet respectively.

B). A 3/4 inch diameter pipe was found 3 inches above grade marking the Southwest corner of the subject property (Lot 1). The origin of this pipe is unknown, however was found to be referenced in a survey performed by Eric L. Deckard for Staats dated October 16th, 2003. This pipe was found to agree with other monuments in the area and was accepted and held as said corner. The record versus measured distance between this monument and the monument previously described in line "A" is 189.02 feet versus 189.00 feet respectively.

C). Several 5/8 inch diameter rebar with caps stamped "Deckard" were found marking corner of the subject property (Lot 1). These rebar were set in a survey performed by Eric L. Deckard for Staats dated October 16th, 2003. These rebar were found to agree with other monuments in the area and were accepted and held as said corners.

D). A 5/8 inch diameter rebar with pink cap was found 2 inches above grade marking the Northeast corner of the subject property (Lot 1). The origin of this rebar is unknown, however was found to be referenced in a survey performed by Eric L. Deckard for Staats dated October 16th, 2003. This rebar was found to agree with other monuments in the area and was accepted and held as said corner.

E). A 1 3/4 inch diameter boat spike was found 2 inches below grade marking the Northeast corner of the Southeast Quarter of Section 35, Township 9 North, Range 1 West. This spike is referenced as Corner I.D. Blm, U23 in the Office of the Monroe County Surveyor and was accepted and held as said corner.

F). Several 5/8 inch diameter rebar were found marking corners on the east line of the subject property (Lot 1). The origin of these rebar is unknown, however were found to be referenced in a survey performed by Eric L. Deckard for Staats dated October 16th, 2003. These rebar were found to agree with other monuments in the area and were accepted and held as said corners.

G). A 5/8 inch diameter rebar was found 2 inches above grade marking a point on the east line of the subject property (Lot 1) and the Northwest corner of the land now or formerly owned by Arce (Inst. 2021009407). The origin of this rebar is unknown, however was found to be referenced in a survey performed by Eric L. Deckard for Staats dated October 16th, 2003. This rebar was found to agree with other monuments in the area and was accepted and held as said point on line and corner.

H). A 3/4 inch diameter pipe was found 2 inches below grade marking a corner on the south line of the subject property (Lot 1) and the Northeast corner of the land now or formerly owned by Harris (Inst. 201603298). The origin of this pipe is unknown, however was found to be referenced in a survey performed by Eric L. Deckard for Staats dated October 16th, 2003. This pipe was found to agree with other monuments in the area and was accepted and held as said corner. The record versus measured distance between this monument and the Southeast corner of the subject property (Lot 1) previously described in line "C" is 139.05 feet versus 139.12 feet respectively.

I). A 3/4 inch diameter pipe was found flush with grade marking the Northeast corner of the subject property (Lot 2). The origin of this pipe is unknown, however was found to be referenced in a survey performed by Eric L. Deckard for Staats dated October 16th, 2003. This pipe was found to agree with other monuments in the area and was accepted and held as said corner. The record versus measured distance between this monument and monument previously described in line "H" is 54.72 feet versus 54.56 feet respectively.

J). A 3/4 inch diameter pipe was found 1 inch above grade marking the Southeast corner of the subject property (Lot 2). The origin of this pipe is unknown, however was found to be referenced in a survey performed by Eric L. Deckard for Staats dated October 16th, 2003. This pipe was found to agree with other monuments in the area and was accepted and held as said corner. The record versus measured distance between this monument and monument previously described in line "I" is 186.74 feet versus 187.03 feet respectively.

MYERS MINOR SUBDIVISION - SECONDARY PLAT
A PART OF THE NORTHEAST QUARTER AND A PART OF THE
SOUTHEAST QUARTER OF SECTION 35, TOWNSHIP 9 NORTH, RANGE 1
WEST MONROE COUNTY, INDIANA

K). A mag nail was found flush with grade in East 3rd Street marking the Southeast corner of Section 35, Township 9 North, Range 1 West. This nail is referenced as Corner I.D. Blm, U25 in the Office of the Monroe County Surveyor and was accepted and held as said corner.

LINES OF OCCUPATION

The lines of occupation, which affect this survey, are detailed as follows:

- 1). The centerline of E. Post Road was found running east and west along the south line of the subject property (Lot 2). This centerline meanders from +/- 24.7 feet south of line at the east end to +/- 22.2 feet south of line at the west end.
2). A vinyl fence was found running north and south along a portion of the west line of the subject property (Lot 2). This fence meanders from +/- 2.2 feet west of line at the south end to +/- 0.2 feet east of line at the north end.
3). A wire fence was found running east and west along a portion of the north line of the subject property (Lot 1). This fence is on line at the west end and on line at the east end.
4). A wire fence was found running north and south along a portion of the east line of the subject property (Lot 1). This fence meanders from on line at the north end to +/- 2.0 feet east of line at the south end.

RECORD DESCRIPTIONS:

- 1). The subject property was previously surveyed by Eric L. Deckard in a survey for Robert E. Staats dated October 16th, 2003. The monuments found and/or set in said survey were found in this survey and are noted on the plat.
2). The subject description (Inst. 2015013362) describes a 3.99 acre parcel of land located in Section 35, Township 9 North, Range 1 West that encompasses the unimproved portion of Hollywood Drive. This description was derived from the survey mentioned above in line "I". After further research was conducted, it was found that a description of the said unimproved Hollywood Drive was described in Instrument Number 2023009446 from James F. Staats, as the Trustee of the Robert E. Staats Revocable Trust, Charles R. Staats and Sally A. Link to John Myers and Sherry Myers. With the discovery of this transfer, I would recommend a title search be conducted on the subject property to eliminate any discrepancies.

SURVEY DESCRIPTION

OVERALL

A part of the Northeast Quarter and a part of the Southeast Quarter of Section 35, Township 9 North, Range 1 West, Monroe County, Indiana, being that 4.21 acre parcel surveyed by Eric L. Deckard, Indiana Professional Surveyor #2990012 and shown on a plat of survey as Deekard Land Surveying Job No. 23-137, being more particularly described as follows:

Commencing at a mag nail marking the Southeast corner of said Section 35; thence along the east line of the Southeast Quarter of said Section 35 North 01 degrees 13 minutes 25 seconds West for a distance of 1957.92 feet; thence leaving said east line South 88 degrees 46 minutes 35 seconds West for a distance of 619.20 feet to a pipe marking the Point of Beginning; thence South 77 degrees 57 minutes 31 seconds West for a distance of 149.92 feet to a pipe; thence North 11 degrees 28 minutes 28 seconds West for a distance of 189.00 feet to a pipe, passing through a rebar stamped "Deckard" on the north right of way of E. Post Road at 7.78 feet; thence North 18 degrees 36 minutes 20 seconds West for a distance of 113.41 feet to a rebar stamped "Deckard"; thence North 07 degrees 09 minutes 42 seconds East for a distance of 100.21 feet to a rebar stamped "Deckard"; thence North 80 degrees 34 minutes 50 seconds East for a distance of 115.31 feet to a rebar stamped "Deckard"; thence North 40 degrees 24 minutes 17 seconds West for a distance of 22.66 feet to a rebar stamped "Deckard"; thence North 31 degrees 56 minutes 11 seconds East for a distance of 66.28 feet to a rebar stamped "Deckard"; thence North 15 degrees 28 minutes 54 seconds West for a distance of 267.79 feet to a rebar stamped "Deckard"; thence North 25 degrees 33 minutes 13 seconds West for a distance of 43.72 feet to a rebar stamped "Deckard"; thence North 73 degrees 37 minutes 04 seconds East for a distance of 93.98 feet to a rebar stamped "Deckard"; thence North 86 degrees 36 minutes 43 seconds East for a distance of 156.64 feet to a rebar; thence South 03 degrees 23 minutes 34 seconds East for a distance of 350.37 feet to a rebar; thence South 74 degrees 43 minutes 00 seconds West for a distance of 33.84 feet to a rebar; thence South 21 degrees 19 minutes 50 seconds East for a distance of 115.62 feet to a rebar stamped "Deckard"; thence South 21 degrees 35 minutes 34 seconds East for a distance of 107.18 feet to a rebar stamped "Deckard"; thence South 78 degrees 28 minutes 43 seconds West for a distance of 84.33 feet to a rebar stamped "Deckard" on the east line of E. Hollywood Drive; thence along said east line South 35 degrees 39 minutes 22 seconds East for a distance of 200.08 feet to the intersection of the north line of E. Post Road and the east line of E. Hollywood Drive, passing through a rebar stamped "Deckard" at 194.20' on the north right-of-way of E. Post Road; thence leaving said east line and along the north line of E. Post Road 57.83 feet along a 169.11 foot radius non-tangent curve to the left whose chord bears South 84 degrees 01 minutes 18 seconds West for a distance of 57.55 feet to the intersection of the north line of E. Post Road and the west line of E. Hollywood Drive; thence leaving said north line and along said west line North 35 degrees 39 minutes 22 seconds West for a distance of 193.99 feet to a pipe, passing through a rebar stamped "Deckard" on the north right-of-way of E. Post Road at 6.82 feet; thence leaving said west line South 79 degrees 53 minutes 28 seconds West for a distance of 54.56 feet to a pipe; thence South 11 degrees 44 minutes 02 seconds East for a distance of 187.03 feet to the Point of Beginning, passing through a rebar stamped "Deckard" on the north right-of-way of E. Post Road at 181.72 feet, containing in all 4.21 acres, more or less.

Subject to the Right-of-Way of E. Post Road, E. Hollywood Drive, and all legal easements of record. Acreage less dedicated right-of-way 4.18 acres, more or less.

28
AREA FOR COUNTY
RECORDER

DEDICATION OF PUBLIC RIGHTS-OF-WAY:

John Myers and Sherry Myers (Owners), of the real estate shown and described herein do hereby certify, lay off and plat Lots numbered 1 & 2 to be known as Myers Minor Subdivision - Final Plat. Rights-of-way not heretofore dedicated are hereby dedicated to City of Bloomington. In accordance with this plat and certification, this plat shall be known as Myers Minor Subdivision - Final Plat.

The right-of-way to be dedicated for E. Post Road shall measure 30 feet perpendicular to and parallel with the existing centerline of E. Post Road. Any interest that said parties have within said right-of-way is hereby dedicated to City of Bloomington.

There are building setbacks on this plat upon which no structures may be erected or maintained.

Witness our hands and seals this ____ day of _____, 20__.

John Myers (Owner)
3615 E. Post Road
Bloomington, IN 47408
(812) 340-2618

Sherry Myers (Owner)
3615 E. Post Road
Bloomington, IN 47408
(812) 340-2618

STATE OF INDIANA)
) ss:
COUNTY OF MONROE)

Before me, the undersigned Notary Public, in and for said County and State, personally appeared John Myers and Sherry Myers (Owners), each separately and severally acknowledged the execution of the foregoing instrument as his or her voluntary act and deed, for the purposes therein expressed.

Witness my hand and notarial seal this ____ day of _____, 20__.

Notary Public: _____

County of Residence: _____ (Seal)

My Commission Expires: _____

STORM & SURFACE DRAINAGE:

This is to certify that the subject property is located in Zone "X", according to FHBM, Panel Number 18105C0161D dated December 17th, 2010.

CERTIFICATE OF APPROVAL OF PLAN COMMISSION:

Under the authority of Indiana Code 36-7-4 700 series, enacted by the General Assembly of the State of Indiana and ordinance adopted by the Common Council of the City of Bloomington, Indiana, this plat was given approval by the City of Bloomington as follows:

Pursuant to Bloomington Municipal Code 20.06.060(c)(3)(C)(i)(1), approval authority was delegated to the Planning and Transportation Department by the Plan Commission at its hearing on: _____

The Planning and Transportation Department approved this plat, Myers Minor Subdivision - Final Plat on: _____

David Hittle, Director of Planning and Transportation

REFERENCED EASEMENTS:

PER SCHEDULE B OF TITLE COMMITMENT NUMBER 53-53831 (Policy Number 5011400-1247889e)
1). A 50 foot non-exclusive roadway Easement running through the real estate as described in Deed recorded May 11, 2012 as Instrument 2012007295.

2). Easement in favor of Public Service Company of Indiana, Inc. for electric pole line and incidental purposes recorded May 10, 1967 in Book 177, pages 143-144.

3). Easement in favor of Public Service Company of Indiana, Inc. for electric pole line and incidental purposes recorded May 10, 1967 in Book 177, pages 145-146.

4). Easement in favor of Public Service Company of Indiana, Inc. for electric pole line and incidental purposes recorded May 10, 1967 in Book 177, pages 147-148.

5). Easement in favor of Public Service Company of Indiana, Inc. for electric pole line and incidental purposes recorded May 10, 1967 in Book 177, pages 149-150.

DECKARD
LAND SURVEYING
INCORPORATED
REGISTERED PROFESSIONAL SURVEYOR
NO. 2990012
INDIANA
2012 E. CARLETON AVE. SUITE 100
BLOOMINGTON, IN 47408



MYERS
MINOR SUBDIVISION
A PART OF SECTION 35, T9N, R1W

DATE	FILED	RECORDED	INDEXED	FILED	RECORDED	INDEXED	FILED	RECORDED	INDEXED

Q & T
Z1W
LUD
BNDY

23-137
3
4
10/30/24
BNDY.SHT

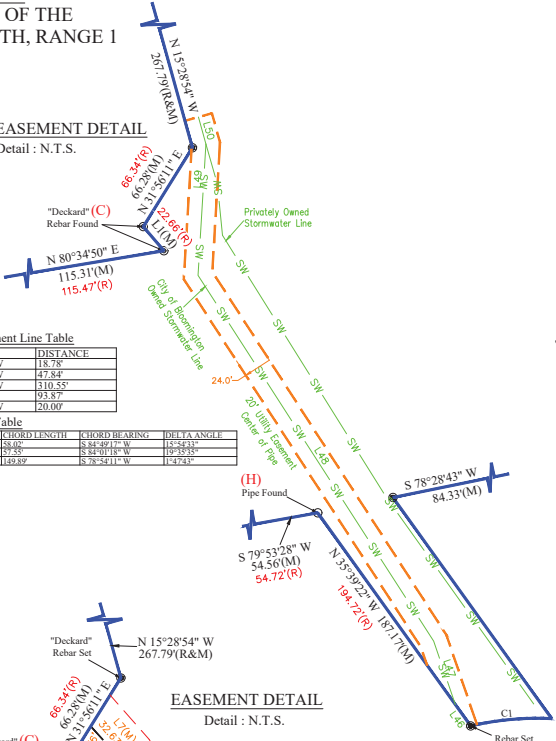
MYERS MINOR SUBDIVISION - SECONDARY PLAT
A PART OF THE NORTHEAST QUARTER AND A PART OF THE
SOUTHEAST QUARTER OF SECTION 35, TOWNSHIP 9 NORTH, RANGE 1
WEST MONROE COUNTY, INDIANA

29
AREA FOR COUNTY
RECORDER

DECKARD
LAND SURVEYING
1000 N. 10th St.
Bloomington, IN 47404
TEL: 317.344.1111
WWW.DECKARDLANDSURV.COM

PLAT NO. 23-137
DATE 10/30/24
BY BNDY.SHT

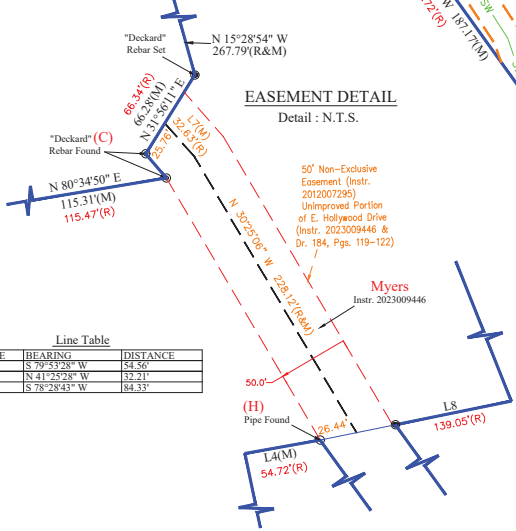
UTILITY EASEMENT DETAIL
Detail : N.T.S.



Utility Easement Line Table				
LINE	BEARING	DISTANCE		
L46	N 33°39'22" W	18.78		
L47	N 18°49'29" W	47.84		
L48	N 33°47'31" W	310.55		
L49	N 63°26'21" E	93.87		
L50	N 15°28'54" W	20.00		

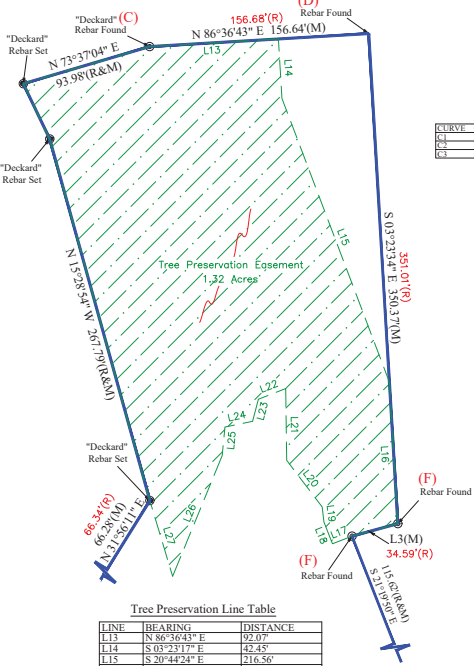
Curve Table				
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
C1	820.46	53.87	53.85	S 84°00'18" W
C2	100.11	53.87	53.85	S 84°00'18" W
C3	438.67	149.90	149.89	S 78°34'11" W

EASEMENT DETAIL
Detail : N.T.S.



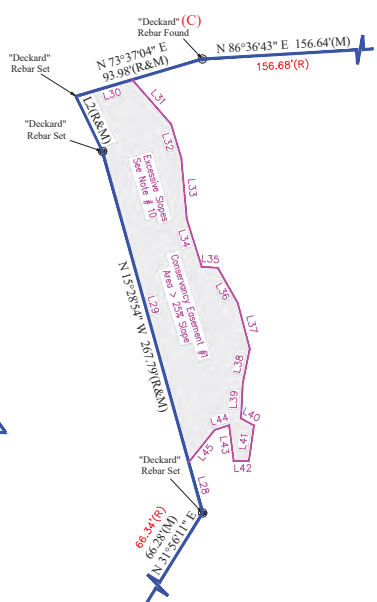
Line Table		
LINE	BEARING	DISTANCE
L4	S 70°53'28" W	54.56
L7	N 41°25'28" W	32.21
L8	S 78°28'43" W	84.33

TREE PRESERVATION DETAIL
Detail : N.T.S.



Tree Preservation Line Table		
LINE	BEARING	DISTANCE
L13	N 86°36'43" E	92.07
L14	S 03°28'17" E	42.43
L15	S 20°44'24" E	216.56
L16	S 03°23'34" E	101.23
L17	S 68°40'10" W	15.06
L18	N 21°19'50" W	16.67
L19	N 06°54'01" W	10.91
L20	N 37°16'54" W	41.70
L21	N 00°47'39" W	51.21
L22	S 68°41'47" W	20.91
L23	S 14°45'12" W	16.32
L24	S 78°19'51" W	20.14
L25	S 05°28'57" W	20.45
L26	S 22°18'57" W	93.10
L27	N 16°43'56" W	56.43

CONSERVANCY EASEMENT DETAIL
Detail : N.T.S.



Conservancy Easement Line Table		
LINE	BEARING	DISTANCE
L28	N 15°28'54" W	37.63
L29	N 15°28'54" W	230.16
L30	N 73°37'04" E	41.81
L31	S 41°00'12" E	42.50
L32	S 16°44'17" E	25.65
L33	S 04°53'53" E	42.23
L34	S 17°05'49" E	36.34
L35	S 85°36'20" E	11.81
L36	S 29°11'01" E	25.35
L37	S 14°25'33" E	33.44
L38	S 11°52'48" W	23.75
L39	S 03°10'59" W	26.09
L40	S 60°52'31" E	10.78
L41	S 08°35'55" W	25.43
L42	S 89°02'46" W	10.87
L43	N 06°52'52" W	25.69
L44	S 73°07'45" W	10.60
L45	S 39°05'06" W	29.91

Acceptable-Storm Sewer

caden.swanson 08/01/2024

3615 Post Road Drainage Report

3615 Post Road

Bloomington, IN., 47408

BFA 402425

July 30th, 2024

Jeffrey S. Fanyo, P.E.

7-30-24

Date

Bynum Fanyo & Associates, Inc.
528 North Walnut Street
Bloomington, Indiana 47404

Project Narrative:

Located at 3615 Post Road, a 4.21 ac parcel of land will be subdivided into two parcels. The subdivision will include a 0.63-acre lot for the existing home with the excess 4.18-acres parceled off. The subdivision will include right-of-way dedication in some areas. There are no plans for development included with this subdivision and no land disturbing activities will take place.

The existing site consists of approximately 6,375 square feet of impervious area. The existing home is located at the high point of the site near the south property line. The site drains from the high point to the northeast. Runoff will leave the site and enter a large existing drainage swale. A large portion of the site is wooded and protected by a tree protection easement. There are several areas of steep slope protected by conservancy areas. Much of the existing site will remain undeveloped.

The City of Bloomington has requested that drainage calculations be provided to show that the post-development discharge rates can be reduced to 0.5 cfs/acre for the 10-year storm event and 0.9 cfs/acre for the 100-year storm event assuming both parcels are fully developed with the maximum allowable impervious area. The allowable discharge rate ratios listed above have been determined by CBU to represent pre-civilization discharge rates relative to the existing drainage area. The property is currently zoned R-2 and allows for 40% impervious area. Post-development runoff coefficients for the site are representative of the maximum impervious area allowed. A large portion of Lot 1 in the proposed subdivision is part of a platted Tree Preservation and Conservancy Easement. This area of the site has been removed from the study area since no future development can occur. Said area is currently wooded and consistent with precivilization site characteristics. Refer to the drainage basin maps included in this report and proposed plat by Deckard Land Surveying for additional information.

CBU does not require any stormwater mitigation measures to be implemented for the site if stormwater facilities are needed to meet the allowable discharge rates. CBU is only requiring calculations showing that it is possible to meet the drainage requirements if future development was to occur.

The following are calculations supporting that the post-development discharge rates, assuming future development, can meet the allowable discharge rates provided by CBU. The location of the pre- and post-development drainage basins are indicated in the Basin Maps included in this report. Some form of detention is needed to meet allowable discharge rates. A detention swale has been modeled in the hydrograph reports and is shown on the post-development basin map. The detention swale modeled meets the allowable discharge rates and the site has adequate space to accommodate this feature as shown on the basin map.

Project Site Description:

Existing Conditions: The site in its existing condition is a 4.21 acre single family residential lot. The site is mostly open space/lawn area with some existing trees and vegetation. 3.56 acres of the site is tall grass and other vegetation that is not mowed frequently.

Lot Area = 183,388 sf = 4.21 ac
 Impervious Surface = 6,375 sf = 0.15 ac
 Percent Impervious = 3.48%

Future Conditions: The future conditions could potentially include two single family lots. There are no plans for development currently. Lot 2 will retain the existing home on site and Lot 1 will include all remaining land.

Lot 1 Area = 154,638 sf = 3.55 ac
 Maximum Impervious Surface Allowed = 61,855 sf = 1.42 ac
 Percent Impervious = 40.00%

This value is adjusted due to reduced buildable area by existing site constraints. There is a tree preservation easement, conservancy easement, utility easements, and etc. located on Lot 2. The total non-buildable area on lot 2 is approximately 2.90 acres. Refer to basin maps included in this report and proposed plat for additional information.

Adjusted impervious Surface = 28,300 sf
 Adjusted percent impervious = 18.31%

Lot 2 Area = 27,443 sf = 0.63 acres
 Impervious Area = 6,375 sf = 0.15 acres
 Percent Impervious = 23.23%

Calculation Summary:

<i>10% EP Storm</i>						
Basin Area	Pre-Developed Drainage Area (Ac)	Pre-Developed Discharge Rate (cfs)	Post-Developed Drainage Area (Ac)	Post-Developed Q (cfs)	Allowable Q (cfs) (1)	Actual Q (cfs) (2)
1	2.64	1.92	2.64	4.64	1.32	1.05
2	1.54	1.31	1.54	4.01	0.77	0.77

<i>1% EP Storm</i>						
Basin Area	Pre-Developed Drainage Area (Ac)	Pre-Developed Discharge Rate (cfs)	Post-Developed Drainage Area (Ac)	Post-Developed Q (cfs)	Allowable Q (cfs) (1)	Actual Q (cfs) (2)
1	2.64	2.69	2.64	6.43	2.38	1.34
2	1.54	1.83	1.54	3.28	1.39	1.03

(1) Allowable Discharge: 10% EP at 0.5 cfs/ac and the 1% EP at 0.9 cfs/ac.

(2) Actual Discharge = Refer to basin map in this report for swale design features.

Swale is modeled in hydrograph report and shown on basin map to show adequate space on site to construct swale shown

Discharge Rate Calculation Methodology:

The Rational Method was used to calculate the storm water runoff rates for the pre-development and post-development drainage basins. The Rational Method was chosen to calculate the runoff rates because the drainage basin areas are less than 50 acres. The TR-55 Time of Concentration worksheet was used to calculate the time of concentration for each drainage basin. A five minute time of concentration was used when the calculated time of concentration was less than five minutes. Weighted runoff coefficients were calculated for each drainage basin using the coefficients listed in Section 7.3.5.4 of the City of Bloomington Engineering Design and Construction Manual. Refer the Basin Characteristics in this report for detailed calculations of runoff coefficients. Rainfall data was obtained from the Depth and Intensity Duration Frequency Tables from the 2020 Construction Specifications for City of Bloomington Utilities. The rainfall data was imported into the Hydraflow Hydrographs program for discharge rate calculations. The proposed detention swale was modeled in the Hydrograph program using proposed contour data. The Average End Area calculation method was used to determine the storage volume of the ponds. Each pond was modeled with a riser structure set 1' above the swale bottom. The post-development drainage basins were routed through the detention swale. The hydrograph program models a stage / storage / discharge relationship for the swale to determine the discharge rates and maximum water surface elevations for several rainfall events. The riser structures are modeled using a multi-stage discharge with a discharge pipe and weir flow for the riser structure.

Detention Swale

The detention swales shown on the post-development basin map and modeled in the hydrograph report reduce the post development runoff rate to meet the release rate requirements provided by CBU. A full drainage analysis of the existing site will be completed at the time of future development. It will be the responsibility of the future developer to provide adequate design and calculations of any proposed stormwater infrastructure. All proposed stormwater infrastructure and systems will need to be located outside of all existing easements, unless the easement description allows for additional drainage features. Per CBU's direction, the petitioner for the proposed 2 lot subdivision is not required to implement any stormwater infrastructure with the petition being heard by the City of Bloomington Plan Commission. There are no requirements to construct any stormwater runoff mitigation measures and there will be no requirement until development of the site is pursued.

Basin Characteristics (Pre-Civilization Conditions)

Basin '1'

Total Area = 2.64 ac

Area = 1.02 ac C = 0.13 (Wood or Forested land, Average Slope 2 to 7%, Soil Class, B some C)

Area = 1.62 ac C = 0.19 (Wood or Forested land, Steep Slope >8%. Soil Class, B some C)

Weighted Runoff Coefficient = $((1.02 \times 0.13) + (1.62 \times 0.19)) / 2.64 = 0.17$

Time of Concentration, TC:

Overland:

n-value = 0.40 (Light Underbrush)

Length = 100 ft

Slope = 3.50%

2-yr/24hr = 3.07 in

Shallow Concentrated:

Length = 183 ft

Length = 82 ft

Slope = 9.83%

Slope = 4.88%

Unpaved

Unpaved

TC = 19 min

Basin '2'

Total Area = 1.54 ac

Area = 0.37 ac C = 0.14 (Wood or Forested land, Average Slope 2 to 7%, Soil Class, C some B)

Area = 1.17 ac C = 0.20 (Wood or Forested land, Steep Slope >8%. Soil Class, C some B)

Weighted Runoff Coefficient = $((0.37*0.14)+(1.17*0.20))/1.54 = 0.19$

Time of Concentration, TC:

Overland:

n-value = 0.40 (Light Underbrush)

Length = 100 ft

Slope = 4.00%

2-yr/24hr = 3.07 in

Shallow Concentrated:

Length = 206ft

Slope = 11.17%

Unpaved

TC = 17 min

Basin Characteristics

(Post-Developed Conditions)

Basin '1'

Total Area = 2.64ac

Area = 1.79 ac C=0.30 (1/2 ac to 1 ac lots., B some C soils)

Area = 0.82 ac C = 0.44 (40% imp., C Soils) (Area of Future Development)

Area = 0.03 ac C = 0.84 (Paved with Open ditches including ROW, C soils)

Weighted Runoff Coefficient = $((1.79*0.30)+(0.82*0.44)+(0.03*0.84))/2.64 = 0.35$

Time of Concentration, TC:

Overland:

n-value = 0.150 (Short Grass)

Length = 50 ft

Slope = 1.00%

2-yr/24hr = 3.07 in

n-value = 0.150 (Short Grass)

length = 50 ft

Slope = 2.00%

2-yr/24hr = 3.07 in

Shallow Concentrated:

Length = 153 ft

Slope = 11.11%

Unpaved

Length = 79 ft

Slope = 2.53%

Unpaved

TC = 14 min

Basin '2'

Total Area = 1.52 ac

Area = 0.28 ac C=0.32 (1/2 ac lots., C soils)

Area = 0.34 ac C = 0.14 (Wooded., C Soils)

Area = 0.03 ac C = 0.90 (Drive/Road Future, C soils)

Area = 0.87 ac C = 0.46 (40% Impervious, C soils) (Future Development)

Weighted Runoff Coefficient = $((0.28*0.32)+(0.34*0.14)+(0.03*0.90)+(0.87*0.46))/1.52 = 0.37$

Time of Concentration, TC:

Overland:

n-value = 0.40 (Light Underbrush)

Length = 100 ft

Slope = 8.00%

2-yr/24hr = 3.07 in

Shallow Concentrated:

Length = 95 ft

Slope = 11.57%

Unpaved

Length = 236 ft

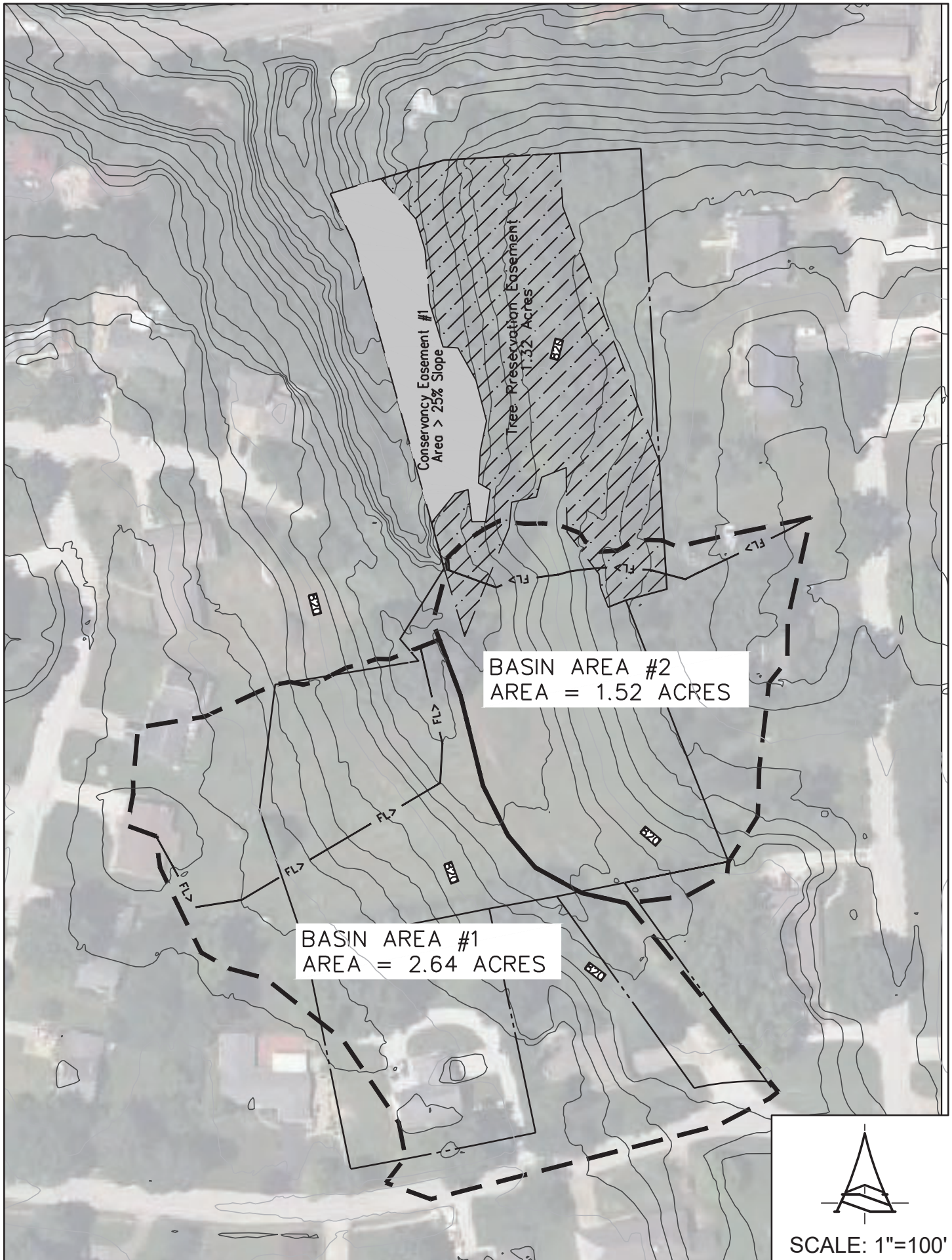
Slope = 2.97%

Unpaved

TC = 14 min

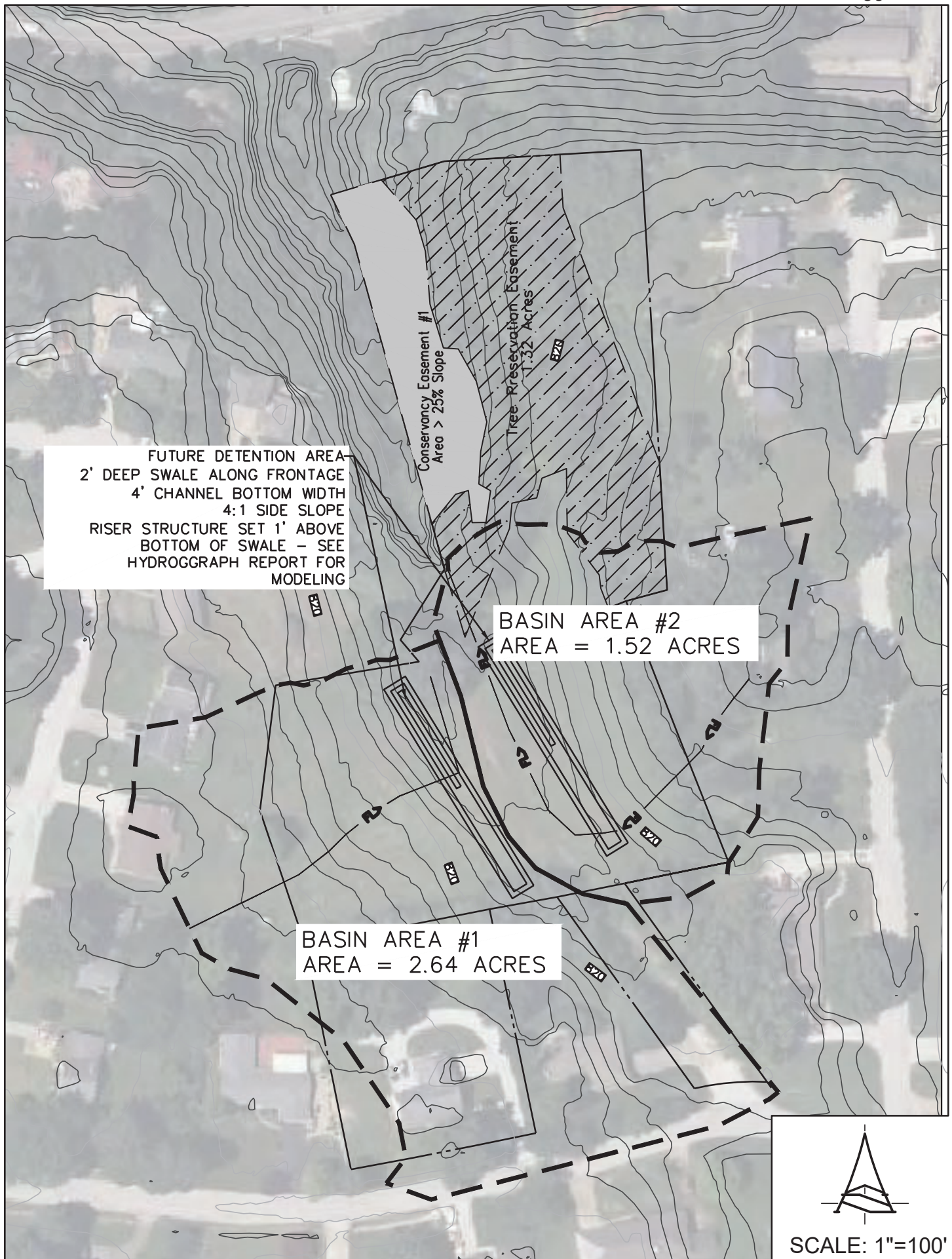
Basin Maps

PRE-DEVELOPMENT DRAINAGE BASINS³⁸

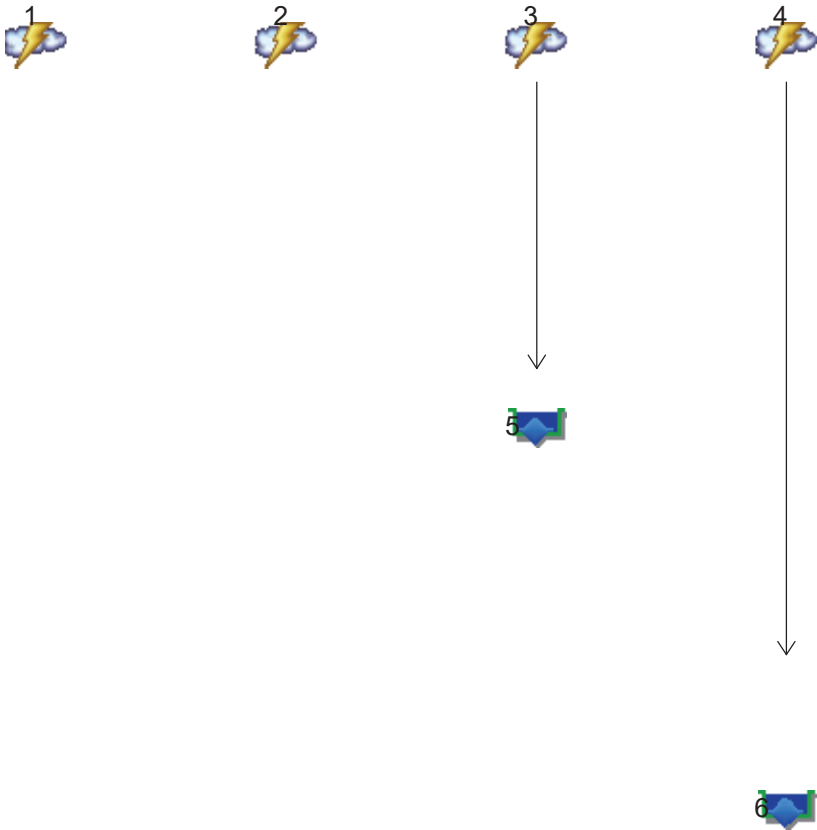


POST-DEVELOPMENT DRAINAGE BASINS

39



Hydrograph Reports



Legend

Hyd.	Origin	Description
1	Rational	Pre Development Basin 1
2	Rational	Pre Development Basin 2
3	Rational	Post Development Basin 1
4	Rational	Post Development Basin 2
5	Reservoir	Detention Swale 1 Disc
6	Reservoir	Detention Swale 2 Disc

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	1.923	1	19	2,193	-----	-----	-----	Pre Development Basin 1
2	Rational	1.313	1	17	1,339	-----	-----	-----	Pre Development Basin 2
3	Rational	4.635	1	14	3,893	-----	-----	-----	Post Development Basin 1
4	Rational	3.278	1	14	2,754	-----	-----	-----	Post Development Basin 2
5	Reservoir	1.046	1	25	2,592	3	810.61	3,160	Detention Swale 1 Disc
6	Reservoir	0.766	1	25	1,452	4	810.33	2,303	Detention Swale 2 Disc
V:\Jobs2024\402425 - 3615 E Post Rd 2 Lot 5\Subdivision\Hydrographs\					Redwood City Computers\Hydrographs\Pre and Post Development Hydrographs.gpw				

Hyd. No. 1

Pre Development Basin 1

Hydrograph type	= Rational	Peak discharge	= 1.923 cfs
Storm frequency	= 10 yrs	Time to peak	= 19 min
Time interval	= 1 min	Hyd. volume	= 2,193 cuft
Drainage area	= 2.640 ac	Runoff coeff.	= 0.17
Intensity	= 4.286 in/hr	Tc by TR55	= 19.00 min
IDF Curve	= BLGTN Updated 2020.IDF	Asc/Rec limb fact	= 1/1



Hyd. No. 1

Pre Development Basin 1

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.400	0.000	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.07	0.00	0.00	
Land slope (%)	= 3.50	0.00	0.00	
Travel Time (min)	= 17.53	+	0.00	+
			0.00	= 17.53
Shallow Concentrated Flow				
Flow length (ft)	= 183.00	82.00	0.00	
Watercourse slope (%)	= 9.83	4.88	0.00	
Surface description	= Unpaved	Unpaved	Paved	
Average velocity (ft/s)	=5.06	3.56	0.00	
Travel Time (min)	= 0.60	+	0.38	+
			0.00	= 0.99
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	(0)0.0	0.0	0.0	
Travel Time (min)	= 0.00	+	0.00	+
			0.00	= 0.00
Total Travel Time, Tc				19.00 min

Hyd. No. 2

Pre Development Basin 2

Hydrograph type	= Rational	Peak discharge	= 1.313 cfs
Storm frequency	= 10 yrs	Time to peak	= 17 min
Time interval	= 1 min	Hyd. volume	= 1,339 cuft
Drainage area	= 1.520 ac	Runoff coeff.	= 0.19
Intensity	= 4.547 in/hr	Tc by TR55	= 17.00 min
IDF Curve	= BLGTN Updated 2020.IDF	Asc/Rec limb fact	= 1/1



Hyd. No. 2

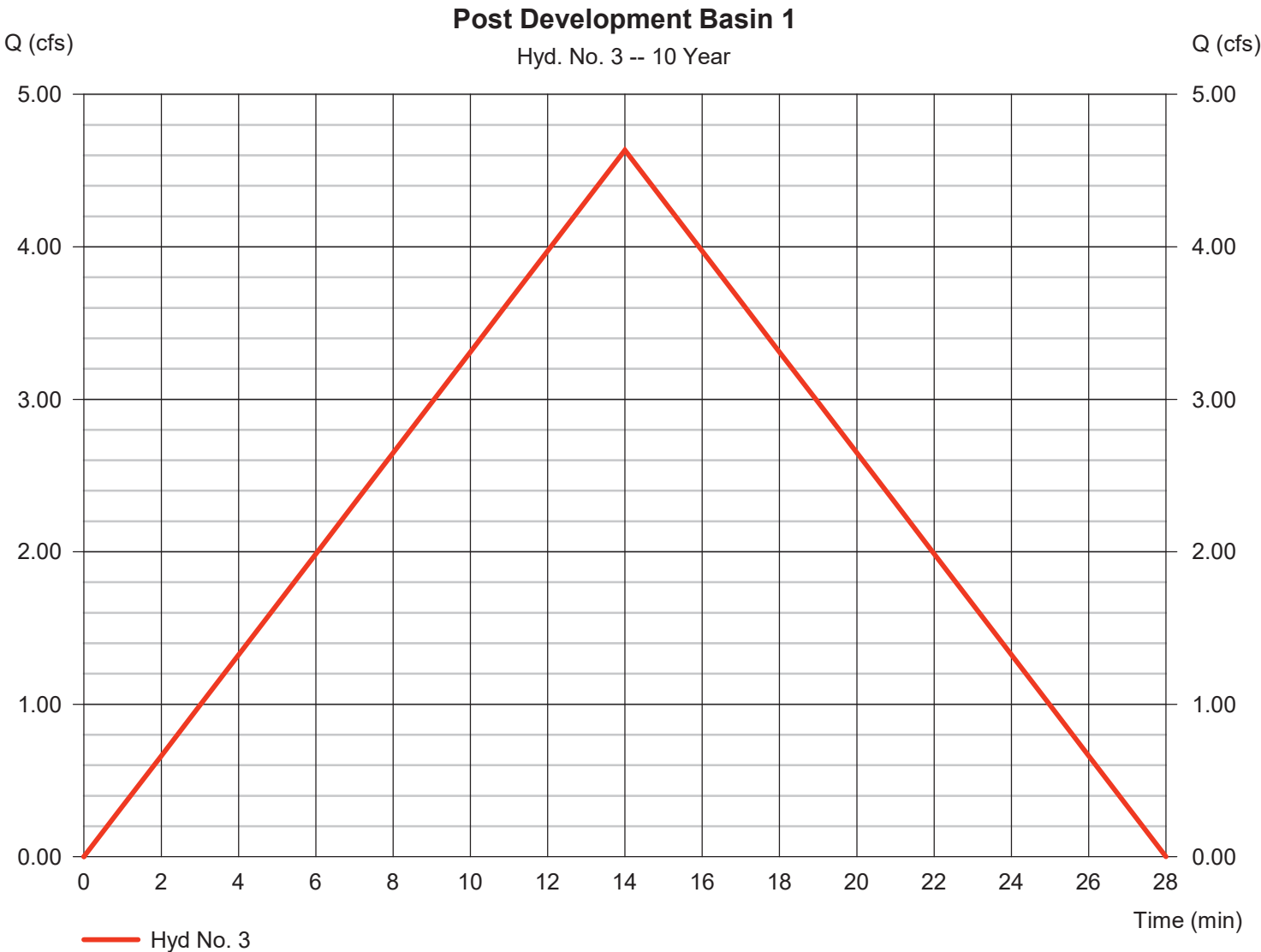
Pre Development Basin 2

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.400	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.07	0.00	0.00	
Land slope (%)	= 4.00	0.00	0.00	
Travel Time (min)	= 16.62	+ 0.00	+ 0.00	= 16.62
Shallow Concentrated Flow				
Flow length (ft)	= 206.00	0.00	0.00	
Watercourse slope (%)	= 11.17	0.00	0.00	
Surface description	= Unpaved	Paved	Paved	
Average velocity (ft/s)	=5.39	0.00	0.00	
Travel Time (min)	= 0.64	+ 0.00	+ 0.00	= 0.64
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	(0)0.0	0.0	0.0	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Total Travel Time, Tc				17.00 min

Hyd. No. 3

Post Development Basin 1

Hydrograph type	= Rational	Peak discharge	= 4.635 cfs
Storm frequency	= 10 yrs	Time to peak	= 14 min
Time interval	= 1 min	Hyd. volume	= 3,893 cuft
Drainage area	= 2.640 ac	Runoff coeff.	= 0.35
Intensity	= 5.016 in/hr	Tc by TR55	= 14.00 min
IDF Curve	= BLGTN Updated 2020.IDF	Asc/Rec limb fact	= 1/1



Hyd. No. 3

Post Development Basin 1

<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>			
Sheet Flow							
Manning's n-value	= 0.150	0.150	0.011				
Flow length (ft)	= 50.0	50.0	0.0				
Two-year 24-hr precip. (in)	= 3.07	3.07	0.00				
Land slope (%)	= 1.00	2.00	0.00				
Travel Time (min)	= 7.58	+	5.75	+	0.00	=	13.33
Shallow Concentrated Flow							
Flow length (ft)	= 153.00	79.00	0.00				
Watercourse slope (%)	= 11.11	2.53	0.00				
Surface description	= Unpaved	Unpaved	Paved				
Average velocity (ft/s)	=5.38	2.57	0.00				
Travel Time (min)	= 0.47	+	0.51	+	0.00	=	0.99
Channel Flow							
X sectional flow area (sqft)	= 0.00	0.00	0.00				
Wetted perimeter (ft)	= 0.00	0.00	0.00				
Channel slope (%)	= 0.00	0.00	0.00				
Manning's n-value	= 0.015	0.015	0.015				
Velocity (ft/s)	=0.00	0.00	0.00				
Flow length (ft)	(0)0.0	0.0	0.0				
Travel Time (min)	= 0.00	+	0.00	+	0.00	=	0.00
Total Travel Time, Tc				14.00 min			

Hyd. No. 4

Post Development Basin 2

Hydrograph type	= Rational	Peak discharge	= 3.278 cfs
Storm frequency	= 10 yrs	Time to peak	= 14 min
Time interval	= 1 min	Hyd. volume	= 2,754 cuft
Drainage area	= 1.520 ac	Runoff coeff.	= 0.43
Intensity	= 5.016 in/hr	Tc by TR55	= 14.00 min
IDF Curve	= BLGTN Updated 2020.IDF	Asc/Rec limb fact	= 1/1



Hyd. No. 4

Post Development Basin 2

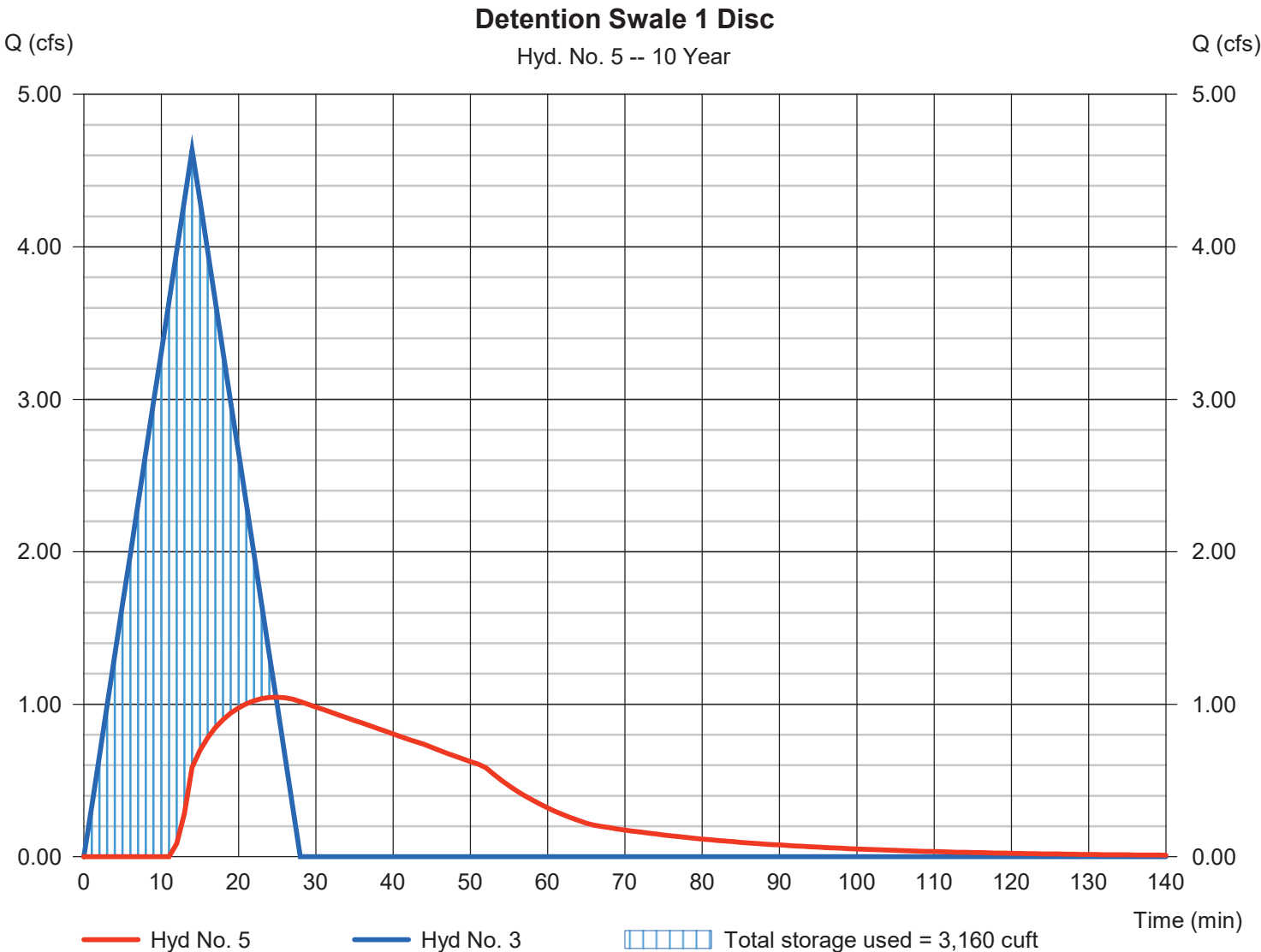
<u>Description</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>Totals</u>
Sheet Flow				
Manning's n-value	= 0.400	0.011	0.011	
Flow length (ft)	= 100.0	0.0	0.0	
Two-year 24-hr precip. (in)	= 3.07	0.00	0.00	
Land slope (%)	= 8.00	0.00	0.00	
Travel Time (min)	= 12.59	+ 0.00	+ 0.00	= 12.59
Shallow Concentrated Flow				
Flow length (ft)	= 95.00	236.00	0.00	
Watercourse slope (%)	= 11.57	2.97	0.00	
Surface description	= Unpaved	Unpaved	Paved	
Average velocity (ft/s)	=5.49	2.78	0.00	
Travel Time (min)	= 0.29	+ 1.41	+ 0.00	= 1.70
Channel Flow				
X sectional flow area (sqft)	= 0.00	0.00	0.00	
Wetted perimeter (ft)	= 0.00	0.00	0.00	
Channel slope (%)	= 0.00	0.00	0.00	
Manning's n-value	= 0.015	0.015	0.015	
Velocity (ft/s)	=0.00	0.00	0.00	
Flow length (ft)	(0)0.0	0.0	0.0	
Travel Time (min)	= 0.00	+ 0.00	+ 0.00	= 0.00
Total Travel Time, Tc				14.00 min

Hyd. No. 5

Detention Swale 1 Disc

Hydrograph type	= Reservoir	Peak discharge	= 1.046 cfs
Storm frequency	= 10 yrs	Time to peak	= 25 min
Time interval	= 1 min	Hyd. volume	= 2,592 cuft
Inflow hyd. No.	= 3 - Post Development Basin 1	Max. Elevation	= 810.61 ft
Reservoir name	= DETENTION SWALE	Max. Storage	= 3,160 cuft

Storage Indication method used.



Pond No. 1 - DETENTION SWALE

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 809.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	809.00	357	0	0
1.00	810.00	2,243	1,300	1,300
2.00	811.00	3,898	3,071	4,371

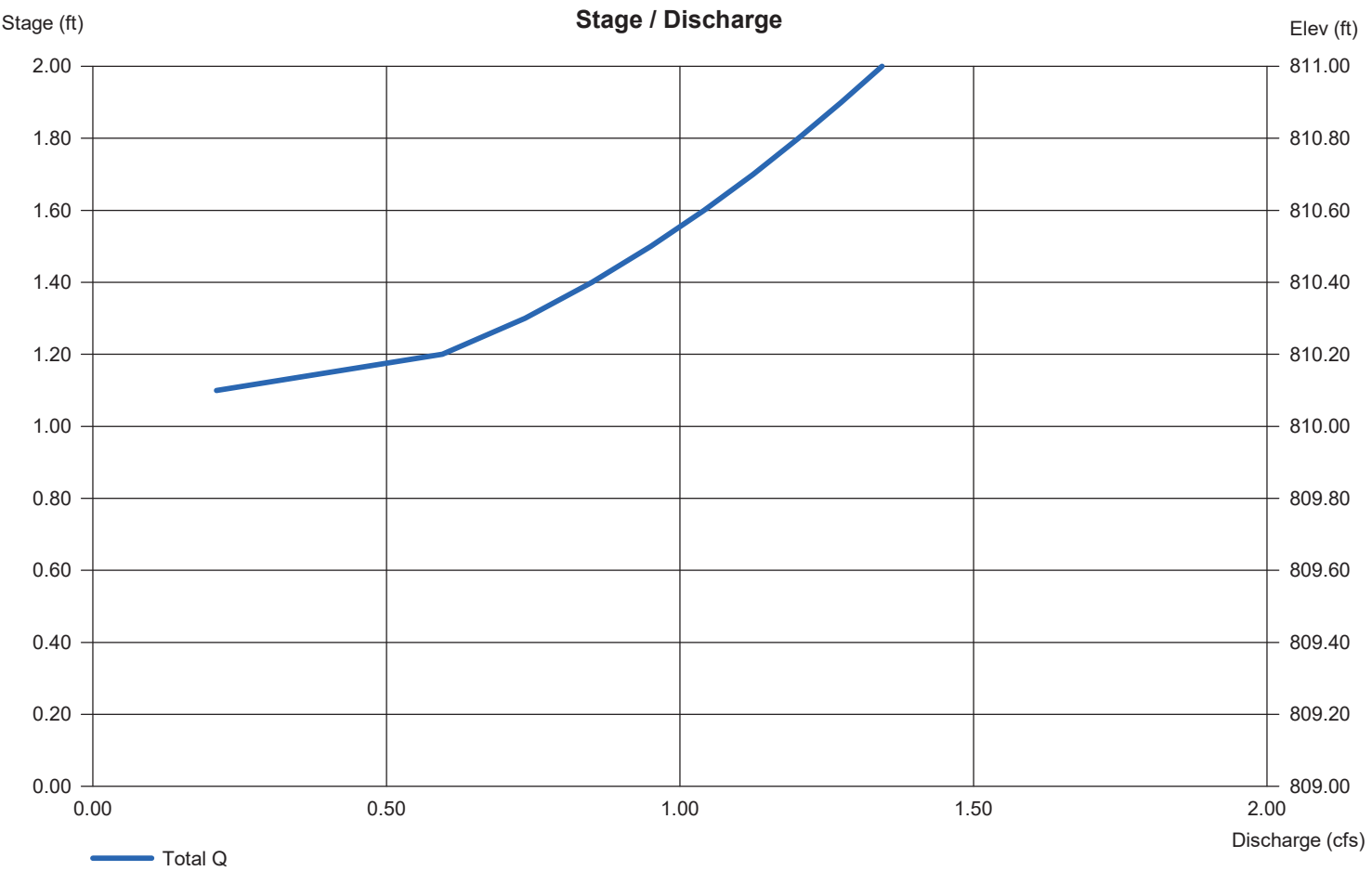
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	0.00	0.00	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 805.00	0.00	0.00	0.00
Length (ft)	= 25.00	0.00	0.00	0.00
Slope (%)	= 5.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 2.00	0.00	0.00	0.00
Crest El. (ft)	= 810.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	---	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 0.000 (by Contour)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

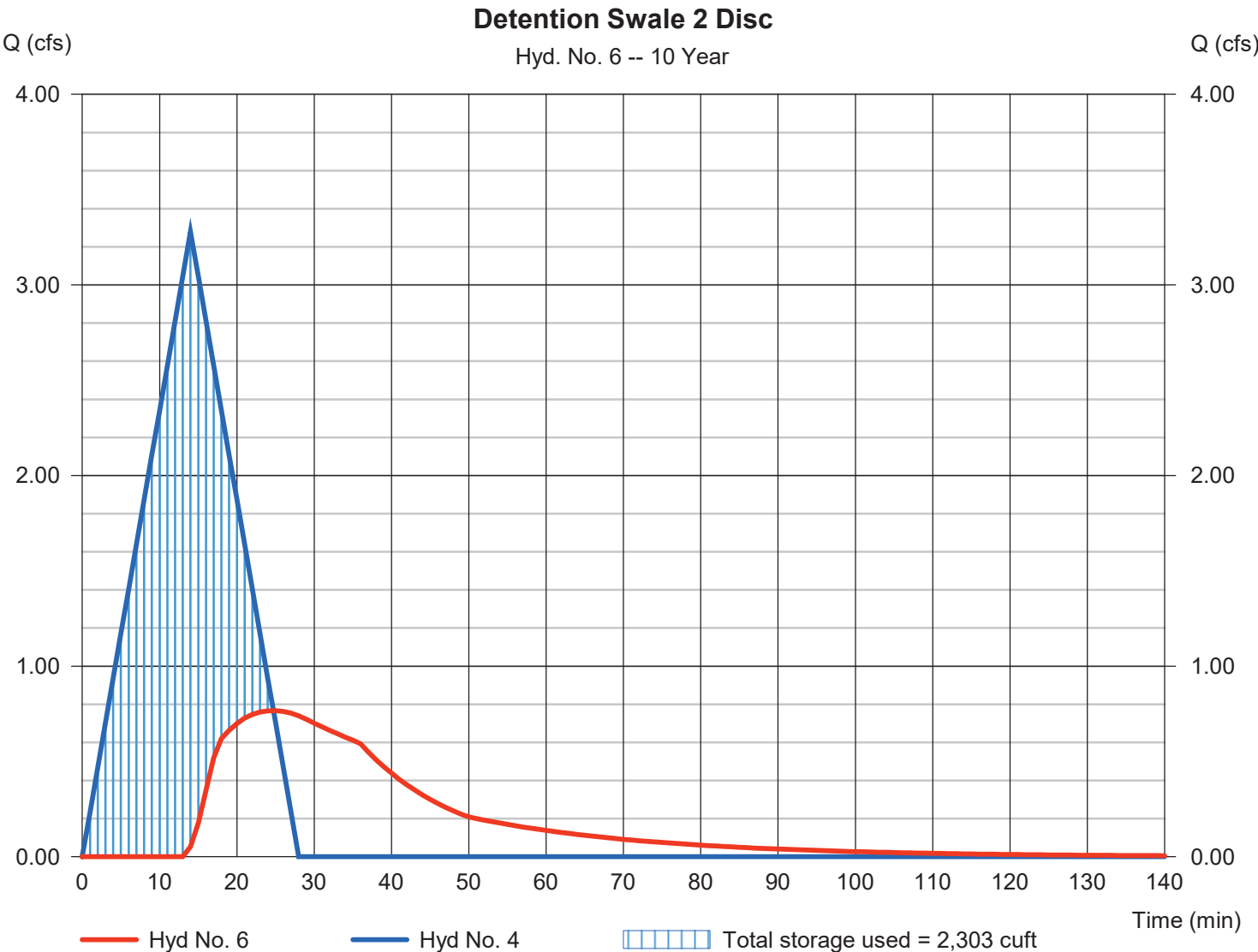


Hyd. No. 6

Detention Swale 2 Disc

Hydrograph type	= Reservoir	Peak discharge	= 0.766 cfs
Storm frequency	= 10 yrs	Time to peak	= 25 min
Time interval	= 1 min	Hyd. volume	= 1,452 cuft
Inflow hyd. No.	= 4 - Post Development Basin 2	Max. Elevation	= 810.33 ft
Reservoir name	= DETENTION SWALE	Max. Storage	= 2,303 cuft

Storage Indication method used.



Pond No. 1 - DETENTION SWALE

Pond Data

Contours -User-defined contour areas. Average end area method used for volume calculation. Beginning Elevation = 809.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	809.00	357	0	0
1.00	810.00	2,243	1,300	1,300
2.00	811.00	3,898	3,071	4,371

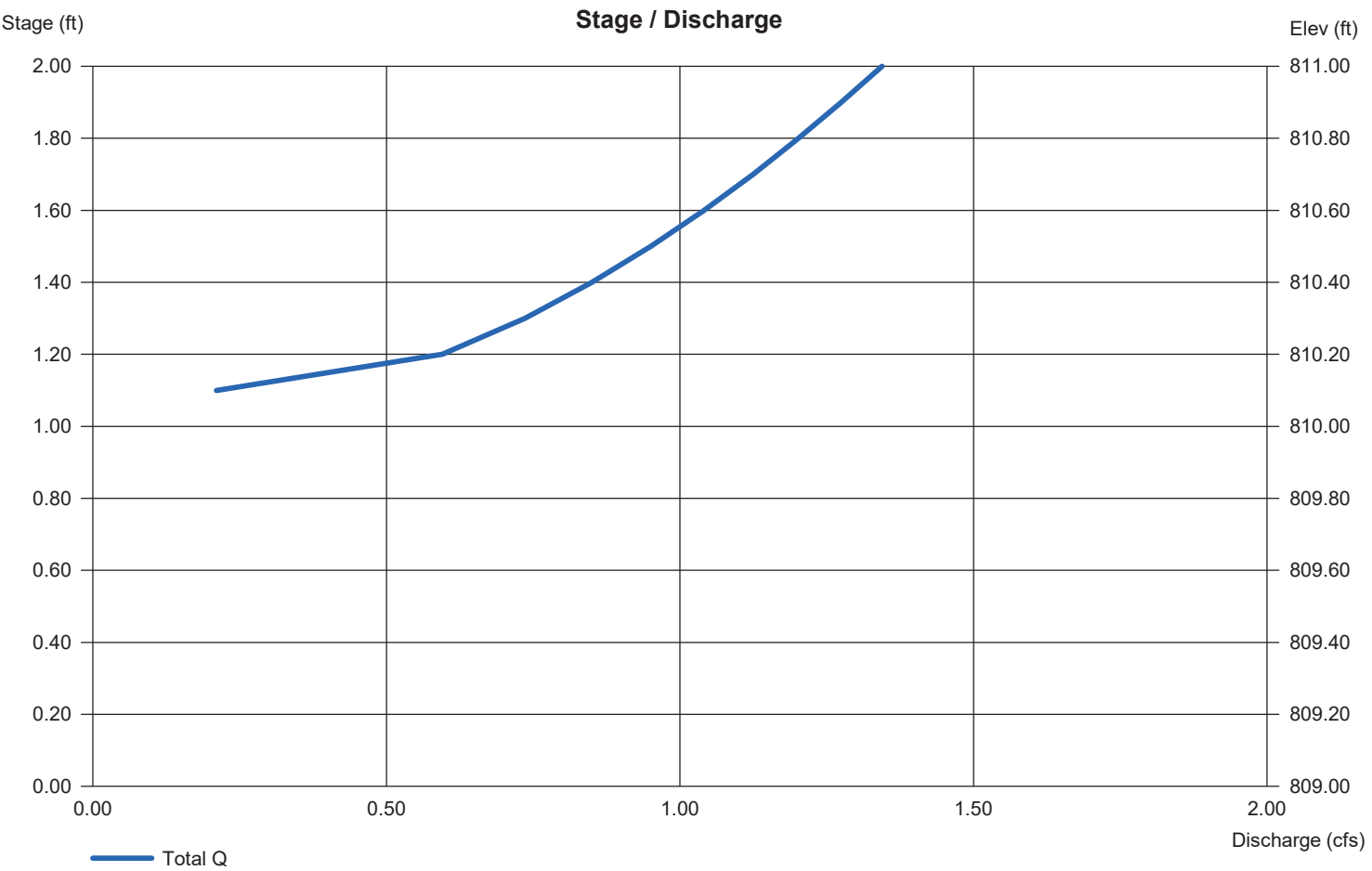
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	0.00	0.00	0.00
Span (in)	= 12.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 805.00	0.00	0.00	0.00
Length (ft)	= 25.00	0.00	0.00	0.00
Slope (%)	= 5.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 2.00	0.00	0.00	0.00
Crest El. (ft)	= 810.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	---	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 0.000 (by Contour)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	Rational	2.690	1	19	3,067	-----	-----	-----	Pre Development Basin 1
2	Rational	1.830	1	17	1,867	-----	-----	-----	Pre Development Basin 2
3	Rational	6.430	1	14	5,401	-----	-----	-----	Post Development Basin 1
4	Rational	4.548	1	14	3,821	-----	-----	-----	Post Development Basin 2
5	Reservoir	1.342	1	25	4,100	3	811.00	4,361	Detention Swale 1 Disc
6	Reservoir	1.030	1	25	2,519	4	810.59	3,105	Detention Swale 2 Disc

Hyd. No. 1

Pre Development Basin 1

Hydrograph type	= Rational	Peak discharge	= 2.690 cfs
Storm frequency	= 100 yrs	Time to peak	= 19 min
Time interval	= 1 min	Hyd. volume	= 3,067 cuft
Drainage area	= 2.640 ac	Runoff coeff.	= 0.17
Intensity	= 5.994 in/hr	Tc by TR55	= 19.00 min
IDF Curve	= BLGTN Updated 2020.IDF	Asc/Rec limb fact	= 1/1



Hyd. No. 2

Pre Development Basin 2

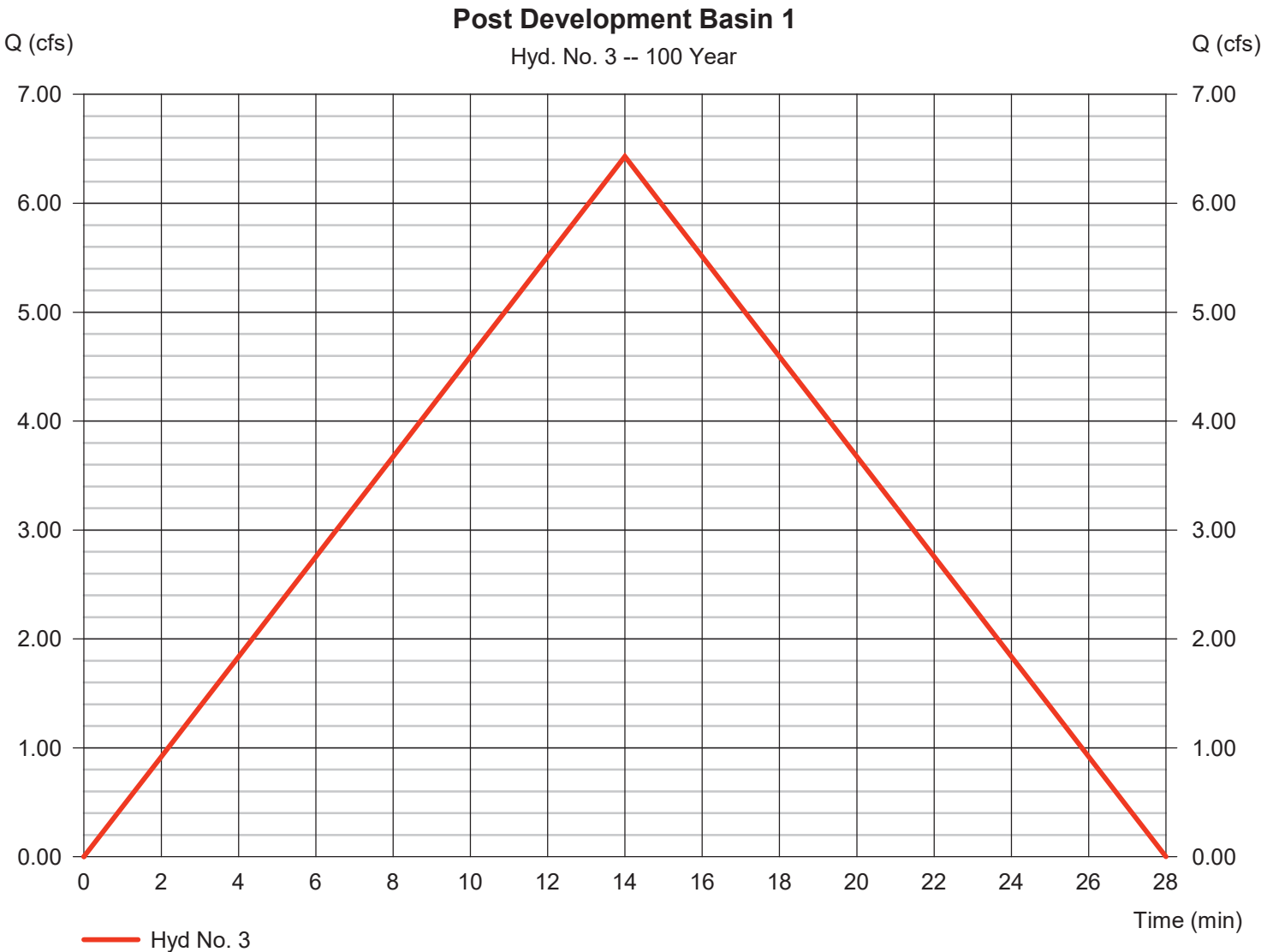
Hydrograph type	= Rational	Peak discharge	= 1.830 cfs
Storm frequency	= 100 yrs	Time to peak	= 17 min
Time interval	= 1 min	Hyd. volume	= 1,867 cuft
Drainage area	= 1.520 ac	Runoff coeff.	= 0.19
Intensity	= 6.338 in/hr	Tc by TR55	= 17.00 min
IDF Curve	= BLGTN Updated 2020.IDF	Asc/Rec limb fact	= 1/1



Hyd. No. 3

Post Development Basin 1

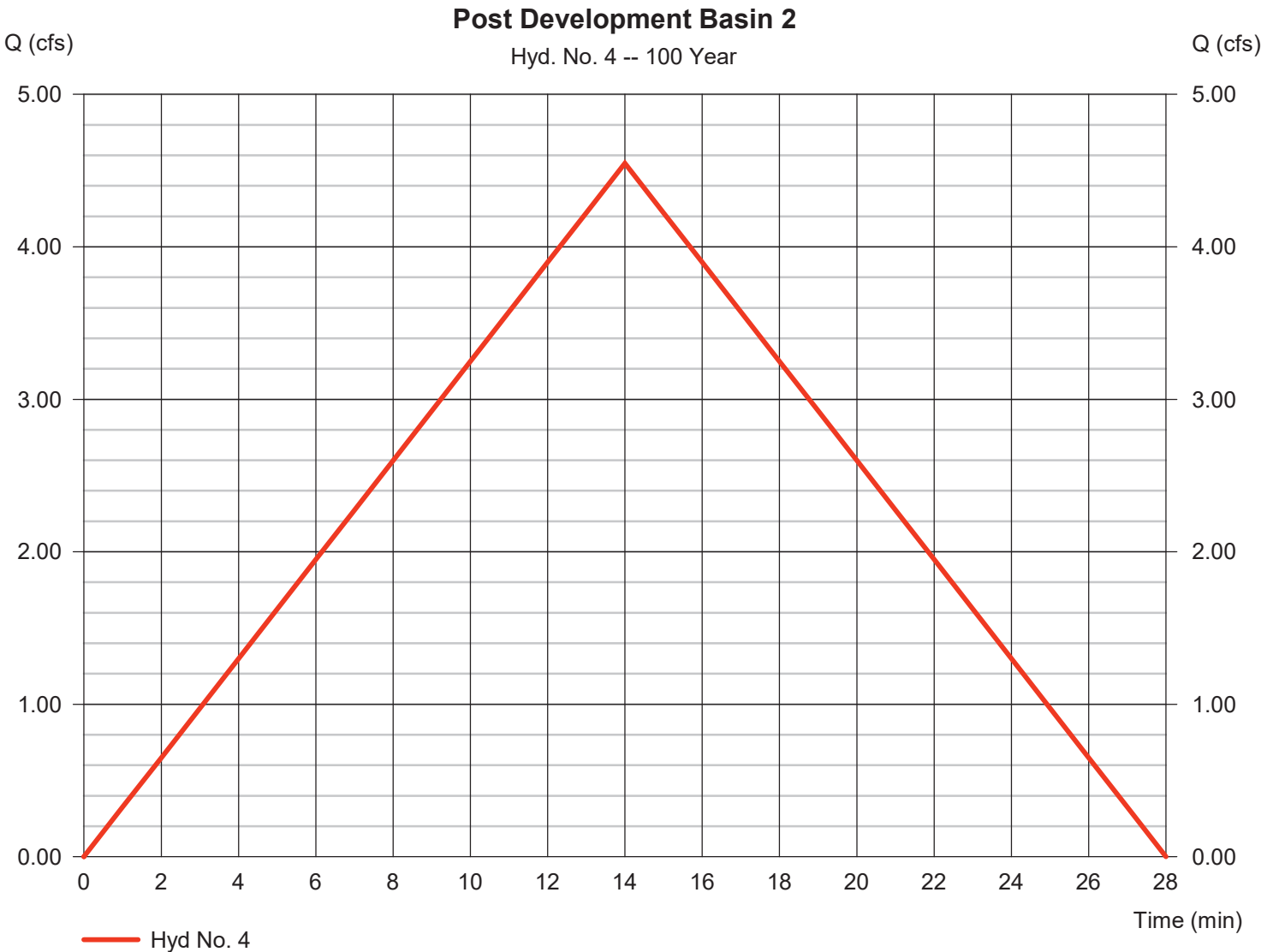
Hydrograph type	= Rational	Peak discharge	= 6.430 cfs
Storm frequency	= 100 yrs	Time to peak	= 14 min
Time interval	= 1 min	Hyd. volume	= 5,401 cuft
Drainage area	= 2.640 ac	Runoff coeff.	= 0.35
Intensity	= 6.959 in/hr	Tc by TR55	= 14.00 min
IDF Curve	= BLGTN Updated 2020.IDF	Asc/Rec limb fact	= 1/1



Hyd. No. 4

Post Development Basin 2

Hydrograph type	= Rational	Peak discharge	= 4.548 cfs
Storm frequency	= 100 yrs	Time to peak	= 14 min
Time interval	= 1 min	Hyd. volume	= 3,821 cuft
Drainage area	= 1.520 ac	Runoff coeff.	= 0.43
Intensity	= 6.959 in/hr	Tc by TR55	= 14.00 min
IDF Curve	= BLGTN Updated 2020.IDF	Asc/Rec limb fact	= 1/1

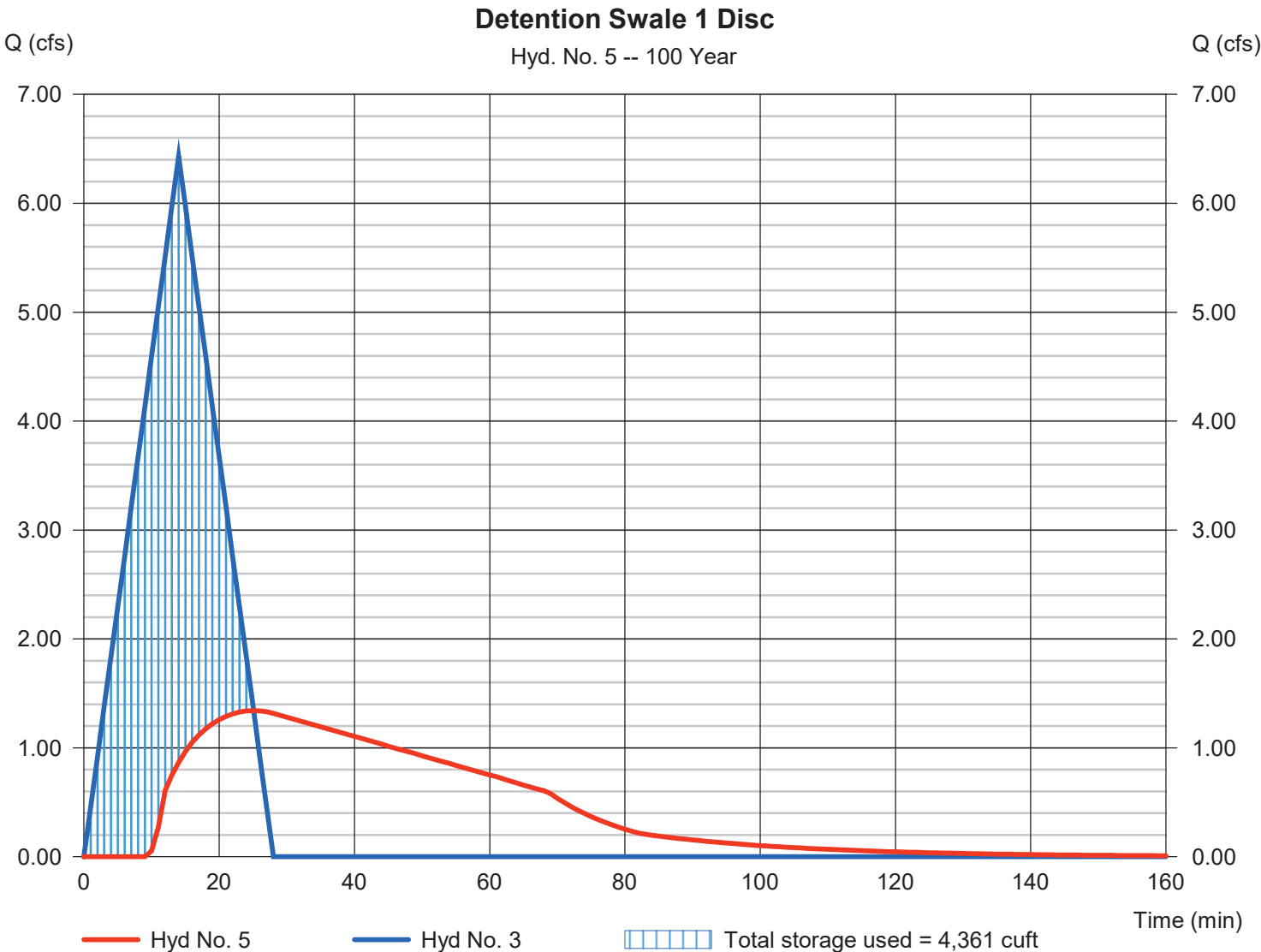


Hyd. No. 5

Detention Swale 1 Disc

Hydrograph type	= Reservoir	Peak discharge	= 1.342 cfs
Storm frequency	= 100 yrs	Time to peak	= 25 min
Time interval	= 1 min	Hyd. volume	= 4,100 cuft
Inflow hyd. No.	= 3 - Post Development Basin 1	Max. Elevation	= 811.00 ft
Reservoir name	= DETENTION SWALE	Max. Storage	= 4,361 cuft

Storage Indication method used.

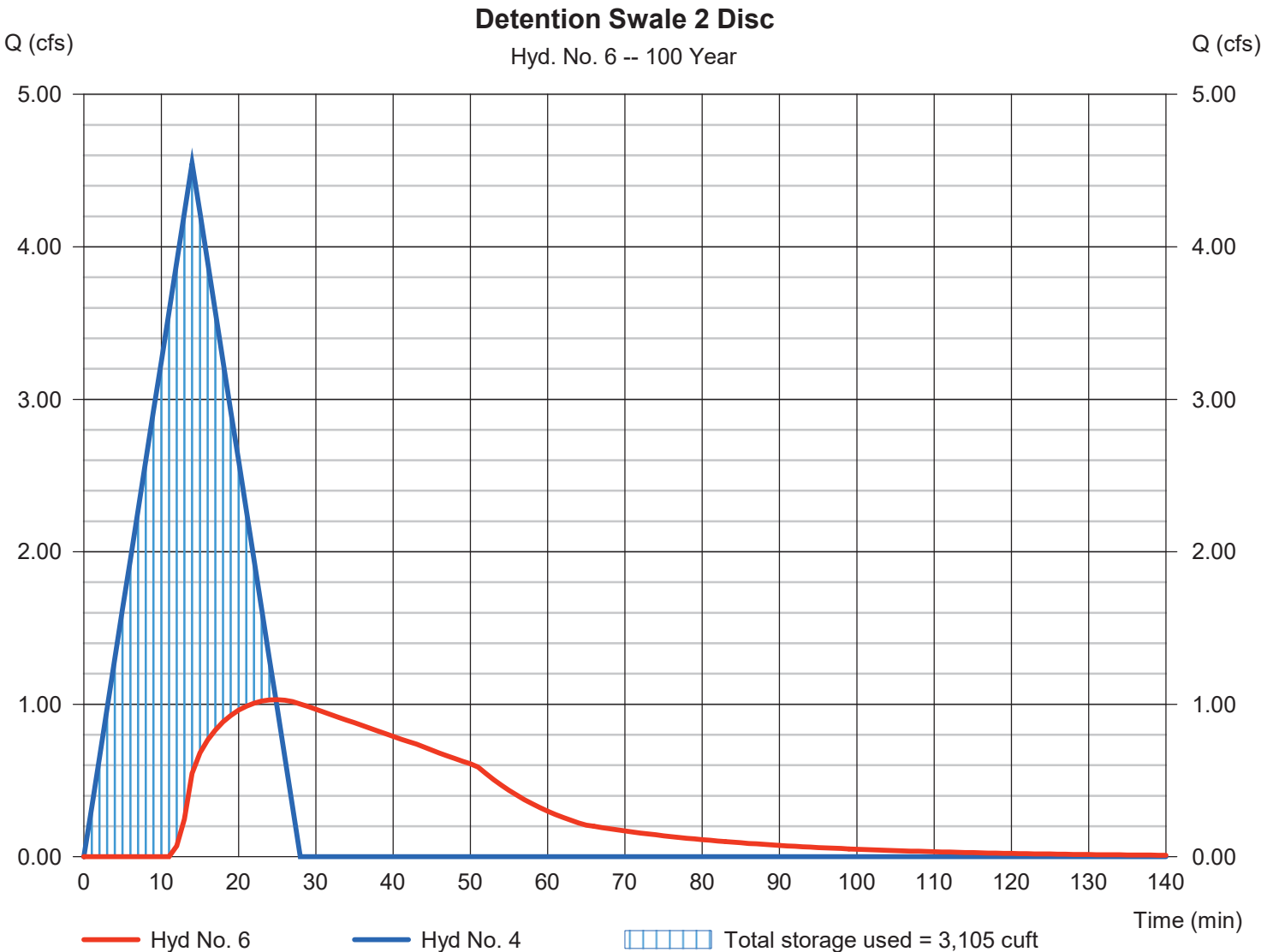


Hyd. No. 6

Detention Swale 2 Disc

Hydrograph type	= Reservoir	Peak discharge	= 1.030 cfs
Storm frequency	= 100 yrs	Time to peak	= 25 min
Time interval	= 1 min	Hyd. volume	= 2,519 cuft
Inflow hyd. No.	= 4 - Post Development Basin 2	Max. Elevation	= 810.59 ft
Reservoir name	= DETENTION SWALE	Max. Storage	= 3,105 cuft

Storage Indication method used.



Return Period (Yrs)	Intensity-Duration-Frequency Equation Coefficients (FHA)			
	B	D	E	(N/A)
1	46.6468	9.5000	0.8650	-----
2	56.4828	9.8000	0.8643	-----
3	0.0000	0.0000	0.0000	-----
5	57.7440	9.2000	0.8173	-----
10	59.2126	8.7000	0.7906	-----
25	55.5095	7.5000	0.7370	-----
50	50.9219	6.3000	0.6907	-----
100	50.3253	5.8000	0.6627	-----

File name: BLGTN Updated 2020.IDF

$$\text{Intensity} = B / (T_c + D)^E$$

Return Period (Yrs)	Intensity Values (in/hr)											
	5 min	10	15	20	25	30	35	40	45	50	55	60
1	4.62	3.57	2.93	2.50	2.18	1.94	1.75	1.60	1.47	1.36	1.27	1.19
2	5.50	4.28	3.52	3.00	2.63	2.34	2.11	1.93	1.77	1.65	1.54	1.44
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	6.60	5.16	4.27	3.66	3.22	2.88	2.61	2.39	2.21	2.06	1.92	1.81
10	7.48	5.85	4.85	4.17	3.67	3.29	2.99	2.74	2.54	2.37	2.22	2.09
25	8.63	6.73	5.60	4.83	4.27	3.84	3.50	3.23	3.00	2.80	2.64	2.49
50	9.54	7.41	6.16	5.32	4.72	4.26	3.90	3.60	3.35	3.15	2.97	2.81
100	10.40	8.08	6.74	5.84	5.19	4.70	4.31	3.99	3.73	3.50	3.31	3.14

Tc = time in minutes. Values may exceed 60.

Precip. file name: Sample.pcp

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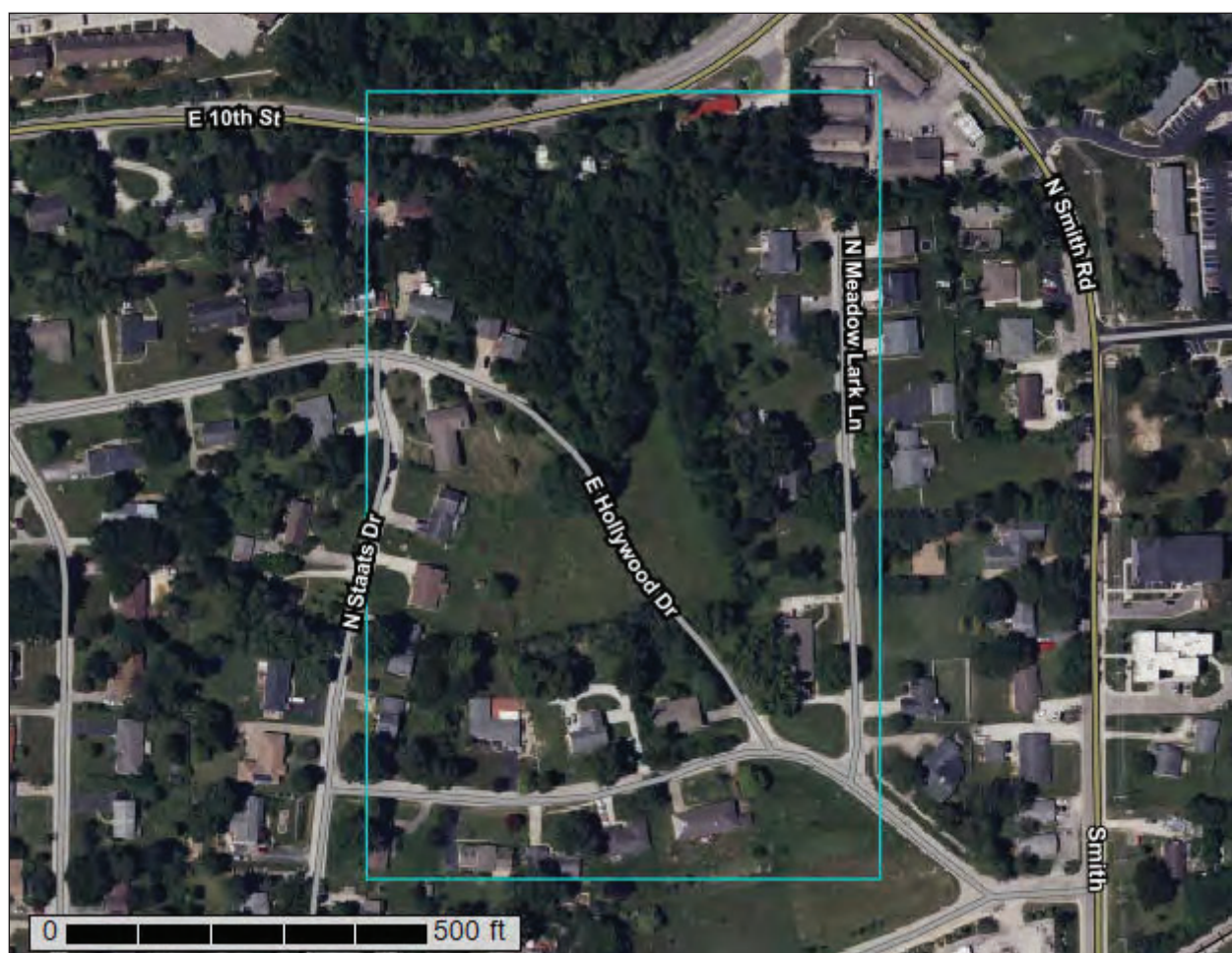
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

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

Custom Soil Resource Report for Monroe County, Indiana



Preface

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

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

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

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

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

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

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How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

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

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


Soil Map

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


Custom Soil Resource Report
Soil Map


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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 30, Sep 1, 2023

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
CaD	Caneyville silt loam, 12 to 18 percent slopes	3.8	21.1%
CoF	Corydon Variant-Caneyville Variant complex, 25 to 70 percent slopes	1.5	8.6%
CtB	Crider-Urban land complex, 2 to 6 percent slopes	2.3	13.0%
CtC	Crider-Urban land complex, 6 to 12 percent slopes	10.2	57.4%
Totals for Area of Interest		17.8	100.0%

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

Monroe County, Indiana

CaD—Caneyville silt loam, 12 to 18 percent slopes

Map Unit Setting

National map unit symbol: 2z8ys
Elevation: 500 to 960 feet
Mean annual precipitation: 37 to 52 inches
Mean annual air temperature: 43 to 63 degrees F
Frost-free period: 173 to 212 days
Farmland classification: Not prime farmland

Map Unit Composition

Caneyville and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Caneyville

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey residuum weathered from limestone

Typical profile

Ap - 0 to 5 inches: silt loam
Bt - 5 to 35 inches: clay
R - 35 to 45 inches: bedrock

Properties and qualities

Slope: 12 to 18 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F122XY002KY - Deep Well Drained Limestone Uplands
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Minor Components

Hagerstown

Percent of map unit: 5 percent

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Landform: Hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F122XY002KY - Deep Well Drained Limestone Uplands
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Crider

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F122XY004KY - Loess Veneered Uplands
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Wilbur, frequently ponded, depression

Percent of map unit: 5 percent
Landform: Sinkholes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F122XY017KY - Moist Alluvium
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

CoF—Corydon Variant-Caneyville Variant complex, 25 to 70 percent slopes

Map Unit Setting

National map unit symbol: kz7z
Elevation: 370 to 1,020 feet
Mean annual precipitation: 40 to 46 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 170 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Corydon variant and similar soils: 55 percent
Caneyville variant and similar soils: 45 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Corydon Variant**Setting**

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey residuum over limestone

Typical profile

A - 0 to 8 inches: flaggy silt loam
Bt1 - 8 to 12 inches: flaggy silty clay loam
Bt2 - 12 to 16 inches: extremely flaggy silty clay loam
R - 16 to 20 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 70 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
 (0.06 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Very low (about 2.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Description of Caneyville Variant**Setting**

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Clayey-skeletal residuum over limestone

Typical profile

A - 0 to 3 inches: channery silt loam
Bt1 - 3 to 13 inches: channery silt loam
2Bt2 - 13 to 22 inches: silty clay
2Bt3 - 22 to 30 inches: very flaggy clay
2R - 30 to 31 inches: unweathered bedrock

Properties and qualities

Slope: 25 to 50 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained

Custom Soil Resource Report

Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

CtB—Crider-Urban land complex, 2 to 6 percent slopes**Map Unit Setting**

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

Map Unit Composition

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

Description of Crider**Setting**

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

Typical profile

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

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2e

Hydrologic Soil Group: B

Ecological site: F122XY004KY - Loess Veneered Uplands

Other vegetative classification: Trees/Timber (Woody Vegetation)

Hydric soil rating: No

Description of Urban Land

Setting

Landform: Hills

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 8

Other vegetative classification: Trees/Timber (Woody Vegetation)

Hydric soil rating: No

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

Map Unit Setting

National map unit symbol: kz85

Elevation: 370 to 1,020 feet

Mean annual precipitation: 40 to 46 inches

Mean annual air temperature: 52 to 57 degrees F

Frost-free period: 170 to 200 days

Farmland classification: Not prime farmland

Map Unit Composition

Crider and similar soils: 60 percent

Urban land: 40 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Crider

Setting

Landform: Hills

Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Linear

Parent material: Loess over clayey residuum

Typical profile

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

Properties and qualities

Slope: 6 to 12 percent
Depth to restrictive feature: 60 to 120 inches to lithic bedrock
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F122XY004KY - Loess Veneered Uplands
Other vegetative classification: Trees/Timber (Woody Vegetation)
Hydric soil rating: No

Description of Urban Land**Setting**

Landform: Hills

Interpretive groups

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

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City of Bloomington
Parks & Recreation
401 N. Morton St., Ste. 250
Bloomington, Indiana 47404

Phone: (812) 349-3716
Fax: (812) 349-3705
E-mail: smithh@bloomington.in.gov
CC - parks@bloomington.in.gov

APPLICATION FOR TREE WORK PERMIT

Application must be submitted seven (7) days prior to date work is set to begin.

Applicant shall follow the standards for Tree Work as set forth in the City of Bloomington Municipal Code—Chapter 12.24 Trees and Flora and in the City of Bloomington Tree Care Manual.

Tree topping of street trees is prohibited per City of Bloomington Municipal Code 12.24.090.

SITE INFORMATION

Address of Tree(s): 3615 E POSE ROAD

Location on Property: ☒ Front ☐ Side ☐ Back

If Exact Address Unknown, please fill in below:

☒ N, ☐ S, ☐ E or ☐ W side of POSE ROAD (Street) _____ feet

☐ N, ☐ S, ☐ E or ☒ W from intersection of POSE ROAD + GRANGER

Part of a Development Project: ☒ Yes ☐ No

Project Name: MYERS MINOR SURV.

Name of Planning and Transportation Dept. Staff Assigned to Project: GABRIEL HOLBROW

TREE WORK TYPE

Select All Applicable:

A. ☒ Street Tree Planting

Number of Trees: 3

Tree Species: TBD

Planter Name: TBD

C. ☐ Street Tree Pruning

Number of Trees: _____

Tree Species: _____

Certified Arborist Information

Name: _____

Certification #: _____

Contact Information: _____

Description of Pruning Objective and Methods:

B. ☐ Street Tree Removal (stump included)

Number of Trees: _____

Tree Species: _____

Removal Company: _____

D. ☐ Application of Chemicals

Number of Trees: _____

Tree Species: _____

Licensed Applicator Information

Name: _____

License #: _____

Contact Information: _____

List of Chemicals and Objective Description:

APPLICATION FOR TREE WORK PERMIT (Cont.)

APPLICANT INFORMATION

Name: SHRUTS, M. KRIS

Relationship to Adjacent Property Owner:

☒ Property Owner ☐ Contractor/Arborist ☐ Property Manager ☐ Other

Mailing Address: 3015 E Post Road

Phone: _____ Email: _____

If Applicant is not the Adjacent Property Owner

Adjacent Property Owner Name: _____

Mailing Address: _____

Phone: 812 340 2018 Email: SHRUTS@BLUEHARTSK.AKS

WORK TIMELINE*

Work to Begin: OCT/22/24 Work To End: 10/31/24

**Permit valid only during this period unless extended by Department.*

The applicant named above shall fully complete and sign this form. Unless otherwise approved by the Bloomington Parks and Recreation Department, this application must be submitted at least 7 days prior to date work is to begin. The permit is not valid until signed by the Department. Please keep a copy of the signed permit for your records. The applicant or his agent is solely responsible for providing notice as required by state law to all underground utilities before commencing an excavation.

By signing below I affirm that the information provided above is true. I agree to abide by any and all conditions imposed below. I agree to indemnify and hold harmless the City, the Board, and the officers, agents and employees of the City and the Board from any and all claims, demands, damages, costs, expenses or other liability arising out of the reckless or negligent act or omission or any willful misconduct on the part of the applicant or any contractors retained by the applicant for work under this permit. If I disagree with the denial of this permit or any conditions imposed, I may appeal in writing within 10 days to the Board of Park Commissioners.

Signature: [Signature] Signed Date: 10/15/24

Do Not Write Below—Staff Use Only

Date Received: 10/15/24

Findings (if different than in information):

Conditions for approval/Reasons for Rejection:

Approved, please select appropriate species from Table 4-14
in Chapter 20.04.080 - for street trees, or Table 4-15 if interior.

Thanks!

Approved



Denied



Signature: [Signature]

Signed Date: 10/15/24

Bloomington Parks and Recreation Department



Heritage Oak street tree at 3615 East Post Road (lot 2) with 3613 East Post Road visible behind, 11/1/2024



Heritage Oak street tree at 3615 East Post Road (lot 2), 11/1/2024



Heritage Oak street trees at driveway end of lot 2, 11/1/2024



Heritage Oak street tree to the right of Post Road driveway to lot 2, 11/1/2024



Heritage Oak street tree to the left of Post Road driveway to lot 2, 11/1/2024