



DEVELOPMENT REVIEW APPLICATION

For Office Use Only

STAFF CONTACT Aaron Gudelj	PROJECT NO(S). ELD-26-02	PRE-APPLICATION NO. PA-25-11
NON-REFUNDABLE FEE(S) \$4,900	REFUNDABLE DEPOSIT(S) \$0	TOTAL \$4,900

Type of Review (Please check all that apply):

- | | | |
|---|--|--|
| <input type="checkbox"/> Annexation (ANX) | <input type="checkbox"/> Final Plat (FP) Related File # _____ | <input checked="" type="checkbox"/> Subdivision (SUB) |
| <input type="checkbox"/> Appeal (AP) | <input type="checkbox"/> Flood Management Area (FMA) | <input type="checkbox"/> Temporary Uses (MISC) |
| <input type="checkbox"/> CDC Amendment (CDC) | <input type="checkbox"/> Historic Review (HDR) | <input type="checkbox"/> Time Extension (EXT) |
| <input type="checkbox"/> Code Interpretation (MISC) | <input type="checkbox"/> Lot Line Adjustment (LLA) | <input type="checkbox"/> Right of Way Vacation (VAC) |
| <input type="checkbox"/> Conditional Use (CUP) | <input type="checkbox"/> Minor Partition (MIP) | <input type="checkbox"/> Variance (VAR) |
| <input type="checkbox"/> Design Review (DR) | <input type="checkbox"/> Modification of Approval (MOD) | <input type="checkbox"/> Water Resource Area Protection/Single Lot (WAP) |
| <input type="checkbox"/> Tree Easement Vacation (MISC) | <input type="checkbox"/> Non-Conforming Lots, Uses & Structures | <input type="checkbox"/> Water Resource Area Protection/Wetland (WAP) |
| <input type="checkbox"/> Expediated Land Division (ELD) | <input type="checkbox"/> Planned Unit Development (PUD) | <input type="checkbox"/> Willamette & Tualatin River Greenway (WRG) |
| <input type="checkbox"/> Extension of Approval (EXT) | <input type="checkbox"/> Street Vacation | <input type="checkbox"/> Zone Change (ZC) |

Pre-Application, Home Occupation, Sidewalk Use, Addressing, and Sign applications require different forms, available on the website.

Site Location/Address: No address assigned

Assessor's Map No.: 21E25CC

Tax Lot(s): 00300

Total Land Area: 55,934 sf, 1.28 ac

Brief Description of Proposal:

Proposed 6-lot single family residential subdivision.

Applicant Name*: Rob Matthews, Blue Palouse Properties
 Address: 333 S. State Street, Suite V452
 City State Zip: Lake Oswego, OR 97034

Phone: 503-936-3212
 Email: robm@bluepalouse.com

Owner Name (required):

Address:
 City State Zip:

Phone:
 Email:

Consultant Name: Jeff Vanderdasson, Vando Development, LLC
 Address: 915 SW Rimrock Way, Ste 201-230
 City State Zip: Redmond, OR 97756

Phone: 503-407-2228
 Email: vandodevelopment@gmail.com

1. Application fees are non-refundable (excluding deposit). Applications with deposits will be billed monthly for time and materials above the initial deposit. ***The applicant is financially responsible for all application costs.**
2. All information provided with the application is considered a public record and subject to disclosure.
3. The owner/applicant or their representative should attend all public hearings related to the application.
4. A decision may be reversed on appeal. The decision will become effective once the appeal period has expired.
5. Submit this form, application narrative, and all supporting documents as a single PDF through the web page: <https://westlinnoregon.gov/planning/submit-land-use-application>.

The undersigned property owner authorizes the application and grants city staff the right of entry onto the property to review the application. The applicant and owner affirm that the information provided in this application is true and correct. Applications with deposits will be billed monthly for time and materials incurred above the initial deposit. The applicant agrees to pay additional billable charges.

Applicant's signature

Date

DocuSigned by:
Rob Matthews
8FB74EB061E2447...
 Owner's signature (**required**)

1/15/2026

Date

DEVELOPMENT REVIEW CHECKLIST

The application form and supporting materials should be submitted electronically through <https://westlinnoregon.gov/planning/submit-land-use-application> as one (1) .pdf file. To create a single PDF file, go to [Adobe Acrobat Free Merge PDF](#) online tool. [Other free Acrobat PDF tools](#) like converting a file to PDF or reducing the file size are available on the Adobe website.

Supporting reports may be uploaded separately through this web form *if* the file size is too large. The separate submissions should be numbered (i.e., Submittal 1 of 2) and noted under transmittal contents. All plan set files **MUST** be flattened and reduced.

Submission requirement to upload through the web form:

- .pdf format.
- Individual file size no larger than 128 MB.
- Do not attach 'zip' files. Our server will reject all 'zip' files.
- Reduce and flatten all plan sets BEFORE uploading plan sets. The raster/vector settings should be optimized for printing.

A complete application must include the following:

- Development Review Application. Original signatures from all owners must be on the application form. **Do NOT use DocuSign.**
- A **project narrative** outlining the project's scope in detail, including the changes to the site, structure, landscaping, parking, land use, and lot consolidations.
- Complete written responses to identified approval criteria in the [Community Development Code \(CDC\)](#).
- A Service Provider Letter from Tualatin Valley Fire and Rescue - <https://www.tvfr.com/399/Service-Provider-Permit> Please contact Jason Arn at jason.arn@tvfr.com with any questions about TVF&R requirements.
- Vicinity Map showing the site within the City.
- Site Plan drawn to scale showing the:
 - Taxlot and address of the project,
 - Area of the site (acres or square feet),
 - Zoning and Neighborhood Association,
 - Location and dimensions of existing and proposed buildings, structures,
 - Location of existing and proposed on-site driveways and off-street parking,
 - Configuration and dimensions of all existing and proposed lots and tracts, including a proposed park, open space, and or drainage tracts or easements,
 - Location and width of existing and proposed easement for access, drainage, etc., and
 - Location of existing and proposed trees and other proposed landscaping.
 - Location of existing public and private utilities, easements, and 100-year floodplain,
 - Sensitive areas, including the location of on-site wetlands and riparian areas,
 - Location of existing off-site driveways across the street,
 - If applicable, internal circulation system, name, and location of existing and proposed roadways and roadway easements (private and public), and
 - Location and width of existing and proposed on-site pedestrian and bicycle facilities on-site.
- If applicable, a Utility Plan and Landscape plan, drawn to scale.
- If applicable, Building elevation drawings with exterior elevations for every side of each structure, height including building materials and floor levels, drawn to scale.
- If required, documentation of any required meeting with the respective City-recognized neighborhood association per CDC [99.038](#).
- Any other materials identified by city staff at the pre-application meeting.

For applications that the Planning Commission decides, the applicant or applicant's representative should present their proposal to the PC at the public hearing.

EXHIBIT B - NARRATIVE



PARKER ROAD WEST LINN, OREGON

An Application for:

6- Lot Subdivision / Expedited Land Division

January 16, 2025

Applicant:

Blue Palouse Properties
333 S. State Street, Suite V452
Lake Oswego OR 97034

Prepared by:

Vando Development, LLC
915 SW Rimrock Way, Ste 201-230
Redmond, OR 97756



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EXHIBITS

- A.** Land Use Application (signed)
- B.** Narrative
- C.** Plan Set:
 - C1 Cover Sheet
 - C2 Existing Conditions Plan- Signed
 - C2.1 Tree Removal Plan
 - C3 Tentative Plan
 - C4 Preliminary Grading Plan
 - C5 Preliminary Utility Plan
- D.** Pre-Application Conference Notes
- E.** Preliminary Stormwater Report
- F.** TVFR Service Provider Letter
- G.** Neighborhood Meeting Packet
- H.** Traffic Study
- I.** Tree Inventory
- J.** Geotechnical Report

GENERAL INFORMATION

Property Owner: **Blue Palouse Properties**
333 S. State Street, Suite V452
Lake Oswego, OR 97034

Applicant: **Blue Palouse Properties**
333 S. State Street, Suite V452
Lake Oswego, OR 97034

Applicant's Representative **Vando Development, LLC**
915 SW Rimrock Way, Ste 201-230
Redmond, OR 97756
(503) 407-2228
Contact: Jeff Vanderdasson
vandodevelopment@gmail.com

Tax Lot Information:	Map	Tax Lot
	21E25CC	300

Location: No address assigned

Property Size: 1.29 ac

Comprehensive Plan Designation: Low-Density Residential

Zoning: R-7 (Single Family Residential Detached and Attached)

General Proposal: Blue Palouse Properties Gary Randall is submitting this application to subdivide the approximately 1.29 acres of land into six, single family residential lots. The subject site is located immediately north of Parker Road, and west of the current terminus of Roxbury Drive. The city recently annexed the property and assigned an R-7 Residential Zoning District on the property. Storm, sanitary and water mains are available in Roxbury Drive and will be extended thru the property to the west property line. With slight modifications, the existing stormwater facility located in the Knollcrest Subdivision to the east has the capacity to treat and detain the proposed run off.

CHAPTER 12 - RESIDENTIAL R-7

12.030 PERMITTED USES

The following uses are permitted outright in this zone:

1. Single-family attached and detached residential unit.

Applicants Response: The applicant is proposing Single-family detached residential units.

12.070 DIMENSIONAL REQUIREMENTS, USES PERMITTED OUTRIGHT AND USES PERMITTED UNDER PRESCRIBED CONDITIONS

Except as may be otherwise provided by the provisions of this code, the following are the requirements for uses within this zone:

STANDARD	REQUIREMENT	ADDITIONAL NOTES
Minimum lot size		
For single-family detached units	7,000 sf	No yard shall be required between units

Applicants Response: The proposed lots sizes are:

- Lot 1 = 7,969 sf
- Lot 2 = 7,003 sf
- Lot 3 = 7,003 sf
- Lot 4 = 7,304 sf
- Lot 5 = 7,398 sf
- Lot 6 = 7,018 sf

The minimum lot size requirement is met. Refer to the Tentative Plan included in Exhibit C.

LOT SIZE SETBACK & HEIGHT REQUIREMENTS

ZONE	SINGLE FAMILY DETACHED UNIT	SINGLE FAMILY ATTACHED UNITS	DUPLEX UNITS	MULTI-FAMILY UNITS
R-7	7,000	5,500	N/A	N/A

DIMENSIONAL REQUIREMENTS BY ZONE

RESIDENTIAL

ZONE	FRONT	REAR	INT SIDE	ST SIDE	MAX BUILDING HEIGHT	MIN STREET FRONTAGE	FLOOR TO AREA RATIO	MAX LOT COVERAGE	LOT DIMENSION AVERAGE WID X DEP
R-7	20'	20'	7.5'	15'	35ft (e)	35'	45%	35%	50' x 90'

Applicants Response: All proposed setbacks are shown on the tentative plat and meet the requirements for the R-7 zone.

Chapter 48

ACCESS, EGRESS AND CIRCULATION

48.020 APPLICABILITY AND GENERAL PROVISIONS

B. All lots shall have access from a public street or from a platted private street approved under the land division chapter.

Applicants Response: All proposed lots will take access from Roxbury Drive, a public street.

C. No building or other permit shall be issued until scaled plans are presented to the City and approved by the City as provided by this chapter, and show how the access, egress, and circulation requirements are to be fulfilled. Access to State or County roads may require review, approval, and permits from the appropriate authority.

Applicants Response: Construction drawings will be submitted that show how the access, egress, and circulation requirements are fulfilled.

48.025 ACCESS CONTROL

B. Access control standards.

1. Traffic impact analysis requirements. A traffic analysis prepared by a qualified professional may be required to determine access, circulation and other transportation requirements. The purpose, applicability and standards of this analysis are found in CDC 85.170(B)(2).

Applicants Response: A Technical Memorandum prepared by Ard Engineering, dated August 18, 2025, and included in Exhibit H.

3. Access options. When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided from a public street adjacent to the development lot or parcel. Street accesses shall comply with access spacing standards in subsection (B)(6) of this section, the West Linn Public Works Design Standards, and TSP. As an alternative, the applicant may request alternative access provisions listed below as Option 1 and Option 2, subject to approval by the City Engineer through a discretionary process.

a) Option 1. Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted. For the purpose of this subsection, a mid-block lane is a narrow private drive providing lot frontage and access for rear lot development.

Applicants Response: All proposed lots will take access from Roxbury Drive, a public street.

6. Access spacing.

a. The access spacing standards found in Tables 14 and 15 of the TSP and in CDC 48.060 shall be applicable to all newly established public street intersections, non-traversable medians, and curb cuts. Deviation from the access spacing standards may be granted by the City Engineer as part of a discretionary review if the applicant demonstrates that the deviation will not compromise the safe and efficient operation of the street and highway system.

Applicants Response: This code section does not apply given the proposed street configuration.

7. Number of access points. For single-family (detached and attached) housing types, one street access point is permitted per lot or parcel when alley access cannot otherwise be provided; except that two access points may be permitted corner lots (i.e., no more than one access per street), subject to the access spacing standards in CDC 48.060. The number of street access points for multiple family development is subject to the access spacing standards in CDC 48.060. The number of street access points for commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with subsection (C)(8) of this section, in order to maintain the required access spacing, and minimize the number of access points.

Applicants Response: Each proposed lot has one access point.

C. Street connectivity and formation of blocks required. In order to promote efficient vehicular and pedestrian circulation throughout the City, land divisions and site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:

2. Street standards. Public and private streets shall also conform to Chapter 92 CDC, Required Improvements, and to any other applicable sections of the West Linn Community Development Code and approved TSP.

Applicants Response: Roxbury Drive and the stub street to north will conform to Chapter 92 CDC, Required Improvements, and to any other applicable sections of the West Linn Community Development Code and approved TSP.

48.030 MINIMUM VEHICULAR REQUIREMENTS FOR RESIDENTIAL USES

B. Driveway standards. When any portion of any house is less than 150 feet from the adjacent right-of-way, driveway access to the home shall meet the following standards:

1. One single-family residence, including residences with an accessory dwelling unit as defined in CDC 02.030, shall provide a driveway with 10 feet of unobstructed horizontal clearance. Dual-track or other driveway designs that minimize the total area of impervious driveway surface are encouraged but not required.

Applicants Response: A 20' driveway is proposed for each lot.

3. Maximum driveway grade shall be 15 percent. The 15 percent shall be measured along the centerline of the driveway only. Variations require approval of a Class II variance by the Planning Commission pursuant to Chapter 75 CDC. However, in no case shall the last 18 feet in front of the garage exceed 12 percent grade as measured along the centerline of the driveway only. Grades elsewhere along the driveway shall not apply.

Applicants Response: All proposed driveways will have a maximum driveway grade that is less than 15 percent.

4. The driveway shall include a minimum of 20 feet in length between the garage door and the back of sidewalk, or, if no sidewalk is proposed, to the paved portion of the right-of-way.

Applicants Response: All proposed driveways will have a minimum of 20 feet in length between the garage door and the back of sidewalk, or, if no sidewalk is proposed, to the paved portion of the right-of-way.

D. Access to five or more single-family homes shall be by a street built to City of West Linn standards, consistent with the TSP (Tables 26 through 30 and Exhibits 6 through 9) and the Public Works Design Standards. All streets shall be public. This full street provision may only be waived by variance.

Applicants Response: All proposed lots will take access from Roxbury Drive, a public street.

48.060 WIDTH AND LOCATION OF CURB CUTS AND ACCESS SEPARATION REQUIREMENTS

A. Minimum curb cut width shall be 16 feet.

Applicants Response: Proposed curb cuts are 20' wide.

G. Clear vision areas shall be maintained, pursuant to Chapter 42 CDC, and required line of sight shall be provided at each driveway or accessway, pursuant to the West Linn Public Works Design Standards. (

Applicants Response: Clear vision areas will be maintained, pursuant to Chapter 42 CDC, and required line of sight shall be provided at each driveway or accessway, pursuant to the West Linn Public Works Design Standards.

48.080 BICYCLE AND PEDESTRIAN CIRCULATION

B. Bicycle and pedestrian ways within a subdivision shall be constructed according to the provisions in CDC 85.200(C).

Applicants Response: A 5' concrete sidewalk is proposed along each side of the proposed extension of Roxbury Drive.

Chapter 85 LAND DIVISIONS – GENERAL PROVISIONS 85.010 PURPOSE

A. The purpose of the land division provisions of this code is to implement the Comprehensive Plan; to provide rules and standards governing the approval of plats of subdivisions (four lots or more) and partitions (three lots or fewer); to help direct the development pattern; to lessen congestion in the streets; to increase street safety; to efficiently provide water, sewage, and storm drainage service; and to conserve energy resources.

B. The purpose is further defined as follows:

1. To improve our sense of neighborhood and community and increase opportunities for socialization.
2. To comply with the State's Transportation Planning Rule (TPR), which seeks to encourage alternate forms of transportation and reduce reliance upon the private automobile and vehicle miles traveled by increasing accessibility within and between subdivisions and neighborhoods. This may be accomplished by designing an easily understood, interconnected pattern of streets, bicycle and foot paths, and accommodation of transit facilities. Cul-de-sacs are to be discouraged unless site conditions dictate otherwise.
3. To reduce pedestrian/vehicle conflicts and create a safe and attractive environment for pedestrians and bicyclists.
4. To protect natural resource areas such as drainageways, Willamette and Tualatin River greenways, creeks, habitat areas, and wooded areas as required by other provisions of this code or by the layout of streets and graded areas so as to minimize their disturbance.
5. To protect the natural features and topography by minimizing grading and site disturbance and by requiring proper erosion control techniques.
6. To arrange the lots and streets so as to minimize nuisance conditions such as glare, noise, and vibration.
7. To maximize passive solar heating benefits by orienting the streets on an east-to-west axis which increases exposure to the sun.

8. To arrange for the efficient layout of utilities and infrastructure as well as their extension to adjacent properties in a manner consistent with either adopted utility plans or sound engineering practices.
9. To arrange lots and roads to create reasonably buildable lots and acceptable driveway grades.
10. To encourage the arrangement of increased densities and smaller lots in proximity to needed services and schools as well as transportation corridors so as to reduce vehicle miles traveled and to encourage alternate modes of travel.
11. To encourage design experimentation and creativity.
12. To arrange for the mitigation of impacts generated by new development. These impacts include increased automobile, foot, and bicycle traffic. These impacts are to be mitigated at the developer's cost, by the provision of streets, sidewalks, bicycle and foot paths, and traffic control devices within, contiguous to, and nearby the development site. Similarly, increased demand on local infrastructure such as water lines, sanitary sewer lines, and storm drainage and detention facilities, should be offset by improving existing facilities or providing new ones. (Ord. 1636 § 49, 2014; Ord. 1647 § 7, 2016; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The proposed subdivision is designed in accordance with all applicable standards and requirements.

85.020 SCOPE – CONFORMITY REQUIRED

- A. This division shall apply to all subdivisions and partitions within the City limits of West Linn.
- B. No person shall subdivide or create a partition except in conformity with the provisions of this code and Chapter 92 ORS. Chapter 92 ORS states that all partitions and subdivisions of land require a final plat to be prepared by a registered professional land surveyor; all corners must be monumented, the partition or subdivision plat must be approved by the City and County surveyor, as appropriate, and recorded with the County recorder.
- C. No building permit shall be issued for any parcel or lot which was created by subdivision or partition if it is not approved and in conformity with the provisions of this code.
- D. No excavation of land or construction of any public or private improvement shall take place or be commenced except in conformity with the provisions of this code. (Ord. 1636 § 50, 2014; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The application acknowledges the requirements of this section.

85.030 SALE OR NEGOTIATION TO SELL LOT OR PARCEL PRIOR TO APPROVAL OF TENTATIVE PLAN

- A. No person shall sell any lot in any subdivision to which approval is required until such approval is obtained. No person shall negotiate to sell any lot in a subdivision until the tentative plan has been approved. A person may negotiate to sell any parcel in a partition for which approval of a tentative plan is required, but shall not sell a parcel prior to approval.
- C. No building permits will be issued for tentatively approved lots or parcels until the final plat is recorded or substantial completion of conditions of development as defined in ORS 455.175 and a financial guarantee is provided per Chapter 91 CDC. (Ord. 1636 § 51, 2014; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The application acknowledges the requirements of this section.

85.050 APPROVAL REQUIRED BEFORE CREATING STREET OR ROAD TO PARTITION LAND

- A. No person shall create a street or road for the purpose of partitioning an area or tract of land without approval by the approval authority under the provisions of CDC 99.060(A) and (B).

B. No instrument dedicating land to public use shall be accepted for recording unless such instrument bears the approval of the Planning Director or City Engineer, as applicable, under the provisions of CDC 99.060(A) and (B), procedures for decision-making. (Ord. 1382, 1995; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The application acknowledges the requirements of this section.

85.070 ADMINISTRATION AND APPROVAL PROCESS

A. The application shall be filed by the record owner(s) of the property or by an authorized agent who has a letter of authorization from the property owners of record. The burden of proof will be upon the applicant to demonstrate the validity of the ownership, if challenged.

B. Action on the application for a tentative plan shall be as provided by Chapter 99 CDC.

1. The Planning Director shall approve, deny, or approve with conditions an application for a partition subject to the provisions of CDC 85.200, 99.060(A), and 99.110. The Director's decision may be appealed to the City Council as provided by CDC 99.240(A).

2. The Planning Commission shall approve, deny, or approve with conditions an application for a tentative plan for a subdivision subject to the provisions of CDC 85.200, 99.060(B), and 99.110. A petition for review of the Planning Commission's decision may be filed as provided by CDC 99.240.

3. The Planning Director shall approve, deny, or approve with conditions an application for an expedited land division subject to the provisions of CDC 85.220, 99.060(A), and 99.110. The decision may be appealed to a referee as provided by CDC 99.060(E).

4. The Planning Director shall approve, deny, or approve with conditions an application for a middle housing land division subject to the provisions of CDC 85.230, 99.060(A), and 99.110. The decision may be appealed to a referee as provided by CDC 99.060(E).

5. Action on the final plat shall be ministerial and taken by the Planning Director and City Engineer, and the Planning Director and City Engineer shall approve a final subdivision or partition plat upon the finding that the approval criteria set forth in CDC 89.050 have been satisfied. The Planning Director's and City Engineer's decision may be appealed to the Planning Commission by the applicant, and the Planning Commission shall make its decision based on testimony from the applicant and the Director. (Ord. 1474, 2001; Ord. 1745 § 1 (Exh. A), 2023; Ord. 1755 § 1 (Exh. A), 2024)

Applicants Response: The application acknowledges the requirements of this section.

85.100 NON-COMPLIANCE – BOND

A. Non-compliance with an approved final plat shall be a violation of this code.

B. The development and associated conditions of approval shall be completed in accordance with the approved final plat before any occupancy permits will be issued except that when the City Engineer or Planning Director determines that immediate execution of any feature of an approved final plat is impractical due to climatic conditions, unavailability of materials, or other temporary condition, the Planning Director or City Engineer shall, as a precondition of the issuance of a required permit, require a cashier's check, cash, or other surety (generally 125 percent of an engineer's estimated cost of improvements), to secure execution of the feature at a time certain not to exceed one year. (Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The application acknowledges the requirements of this section.

85.140 PRE-APPLICATION CONFERENCE REQUIRED

A. An applicant shall participate in a pre-application conference with staff prior to the submission of a complete tentative plan.

B. The Planning staff shall explain the applicable plan policies, ordinance provisions, opportunities, and constraints which may be applicable to the site and type of proposed land division.

C. The City Engineering staff shall explain the public improvement requirements which may be applicable to the site and type of proposed land division, including potential for the applicant to apply for a waiver of street improvements. (Ord. 1544, 2007; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: A pre-application was held on May 1, 2025. Preapplication city notes are included in Exhibit D.

85.150 APPLICATION – TENTATIVE PLAN

A. The applicant shall submit a completed application which shall include:

1. The completed application form(s).
2. Copies of the tentative plan and supplemental drawings shall include one copy at the original scale plus one copy reduced in paper size not greater than 11 inches by 17 inches. The applicant shall also submit one copy of the complete application in a digital format acceptable to the City. When the application submittal is determined to be complete, additional copies may be required as determined by the Community Development Department.
3. A narrative explaining all aspects of land division per CDC 85.200.

Applicants Response: All required items are included in the tentative plan application package.

B. The applicant shall pay the requisite fee. (Ord. 1401, 1997; Ord. 1408, 1998; Ord. 1442, 1999; Ord. 1613 § 19, 2013; Ord. 1621 § 25, 2014; Ord. 1622 § 19, 2014; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The applicant will pay the required fee.

85.160 SUBMITTAL REQUIREMENTS FOR TENTATIVE PLAN

A. A City-wide map shall identify the site. A vicinity map covering one-quarter-mile radius from the development site shall be provided in the application showing existing subdivisions, streets, and unsubdivided land ownerships adjacent to the proposed subdivision and showing how proposed streets and utilities may be extended to connect to existing streets and utilities.

B. The tentative subdivision plan shall be prepared by a registered civil engineer and/or a licensed land surveyor. A stamp and signature of the engineer or surveyor shall be included on the tentative subdivision plan. A tentative minor partition plan (three lots or less) is only required to be drawn to scale and does not have to be prepared by an engineer or surveyor.

C. The tentative plan of a subdivision or partition shall be drawn at a scale not smaller than one inch equals 100 feet, or, for areas over 100 acres, one inch equals 200 feet.

D. The following general information shall be shown on the tentative plan of subdivision or partition:

1. Proposed name of the subdivision and streets; these names shall not duplicate nor resemble the name of any other subdivision or street in the City and shall be determined by the City Manager or designee. Street names should be easily spelled, pronounced, and of limited length. All new street names must, to the greatest extent possible, respect and be representative of the surrounding geography and existing street names. Street names should consider any prominent historical City figures or neighborhood themes that exist. Subdivision street names may not reference names of the builder or developer.
2. Date, north arrow, scale of drawing, and graphic bar scale.
3. Appropriate identification clearly stating the drawing as a tentative plan.

4. Location of the proposed division of land, with a tie to the City coordinate system, where established, and a description sufficient to define its location and boundaries, and a legal description of the tract boundaries.
5. Names and addresses of the owner, developer, and engineer or surveyor.

Applicants Response: All required items are included in the tentative plan included in the application package. Please refer to Exhibit C.

- E. The following existing conditions shall be shown on the tentative plan of a subdivision or partition:
1. The location, widths, and names of all existing or platted streets and rights-of-way within or adjacent to the tract (within 50 feet), together with easements and other important features such as section lines, donation land claim corners, section corners, City boundary lines, and monuments.
 2. Contour lines related to the U.S. Geological Survey datum or some other established benchmark, or other datum approved by the Planning Director and having the following minimum intervals:
 - a. Two-foot contour intervals for ground slopes less than 20 percent.
 - b. Five-foot contour intervals for ground slopes exceeding 20 percent.
 3. The location of any control points that are the basis for the applicant's mapping.
 4. The location, by survey, and direction of all watercourses and areas subject to periodic inundation or storm drainageway overflow or flooding, including boundaries of flood hazard areas as established by the U.S. Army Corps of Engineers or the City zoning ordinance.
 5. Natural features such as rock outcroppings, wetlands tied by survey, wooded areas, heritage trees, and isolated trees (six-inch diameter at five feet above grade) identified by size, type, and location. All significant trees and tree clusters identified by the City Arborist using the criteria of CDC 55.100(B)(2), and all heritage trees, shall be delineated. Trees on non-Type I and II lands shall have their "dripline plus 10 feet" protected area calculated per CDC 55.100(B)(2) and expressed in square feet, and also as a percentage of total non-Type I and II area.
 6. Existing uses of the property, including location of all existing structures. Label all structures to remain on the property after platting.
 7. Identify the size and location of existing sewers, water mains, culverts, drain pipes, gas, electric, and other utility lines within the site, and in the adjoining streets and property.
 8. Zoning on and adjacent to the tract.
 9. Existing uses to remain on the adjoining property and their scaled location.
 10. The location of any existing bicycle or pedestrian ways.
 11. The location of adjacent transit stops.

Applicants Response: All required items are included in the tentative plan application package. Please refer to the existing conditions plan included in Exhibit C.

- F. The following proposed improvements shall be shown on the tentative plan or supplemental drawings:
1. The street location, proposed name, right-of-way width, and approximate radius of curves of each proposed street and street grades. Proposed street names shall comply with the street naming method explained in CDC 85.200(A)(14).

2. The type, method, and location of any erosion prevention and sediment control measures and/or facilities in accordance with the most current version of Clackamas County's *Erosion/Sedimentation Control Plans Technical Guidance Handbook*, which are necessary to prevent and control visible or measurable erosion as determined by the following criteria:

- a. Deposition of soil, sand, dirt, dust, mud, rock, gravel, refuse, or any other organic or inorganic material exceeding one cubic foot in volume in a public right-of-way or public property, or into the City surface water management system either by direct deposit, dropping, discharge, or as a result of erosion; or
- b. Flow of water over bare soils, turbid or sediment-laden flows, or evidence of on-site erosion such as rivulets or bare soil slopes, where the flow of water is not filtered or captured on the development site; or
- c. Earth slides, mud flows, land slumping, slope failure, or other earth movement that is likely to leave the property of origin.

Additional on-site measures may later be required if original measures prove to be inadequate in meeting these attainment standards. For the purposes of this code, "one cubic foot in volume" is defined to include the volume of material, wet or dry, at the time of deposition and includes any water of a discolored or turbid nature.

3. Any proposed infrastructure improvements that address those identified in the City of West Linn Transportation System Plan.
4. Any proposed bicycle or pedestrian paths. The location of proposed transit stops.
5. Any easement(s) – location, width, and purpose of the easement(s).
6. The configuration including location and approximate dimensions and area of each lot or parcel, and in the case of a subdivision, the proposed lot and block number.
7. A street tree planting plan and schedule approved by the Parks Department.
8. Any land area to be dedicated to the City or put in common ownership.

Applicants Response: All required items are included in the tentative plan application package. Please refer to Exhibit C.

85.170 SUPPLEMENTAL SUBMITTAL REQUIREMENTS FOR TENTATIVE SUBDIVISION OR PARTITION PLAN

The following information shall be submitted to supplement the tentative subdivision plan:

A. General.

1. Narrative stating how the plan meets each of the applicable approval criteria and each subsection below.

Applicants Response: A narrative is include in Exhibit B of the application package stating how the plan meets each of the applicable approval criteria and including responses to each subsection below .

2. Statement or affidavit of ownership of the tract (County Assessor's map and tax lot number).

Applicants Response: BP Homes owns the tract.

3. A legal description of the tract.

Applicants Response: A legal description of the tract is included in Exhibit K.

7. Table and calculations showing the allowable number of lots under the zone and how many lots are proposed.

Applicants Response: The density calculation is as follows:

Gross Site area = 55,934 sf

Right of way Dedication = 12,283 sf

Net Site Area = 43,651 sf

Maximum Density = $43,651 \text{ sf} / 7,000 \text{ sf} = 6.24 = 6 \text{ units}$

Minimum Density = $6 \text{ units} \times 0.7 = 4.2 - 4 \text{ units}$

B. Transportation.

1. Centerline profiles with extensions shall be provided beyond the limits of the proposed subdivision to the point where grades meet, showing the finished grade of streets and the nature and extent of street construction. Where street connections are not proposed within or beyond the limits of the proposed subdivision on blocks exceeding 330 feet, or for cul-de-sacs, the tentative plat or partition shall indicate the location of easements that provide connectivity for bicycle and pedestrian use to accessible public rights-of-way.

Applicants Response: A proposed centerline profile for the extension of Roxbury Drive is included in is provide in Exhibit C.

2. Traffic impact analysis (TIA).

d. Traffic impact analysis (dwellings). For development applications that propose new dwelling units, an applicant must submit a traffic impact analysis unless the application is exempt from this requirement pursuant to subsection (B)(2)(d)(6) of this section. Failure to submit the analysis will result in an incomplete application. The applicant shall prepare the analysis in accordance with the following:

6) A transportation impact study is not required under this section if:

(A) The proposed development will generate no more than 250 average daily trips as determined by using the Institute of Transportation Engineers Trip Generation Manual (11th edition); or

Applicants Response: The proposed development will generate 194 average daily trips, as documented in the Technical Memorandum prepared by Ard Engineering, dated August 18, 2025, and included in H.

C. Grading.

1. If areas are to be graded, a plan showing the location of cuts, fill, and retaining walls, and information on the character of soils, shall be provided. The grading plan shall show proposed and existing contours at intervals per CDC 85.160(E)(2).

Applicants Response: A grading plan is included in Exhibit C showing the above required information.

2. The grading plan shall demonstrate that the proposed grading to accommodate roadway standards and create appropriate building sites is the minimum amount necessary.

Applicants Response: A grading plan is included in Exhibit C that demonstrates that the proposed grading to accommodate roadway standards and create appropriate building sites is the minimum amount necessary.

3. The grading plan must identify proposed building sites and include tables and maps identifying acreage, location and type of development constraints due to site characteristics such as slope, drainage and geologic hazards. For Type I, II, and III lands (refer to definitions in Chapter 02 CDC), the applicant must provide a geologic report, with text, figures and attachments as needed to meet the industry standard of practice, prepared by a certified engineering geologist and/or a geotechnical professional engineer, that includes:

- a. Site characteristics, geologic descriptions and a summary of the site investigation conducted;
- b. Assessment of engineering geological conditions and factors;
- c. Review of the City of West Linn's Natural Hazard Mitigation Plan and applicability to the site; and
- d. Conclusions and recommendations focused on geologic constraints for the proposed land use or development activity, limitations and potential risks of development, recommendations for mitigation approaches and additional work needed at future development stages including further testing and monitoring.

Applicants Response: A grading plan is included in Exhibit C showing the above required information. A geotechnical report is included in Exhibit J.

D. Water.

1. A plan for domestic potable water supply lines and related water service facilities, such as reservoirs, etc., shall be prepared by a licensed engineer consistent with the adopted Comprehensive Water System Master Plan and most recently adopted updates and amendments.
2. Location and sizing of the water lines within the development and off-site extensions. Show on-site water line extensions in street stubouts to the edge of the site, or as needed to complete a loop in the system.
3. Adequate looping system of water lines to enhance water quality.

Applicants Response: The proposed 8" water line is shown on the utility plan that is included in Exhibit C showing the proposed public water main extension in Roxbury Drive. The main will be extended in the future with adjoining development and will provide looping at that time.

E. Sewer.

1. A plan prepared by a licensed engineer shall show how the proposal is consistent with the Sanitary Sewer Master Plan, Public Works Design Standards, and subsequent updates and amendments. Agreement with that plan must demonstrate how the sanitary sewer proposal will be accomplished and how it is efficient. The sewer system must be in the correct zone.
2. Sanitary sewer information will include plan view of the sanitary sewer lines, including manhole locations and depths, and show how each lot or parcel would be sewerred.

Applicants Response: The proposed 8" sewer main is shown on the utility plan that is included in Exhibit C showing the proposed public sewer main extension in Roxbury Drive.

F. Storm. A storm detention and treatment plan and narrative compliant with CDC 92.010(E) must be submitted for storm drainage and flood control including profiles of proposed drainageways with reference to the most recently adopted Storm Drainage Master Plan.

Applicants Response: Stormwater laterals will be provided for each proposed lot and conveyed to a storm main extension in Roxbury Drive. That piping discharges to the existing detention and treatment facility that was constructed with the Knoll Crest Subdivision to the east. A stormwater report is included in Exhibit E that analyzes that facility. That facility has additional capacity available and can be utilized with minimal modifications .

G. Service provider permit. A Tualatin Valley Fire and Rescue service provider permit shall be provided. (Ord. 1382, 1995; Ord. 1401, 1997; Ord. 1425, 1998; Ord. 1442, 1999; Ord. 1584, 2008; Ord. 1604 § 65, 2011; Ord. 1635 § 33, 2014; Ord. 1636 § 54, 2014; Ord. 1650 § 1 (Exh. A), 2016; Ord. 1662 § 15, 2017; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: A Tualatin Valley Fire and Rescue service provider permit is included in Exhibit F.

85.180 REDIVISION PLAN REQUIREMENT

A redivision plan shall be required for a partition or subdivision, where the property could be developed at a higher density, under existing/proposed zoning, if all services were available and adequate to serve the use.

- A. The redivision plan is a sketch plan. A land survey and an engineering drawing are not required except where there are unique soil, topographic, or geologic conditions. Under the provisions of CDC 99.035, administrative procedures, the Planning Director may require additional information.
- B. The applicant shall submit a topographic map based on available information and a subdivision layout in accordance with standards set forth in this chapter and the zoning district in which the property is located.
- C. A building permit issued shall be for a specified future lot or parcel and the building shall meet the setback provisions of the zoning district in which the property is located.
- D. The redivision plan is considered a guide. Its purpose is to assure the efficient use of land and orderly growth. At such time as the property owner applies to redivide the land, a different proposal may be submitted for approval provided it meets all of the requirements. The redivision plan is not binding on the applicant or the City at the time a formal application is submitted under this chapter.
- E. The Planning Director shall approve the redivision plan in the manner set forth in CDC 99.060(A)(2), except that no notice shall be given. The applicant may appeal the Planning Director's decision as provided by CDC 99.240(A).
- F. The Planning Director's decision shall be based on the following findings:

- 1. The redivision plan complies with the applicable requirements of this chapter and zoning district in which the property is located.
- 2. There are adequate water and sewage systems available for the proposed use. (Ord. 1636 § 55, 2014; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The applicant proposes developing the property at the maximum allowable density and building single family detached residential homes, with no plans of redeveloping.

85.190 ADDITIONAL INFORMATION REQUIRED AND WAIVER OF REQUIREMENTS

- A. The Planning Director may require additional information as part of the application subject to the provisions of CDC 99.035(A).
- B. The applicant may request a waiver of any requirements for the application subject to the provisions of CDC 99.035(B) and (C). (Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The applicant acknowledges this code section.

85.200 APPROVAL CRITERIA

No tentative subdivision or partition plan shall be approved unless adequate public facilities will be available to provide service to the partition or subdivision area prior to final plat approval and the Planning Commission or Planning Director, as applicable, finds that the following standards have been satisfied, or can be satisfied by conditions of approval:

A. Streets.

3. Tree protection. Streets shall be laid out to avoid and protect significant trees and significant tree clusters, but not to the extent that it would compromise connectivity requirements per this subsection A, or bring the achievable density below 70 percent of the maximum density for the developable net area. The developable net area is calculated by taking the total site acreage and deducting Type I and II lands; then up to 20 percent of the remaining land may be excluded as necessary for the purpose of protecting significant trees and tree clusters as provided in CDC 55.100(B)(2) or 55.105(B)(2), as applicable.

Applicants Response: It is necessary to remove all trees in order to meet connectivity requirements.

4. Street connections. The developer shall make all local street connections identified in the Transportation System Plan, Table 17 and Figure 12, that are within the boundaries of the project.

Applicants Response: Roxbury Drive will be extended thru the property.

5. Street improvements.

a. Streets that are internal to the land division site are the responsibility of the developer. All streets bordering the development site are to be developed by the developer with, typically, half-street improvements to the City of West Linn Public Works Design Standards. Additional travel lanes may be required to be consistent with adjacent road widths or to be consistent with the adopted Transportation System Plan (TSP), Tables 26 through 30 and Exhibits 6 through 9.

Applicants Response: The applicant acknowledges responsibility for constructing the Roxbury Drive extension.

c. Right-of-way widths shall depend upon which classification of street is proposed. The right-of-way widths are established in the adopted TSP, Exhibits 6 through 9.

Applicants Response: The proposed right of way width matches the existing width of Roxbury Drive at the connection point.

d. Public Works Design Standards. Street design shall conform to the standards of the applicable roadway authority; for City streets that is the West Linn Public Works Design Standards manual. Where a conflict occurs between this code and the Public Works Design Standards manual, the provisions of this code shall govern.

Applicants Response: The Roxbury Drive extension will be designed to conform to the standards of the applicable roadway authority; for City streets that is the West Linn Public Works Design Standards manual.

6. Street widths. Street widths shall depend upon the classification of street proposed. The classifications and required cross sections are established in the adopted TSP, Tables 26 through 30 and Exhibits 6 through 9.

Applicants Response: The proposed street width matches the existing width of Roxbury Drive at the connection point.

9. Alignment. All streets other than local streets or cul-de-sacs shall be in alignment with existing streets by continuations of the centerlines thereof. The staggering of street alignments resulting in "T" intersections shall leave a minimum distance of 200 feet between the centerlines of streets having approximately the same direction and otherwise shall not be less than 100 feet. Exceptions to these requirements shall only be approved if the applicant demonstrates that compliance is not practical through a discretionary review.

Applicants Response: The proposed street alignment matches the existing alignment of Roxbury Drive at the connection point.

10. Future extension of streets. The street system of a proposed development shall be designed to connect to existing, proposed, and planned streets adjacent to the development. Wherever a proposed development abuts unplatted land or a future development phase of an existing development, street stubs shall be provided to allow access to future abutting subdivisions and to logically extend the street system into the surrounding area. Where the stubbed street is over 100 feet long, street ends shall contain temporary turnarounds built to Oregon Fire Code standards and shall be designed to facilitate future extension in terms of grading, width, and temporary barricades.

Applicants Response: The proposed Roxbury Drive extension ends at the west property line of the subdivision and provide a connection point for development to the west.

11. Intersection angles.

a. Except as specified in subsection (A)(11)(c) of this section, street intersections shall be located and designed as follows:

- 1) Streets shall be located and designed to intersect at, or close to, right angles (i.e., 90 degrees or within three degrees of 90 degrees).
- 2) All legs of an intersection shall meet the above standard for at least 100 feet back from the point of intersection.

Applicants Response: There is a proposed intersection on the western property line with right of way being dedicated for that future street extension. The proposed intersecting streets are at right angles.

b. Curb radii.

- 3) Other street intersections shall have curb radii of not less than 25 feet.
- 4) All radii shall maintain a uniform width between the roadway and the right-of-way lines.

Applicants Response: The proposed curb radius is 25 feet. The radius maintains a uniform width between the roadway and the right-of-way lines.

15. Grades and curves. Grades and horizontal/vertical curves shall meet the West Linn Public Works Design Standards.

Applicants Response: Grades and horizontal/vertical curves will meet the West Linn Public Works Design Standards.

18. Sidewalks. Sidewalks shall be installed per CDC 92.010(H), Sidewalks. The residential sidewalk width is six feet plus planter strip as specified below. Sidewalks in commercial zones shall be constructed per subsection (A)(6) of this section. See also subsection C of this section. If part of a discretionary review, sidewalk width may be reduced with City Engineer approval to the minimum amount (e.g., four feet wide) necessary to respond to site constraints such as grades, mature trees, rock outcroppings, etc., or to match existing sidewalks or right-of-way limitations.

Applicants Response: Sidewalks are proposed on both sides of the Roxbury Drive extension.

19. Planter strip. The planter strip is between the curb and sidewalk providing space for a grassed or landscaped area and street trees. The planter strip shall be at least six feet wide to accommodate a fully matured tree without the boughs interfering with pedestrians on the sidewalk or vehicles along the curbline. If part of a discretionary review, planter strip width may be reduced or eliminated, with City Engineer approval, when it cannot be corrected by site plan, to the minimum amount necessary to respond to site constraints such as grades, mature trees, rock outcroppings, etc., or in response to right-of-way limitations.

Applicants Response: Planter Strips are proposed on both sides of the Roxbury Drive extension.

20. Streets and roads shall be dedicated without any reservations or restrictions.

Applicants Response: The Roxbury Drive extension be dedicated without any reservations or restrictions.

21. All lots in a subdivision shall have access to a public street. Lots created by partition may have access to a public street via an access easement pursuant to the standards and limitations set forth for such accessways in Chapter 48 CDC.

Applicants Response: All lot will take access off of Roxbury Drive, a public street.

B. Blocks and lots.

3. Lot size and shape. Lot or parcel sizes and dimensions shall conform to the minimum standards of the CDC, unless as allowed by planned unit development (PUD). No lot or parcel shall be dimensioned to contain part of an existing or proposed street. All lots or parcels shall be buildable. "Buildable" describes lots that are free of constraints such as wetlands, drainageways, etc., that would make home construction impossible.

Applicants Response: Proposed lot sizes conform to the minimum standards of the CDC, as outlined in previous portion of this code response.

4. Access. Access to subdivisions, partitions, and lots shall conform to the provisions of Chapter 48 CDC, Access, Egress and Circulation.

Applicants Response: Access conforms to the provisions of Chapter 48 CDC, Access, Egress and Circulation.

6. Lot and parcel side lines. The side lot lines of lots and parcels shall run at right angles to the street upon which they face, except that on curved streets they shall be radial to the curve.

Applicants Response: The side lot lines of the proposed lots run at right angles to Roxbury Drive.

E. Grading. Grading of building sites shall conform to the following standards unless physical conditions demonstrate the propriety of other standards:

1. All cuts and fills shall comply with the excavation and grading provisions of the Building Code and the following:

a. Cut slopes shall not exceed one and one-half feet horizontally to one foot vertically (i.e., 67 percent grade).

b. Fill slopes shall not exceed two feet horizontally to one foot vertically (i.e., 50 percent grade). Please see the following illustration.

3. The proposed grading shall be the minimum grading necessary to meet roadway standards, pursuant to the West Linn Public Works Design Standards, and to create buildable sites, considering maximum allowed driveway grades.

4. Type I lands shall require a geologic report submitted by a certified engineering geologist, and Type I and Type II lands shall require a geologic hazard report stamped by a certified geotechnical professional engineer, consistent with the submittal requirements in CDC 85.170(C)(3).

5. The review authority may impose conditions, including limits on type or intensity of land use, necessary to mitigate known risks of landslides or property damage, based on the conclusions and recommendations of the geologic report.

6. On land with slopes in excess of 12 percent, cuts and fills shall be regulated as follows:

- a. Toes of cuts and fills shall be set back from the boundaries of separate private ownerships at least three feet, plus one-fifth of the vertical height of the cut or fill. Where an exception is required from that requirement, slope easements shall be provided.
- b. Cuts shall not remove the toe of any slope where a severe landslide or erosion hazard exists.
- c. Any structural fill shall be designed by a registered engineer in a manner consistent with the intent of this code and standard engineering practices, and certified by that engineer that the fill was constructed as designed.
- d. Retaining walls shall be constructed pursuant to Section 2308(b) of the Oregon State Structural Specialty Code.

Applicants Response: At building the permit stage, lot grading will conform with the above requirements.

F. Water.

1. A plan for domestic water supply lines or related water service facilities shall be prepared consistent with the adopted Comprehensive Water System Master Plan, updated in 2008, and subsequent superseding revisions or updates. The plan shall include:
 - a. Location and sizing of the water lines consistent with the Water System Master Plan and West Linn Public Works Design Standards.
 - b. For all non-single-family developments, there shall be a demonstration of adequate fire flow to serve the site, as demonstrated by consistency with West Linn Public Works Design Standards.
 - c. A written statement, signed by the City Engineer, that water service can be made available to the site by the construction of on-site and off-site improvements and that such water service has sufficient volume and pressure to serve the proposed development's domestic, commercial, industrial, and fire flows.

Applicants Response: The proposed 8" water line is shown on the utility plan that is included in Exhibit C showing the proposed public water main extension in Roxbury Drive. The main will be extended in the future with adjoining development and will provide looping at that time.

G. Sewer.

1. A plan prepared by a licensed engineer shall show how the proposal is consistent with the current Sanitary Sewer Master Plan and subsequent updates and amendments applicable at the time the proposal is submitted. Agreement with that plan must demonstrate how the sanitary sewer proposal will be accomplished and how it is gravity-efficient. The sewer system must be in the correct basin and allow for full gravity service.
2. Sanitary sewer information will include plan view of the sanitary sewer lines, including manhole locations and depth or invert elevations.
3. Sanitary sewer lines shall be located in the public right-of-way, particularly the street, unless the applicant can demonstrate as part of a discretionary review why the alternative location is necessary and meets accepted engineering standards.
4. Sanitary sewer line shall be at a depth that can facilitate connection with down-system properties in an efficient manner.
5. For non-residential development, the sanitary sewer line should be designed to minimize the amount of lineal feet in the system.
6. The sanitary sewer line shall avoid disturbance of wetland and drainageways. In those cases where that is unavoidable, disturbance shall be mitigated pursuant to Chapter 32 CDC, Water Resource Area Protection, all

trees replaced, and proper permits obtained. Dual sewer lines may be required so the drainageway is not disturbed.

7. Sanitary sewer shall be extended or stubbed out to adjacent undeveloped land or a point in the street that allows for connection with adjacent or nearby properties.

8. The sanitary sewer system shall be built pursuant to DEQ, City, and Tri-City Service District sewer standards. The design of the sewer system shall be prepared by a licensed engineer, and the applicant must be able to demonstrate the ability to satisfy these submittal requirements or standards at the pre-construction phase.

9. A written statement, signed by the City Engineer, that sanitary sewers with sufficient capacity to serve the proposed development and that adequate sewage treatment plant capacity is available to the City to serve the proposed development.

Applicants Response: The proposed 8" sewer main is shown on the utility plan that is included in Exhibit C showing the proposed public sewer main extension in Roxbury Drive.

H. Storm detention and treatment. All proposed storm detention and treatment facilities comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards, as demonstrated by stormwater plan and report stamped by a professional engineer.

Applicants Response: Stormwater laterals will be provided for each proposed lot and conveyed to a storm main extension in Roxbury Drive. That piping discharges to the existing detention and treatment facility that was constructed with the Knoll Crest Subdivision to the east. A stormwater report is included in Exhibit E that analyzes that facility. That facility has additional capacity available and can be utilized with minimal modifications .

I. Utility easements. Subdivisions and partitions shall establish utility easements to accommodate the required service providers as specified in the West Linn Public Works Design Standards.

Applicants Response: An 8' PUE is proposed along the frontage of all streets. No other utility easements are necessary.

J. Supplemental provisions.

3. Street trees. Street trees are required as identified in Section 8.720 of the municipal code and Chapter 54 CDC.

Applicants Response: Proposed street trees are shown on sheet X included in the preliminary plan set in Exhibit C.

4. Lighting. All subdivision street or alley lights shall meet West Linn Public Works Design Standards.

Applicants Response: One street light is proposed on Roxbury Drive. Refer to sheet C5 included in the preliminary plan set in Exhibit C.

6. Underground utilities. All utilities, such as electrical, telephone, and television cable, that may at times be above ground or overhead shall be buried underground in the case of new development. Exceptions shall be permitted in those cases where adjacent properties have above-ground utilities and where the development site's frontage is under 200 feet and the site is less than one acre. High voltage transmission lines, as classified by Portland General Electric or electric service provider, are also exempted. Where adjacent future development is planned or proposed, conduits may be required at the direction of the City Engineer. All services shall be underground with the exception of standard above-grade equipment such as some meters, etc.

Applicants Response: There are no existing overhead lines that would require undergrounding.

7. Density requirement. Density shall occur at 70 percent or more of the maximum density allowed by the underlying zoning. These provisions do not apply when density is transferred from Type I and II lands as

defined in CDC 02.030. Development of Type I or II lands are exempt from these provisions. Land divisions of three lots or less are also exempt.

Applicants Response: The density calculation is as follows:

Gross Site area = 55,934 sf

Right of way Dedication = 12,283 sf

Net Site Area = 43,651 sf

Maximum Density = $43,651 \text{ sf} / 7,000 \text{ sf} = 6.24 = 6 \text{ units}$

Minimum Density = $6 \text{ units} \times 0.7 = 4.2 = 4 \text{ units}$

There are 6 units proposed. This requirement is met.

9. Heritage trees/significant tree and tree cluster protection. All heritage trees, as defined in Section 8.710 of the municipal code, shall be protected. If requested by the applicant, diseased heritage trees, as determined by the City Arborist, may be removed. Significant trees and significant tree clusters, as defined in CDC 2.030, shall be protected pursuant to CDC 55.100(B)(2) or 55.105(B)(2), as applicable. (Ord. 1377, 1995; Ord. 1382, 1995; Ord. 1401, 1997; Ord. 1403, 1997; Ord. 1408, 1998; Ord. 1425, 1998; Ord. 1442, 1999; Ord. 1463, 2000; Ord. 1526, 2005; Ord. 1544, 2007; Ord. 1584, 2008; Ord. 1590 § 1, 2009; Ord. 1604 § 64, 2011; Ord. 1613 § 20, 2013; amended during July 2014 supplement; Ord. 1635 § 34, 2014; Ord. 1636 § 56, 2014; Ord. 1647 § 8, 2016; Ord. 1650 § 1 (Exh. A), 2016; Ord. 1662 § 16, 2017; Ord. 1675 § 53, 2018; Ord. 1695 § 4, 2019; Ord. 1713 § 1, 2020; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: A tree inventory is provided in Exhibit I. A tree removal plan is included in Exhibit C depicting trees that will be removed in order to construct required streets and sewers. Other trees that may be required to be removed will be addressed during the building permit stage.

85.220 EXPEDITED LAND DIVISIONS

An expedited land division, as defined by ORS 197.360, is an alternative process for the review of preliminary partition or subdivision plats. An expedited land division compresses review timelines, provides for different noticing requirements, and mandates a specific appeal process.

A. Submittal requirements.

1. Written responses to ORS 197.360(1) describing how the proposal qualifies for an expedited land division.

ORS 197.360

(1) As used in this section:

(a) "Expedited land division" means a division of land under ORS 92.010 to 92.192, 92.205 to 92.245 or 92.830 to 92.845 by a local government that:

(A) Includes only land that is zoned for residential uses and is within an urban growth boundary.

Applicants Response: The land is zoned for residential uses and is within an urban growth boundary.

(B) Is solely for the purposes of residential use, including recreational or open space uses accessory to residential use.

Applicants Response: The land is being subdivided solely for the purposes of residential use, including recreational or open space uses accessory to residential use.

(C) Does not provide for dwellings or accessory buildings to be located on land that is specifically mapped and designated in the comprehensive plan and land use regulations for full or partial protection of natural features under the statewide planning goals that protect:

(i) Open spaces, scenic and historic areas and natural resources;

(ii) The Willamette River Greenway;

(iii) Estuarine resources;

(iv) Coastal shorelands; and

(v) Beaches and dunes.

Applicants Response: The land being subdivided does not provide for dwellings or accessory buildings to be located on any of land types described above.

(D) Satisfies minimum street or other right-of-way connectivity standards established by acknowledged land use regulations or, if such standards are not contained in the applicable regulations, as required by statewide planning goals or rules.

Applicants Response: The land being subdivided satisfies minimum street or other right-of-way connectivity standards established by acknowledged land use regulations

(E) Will result in development that either:

(i) Creates enough lots or parcels to allow building residential units at 80 percent or more of the maximum net density permitted by the zoning designation of the site; or

(ii) Will be sold or rented to households with incomes below 120 percent of the median family income for the county in which the project is built.

Applicants Response: The land being subdivided creates enough lots or parcels to allow building residential units at 80 percent or more of the maximum net density permitted by the zoning designation of the site.

Maximum Density = 43,651 sf / 7,000 sf = 6.24 = 6 units

There are 6 units proposed. This requirement is met.

2. Confirmation of participation in a pre-application conference per CDC 85.140.

Applicants Response: A pre-application was held on May 1, 2025. Preapplication city notes are included in Exhibit D.

3. Required neighborhood meeting materials per CDC 99.038 for subdivision proposals.

Applicants Response: Required neighborhood meeting materials are provided in Exhibit G.

4. Materials identified in CDC 85.150 through 85.190.

Applicants Response: Required neighborhood meeting materials are provided in Exhibit G.

REQUIRED IMPROVEMENTS

92.010 PUBLIC IMPROVEMENTS FOR LAND DIVISIONS

The following improvements shall be installed at the expense of the developer and meet all City codes and standards:

A. Streets within subdivisions.

1. All streets within a subdivision, including alleys, shall be graded for the full right-of-way width and improved in accordance with the West Linn Public Works Design Standards and with the street cross sections in Exhibits 6 through 9 of the Transportation System Plan, unless the applicant requests an exception as part of a discretionary review and the decision-making authority makes the following findings:

Applicants Response: Roxbury Drive will be graded for the full right-of-way width and improved in accordance with the West Linn Public Works Design Standards and with the street cross sections in Exhibits 6 through 9 of the Transportation System Plan.

Construction staging area shall be established and approved by the City Engineer. Clearing, grubbing, and grading for a development shall be confined to areas that have been granted approval in the land use approval process only. Clearing, grubbing, and grading outside of land use approved areas can only be approved through a land use approval modification and/or an approved Building Department grading permit for survey purposes. Catch basins shall be installed and connected to pipe lines leading to storm sewers or drainageways.

Applicants Response: The proposed staging area is shown on the grading plan that is included in Exhibit C.

C. Streets within the rights-of-way abutting a subdivision shall:

1. Be graded for the full right-of-way width and approved in accordance with the West Linn Public Works Design Standards;

Applicants Response: The Roxbury Drive extension will be graded for the full right-of-way width and approved in accordance with the West Linn Public Works Design Standards.

2. Install pedestrian and bicycle infrastructure and two full travel lanes adjacent to the subdivision in accordance with CDC 85.200(A)(3);

Applicants Response: A 5' concrete sidewalk is proposed along each side of the proposed extension of Roxbury Drive.

3. Install required stormwater and utility facilities adjacent to the subdivision in accordance with the West Linn Public Works Design Standards; and

Applicants Response: The project will utilize the existing Knoll Crest stormwater facility which has adequate capacity to treat and detain the proposed stormwater runoff from the project. A stormwater analysis is provide in stormwater report included in Exhibit E.

4. Comply with adopted West Linn Public Works Design Standards.

Applicants Response: The proposed street extension will comply with adopted West Linn Public Works Design Standards.

D. Monuments. Upon completion of the first pavement lift of all street improvements, monuments shall be installed and/or reestablished at every street intersection and all points of curvature and points of tangency of street centerlines with an iron survey control rod. Elevation benchmarks shall be established at each street intersection monument with a cap (in a monument box) with elevations to a U.S. Geological Survey datum that exceeds a distance of 800 feet from an existing benchmark.

Applicants Response: A monument will be set at intersection of Roxbury Drive and the proposed street stub to north.

E. Storm detention and treatment. For Type I, II and III lands (refer to definitions in Chapter 02 CDC), a registered civil engineer must prepare a storm detention and treatment plan, at a scale sufficient to evaluate all aspects of the proposal, and a statement that demonstrates:

1. The location and extent to which grading will take place indicating general contour lines, slope ratios, slope stabilization proposals, and location and height of retaining walls, if proposed.
2. All proposed storm detention and treatment facilities comply with the standards for the improvement of public and private drainage systems located in the West Linn Public Works Design Standards.
3. There will be no adverse off-site impacts, including impacts from increased intensity of runoff downstream or constrictions causing ponding upstream.
4. There is sufficient factual data to support the conclusions of the plan.
5. Per CDC 99.035, the Planning Director may require the information in subsections (E)(1), (2), (3) and (4) of this section for Type IV lands if the information is needed to properly evaluate the proposed site plan.

Applicants Response: Stormwater laterals will be provided for each proposed lot and conveyed to a storm main extension in Roxbury Drive. That piping discharges to the existing detention and treatment facility that was constructed with the Knoll Crest Subdivision to the east. A stormwater report is included in Exhibit E that analyzes that facility. That facility has additional capacity available and can be utilized with minimal modifications.

F. Sanitary sewers. Sanitary sewers shall be installed in accordance with the West Linn Public Works Design Standards to serve the subdivision and to connect the subdivision to existing mains.

Applicants Response: A proposed 8" sewer main is shown on the utility plan that is included in Exhibit C showing the proposed public sewer main extension in Roxbury Drive.

G. Water system. Water lines with valves and fire hydrants providing service to each building site in the subdivision and connecting the subdivision to City mains shall be installed. Prior to starting building construction, the design shall take into account provisions for extension beyond the subdivision and to adequately grid the City system. Hydrant spacing is to be based on accessible area served according to City standards. If required water mains will directly serve property outside the subdivision, the City may reimburse the developer an amount estimated to be the proportionate share of the cost for each connection made to the water mains by property owners outside the subdivision for a period of 10 years from the time of installation of the mains. If oversizing of water mains is required to areas outside the subdivision as a general improvement, but to which no new connections can be identified, the City may reimburse the developer that proportionate share of the cost for oversizing. The actual amount and reimbursement method shall be as determined by the City Administrator considering current or actual construction costs.

Applicants Response: Water lines with valves and fire hydrants providing service to each building site in the subdivision and connecting the subdivision to City mains will be installed.

H. Sidewalks.

1. Sidewalks shall be installed on both sides of a public street and in any special pedestrian way within the subdivision, except that in the case of primary or secondary arterials, or special type industrial districts, or special site conditions, the Planning Commission may approve a subdivision without sidewalks if requested by the applicant as part of a discretionary review, and only if alternate pedestrian routes are available.

Applicants Response: Sidewalks will be installed on both sides of the Roxbury Drive extension. Refer to preliminary plan set in Exhibit C.

2. At the applicant's option, on local streets serving only single-family dwellings, sidewalks may be constructed during home construction, but a letter of credit shall be required from the developer to ensure construction of all missing sidewalk segments within four years of final plat approval pursuant to CDC 91.010(A)(2).

Applicants Response: Sidewalks will be constructed during home construction, with a letter of credit provided by the developer to ensure construction of all missing sidewalk segments within four years of final plat approval pursuant to CDC 91.010(A)(2).

3. The sidewalks shall be located and designed consistent with the street cross sections in s 6 through 9 of the Transportation System Plan. If requested by the applicant through a discretionary review, reductions in sidewalk widths to preserve trees or other topographic features, inadequate right-of-way, or constraints may be permitted if approved by the City Engineer in consultation with the Planning Director.

Applicants Response: The sidewalks will be located and designed consistent with the street cross sections in Exhibits 6 through 9 of the Transportation System Plan.

I. Bicycle routes. As part of a discretionary review, and if appropriate to the extension of a system of bicycle routes, existing or planned, the Planning Commission may require the installation of separate bicycle lanes within streets and separate bicycle paths.

Applicants Response: The applicant acknowledge this code section.

J. Street name signs. All street name signs and traffic control devices for the initial signing of the new development shall be installed by the City with sign and installation costs paid by the developer.

Applicants Response: A street name sign will be installed at the proposed half street intersection located at the westerly terminus of the Roxbury Drive Extension.

K. Dead-end street signs. Signs indicating "future roadway" shall be installed at the end of all discontinued streets. Signs shall be installed by the City per City standards, with sign and installation costs paid by the developer.

Applicants Response: A sign indicating "future roadway" will be installed at the end of all Roxbury Drive.

M. Street lights. Street lights shall be installed and shall be served from an underground source of supply. The street lighting shall meet IES lighting standards. The street lights shall be the shoe-box style light (flat lens) with a 30-foot bronze pole in residential (non-intersection) areas. The street light shall be the cobra head style (drop lens) with an approximate 50-foot (sized for intersection width) bronze pole. The developer shall submit to the City Engineer for approval of any alternate residential, commercial, and industrial lighting, and alternate lighting fixture design. The developer and/or homeowners association is required to pay for all expenses related to street light energy and maintenance costs until annexed into the City.

Applicants Response: One street light is proposed on Roxbury Drive. Refer to sheet C5 included in the preliminary plan set in Exhibit C.

N. Utilities. The developer shall make necessary arrangements with utility companies or other persons or corporations affected for the installation of underground lines and facilities. Electrical lines and other wires, including but not limited to communication, street lighting, and cable television, shall be placed underground. Exceptions shall be permitted in those cases where adjacent properties have above-ground utilities and where the development site's frontage is under 200 feet and the site is less than one acre. High voltage transmission lines, as classified by Portland General Electric or electric service provider, are also exempted. For non-residential development where adjacent future development is planned or proposed, conduits may be required at the direction of the City Engineer.

Applicants Response: The applicant will coordinate with franchise utility providers that serve the project area.

O. Curb cuts and driveways. Curb cuts and driveway installations are not required of the subdivider at the time of street construction, but, if installed, shall be according to City standards. Proper curb cuts and hard-surfaced driveways shall be required at the time buildings are constructed.

Applicants Response: Proper curb cuts and hard-surfaced driveways will be constructed at the time buildings are constructed.

P. Street trees. Street trees shall be provided by the City Parks and Recreation Department in accordance with standards as adopted by the City in the Municipal Code. The fee charged the subdivider for providing and maintaining these trees shall be set by resolution of the City Council.

Applicants Response: Street trees will be planted by the applicant.

Q. Joint mailbox facilities shall be provided in all residential subdivisions, with each joint mailbox serving at least two, but no more than eight, dwelling units. Joint mailbox structures shall be placed in the street right-of-way adjacent to roadway curbs. Proposed locations of joint mailboxes shall be designated on a copy of the tentative plan of the subdivision, and shall be approved as part of the tentative plan approval. In addition, sketch plans for the joint mailbox structures to be used shall be submitted and approved by the City Engineer prior to final plat approval, to ensure they do not conflict with any other City standards. (Ord. 1180, 1986; Ord. 1192, 1987; Ord. 1287, 1990; Ord. 1321, 1992; Ord. 1339, 1993; Ord. 1401, 1997; Ord. 1408, 1998; Ord. 1442, 1999; Ord. 1650 § 1 (Exh. A), 2016; Ord. 1662 § 17, 2017; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The applicant will coordinate a mailbox location with the postmaster.

92.030 IMPROVEMENT PROCEDURES

In addition to other requirements, public improvements installed by the developer, either as a requirement of these regulations or at the developer's own option, shall conform to the requirements of this title and permanent improvement standards and specifications adopted by the City and shall be installed in accordance with the following procedure:

A. Improvement work shall not be commenced until plans have been checked for adequacy and approved by the City. To the extent necessary for evaluation of the proposal, the improvement plans may be required before approval of the tentative plan of a subdivision or partition. Plans shall be prepared in accordance with the requirements of the City.

B. Improvement work shall not be commenced until a preconstruction meeting has been held.

C. Improvements shall be constructed under the City Engineer's supervision and authorization. The City may require changes in typical sections and details in the public interest if unusual conditions arise during construction to warrant the change.

D. All underground utilities, sanitary sewers, and storm drains installed in streets by the subdivider or by any utility company shall be constructed prior to the surfacing of the streets. Stubs for service connections for underground utilities and sanitary sewers shall be placed to a length obviating the necessity for disturbing the street improvements when service connections are made.

E. A digital map showing all public improvements as built shall be filed with the City Engineer upon completion of the improvements. (Ord. 1408, 1998; Ord. 1745 § 1 (Exh. A), 2023)

Applicants Response: The applicant acknowledges all portions of this section.

Chapter 99
PROCEDURES FOR DECISION MAKING: QUASI-JUDICIAL

Applicants Response: The applicant acknowledges all portions of this chapter.

SUMMARY OF PROPOSAL

The applicant has provided justification in the form of this narrative, supporting documents and detailed findings in support of the proposed subdivision. As addressed in this narrative and the supporting plans, this proposal does meet all applicable code provisions. As such, the applicant respectfully requests that the Expedited Land Division application be approved as submitted.

Schroder, Lynn

From: Jeff Vanderdasson <vandodevelopment@gmail.com>
Sent: Friday, February 27, 2026 3:50 PM
To: Wyss, Darren; 'Rob Matthews'
Cc: Schroder, Lynn; Tracy Peterson
Subject: Re: Parker Road Subdivision ELD - Incomplete Letter
Attachments: RE: Discuss Parker Stormwater Report; 25076PLA1-ParkerRd - FINAL DRAFT.pdf; Bargain and Sale Deed.pdf; Parker Road - C4 Preliminary Plat.pdf; Parker Road - C7 Roxbury Dr Plan & Profile-C7_Roxbury Drive Plan & Profile.pdf; Roxbury Drive Typical Street Section.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

CAUTION: External Email – Confirm legitimacy before clicking, opening attachments, or following instructions.

Good afternoon Darren,

Attached please find documents along with responses below that address your completeness review:

- Please submit the audio recording of the neighborhood meeting.

Response: Tracy sent a link to large file. Please confirm receipt.

- Please submit a stamped and signed tentative subdivision plan. -

Response: Attached

- Please provide a legal description and map of the property. Also, please provide documentation that the recent annexation (ANX-25-01) has been processed/recorded by Metro, Clackamas County, and the Secretary of State. -

Response: Legal description (Bargain and Sale Deed.pdf) and map (25076PLA1-ParkerRd - FINAL DRAFT.pdf) are attached. Based on our conversation about the annexation process this is no longer a completeness item.

- Please provide a centerline profile for Roxbury Street, including compliance with the 28-foot paved width requirement of CDC 85.200.A.6 (Table 85.1). Please provide a street cross-section showing the widths of sidewalk, planter strip, and travel lanes.

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Schroder, Lynn

From: Lumpkin, Jameson <JLumpkin@westlinnoregon.gov>
Sent: Tuesday, February 24, 2026 4:14 PM
To: Jeff Vanderdasson
Cc: Rob Matthews; Ide, Clark
Subject: RE: Discuss Parker Stormwater Report

Good afternoon Jeff,

From a land use application standpoint, I think you have provided enough to satisfy Engineering that the existing stormwater facility can be utilized for this development.

I do have some comments for you to consider when you supply actual construction drawings for the improvements (after land use is approved):

- You cannot use old standard detail drawings that are no longer being used/approved by West Linn.
 - Do not use the 2010 West Linn drawings for the stormwater facility. Supply new standard details (or ones currently in use at other local jurisdictions that you want to proposed for this)
- Your 100-year spillway must be at least 1' below the top of the berm
 - Currently you are not meeting this standard in the design
- You can not supply sheets for construction with previous information crossed out. Clean sheets with consistent information must be supplied for Engineering's review.
 - This also goes for cross sections.

Just to note, my review was to ensure the flow control standard are meet and ensure that it was feasible to utilize this pond for this proposed development. This does not exclude the Engineering department from make further corrections during the public improvement review. Design Engineer and Developer are still fully responsible to ensure all current public works design standards will be met.

Let me know if you have any other questions on this.

Best,
Jameson

From: Jeff Vanderdasson <vandodevelopment@gmail.com>
Sent: Saturday, February 14, 2026 2:28 PM
To: Lumpkin, Jameson <JLumpkin@westlinnoregon.gov>
Cc: Rob Matthews <robm@bluepalouse.com>
Subject: Re: Discuss Parker Stormwater Report

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Good afternoon Jameson,
Attached please find revised report that addresses your comments.

Please call me to discuss if necessary.

Thank you,



Jeff Vanderdasson, PE
Vando Development LLC
915 SW Rimrock Way, Ste 201-230
Redmond, OR 97756
(C) 503-407-2228

From: Lumpkin, Jameson <JLumpkin@westlinnoregon.gov>
Sent: Tuesday, February 10, 2026 11:55 AM
To: Jeff Vanderdasson <vandodevelopment@gmail.com>
Cc: Ide, Clark <CIde@westlinnoregon.gov>
Subject: RE: Discuss Parker Stormwater Report

Jeff,

To follow up on our meeting today, attached is a document with some further comments.

Below are also some notes on what we discussed today.

Reported Peak Discharge Flow Rate:

- The peak discharge values from the AKS report, and table, come from their reported “POST-DEVELOPED RELEASE RATE”. Your report must use the same “POST-DEVELOPED RELEASE RATE” value. (ex. your report states the “POST-DEVELOPED RELEASE RATE” for the 2-year, 24-hour Storm Event is .44 CFS)
- If you are going to try and justify that the “Primary OutFlow” value should be used instead of the “POST-DEVELOPED RELEASE RATE”, the city will accept this, but you will need to match the same “Primary OutFlow” values that are in AKS’s report. (ex. AKS states the “Primary OutFlow” value for the 2-year, 24-hour Storm Event is .33 CFS)

Storm Period Analysis:

- Every storm analysis shall have a Time Span value of 24 hours (0.00-24.00 hrs).

Grading, Planting, and other Construction Notes:

- During construction, all aspects of the facility shall be verified prior to any construction. Elevations from original plan set may not match what is in the field which may require further design modifications.
- During construction, a grading plan will verify the limit of plants. All designated wet zones shall be planting according to the West Linn Stormwater Management Manual.
 - Based on the proposed design, if anything it looks like you may need to plant some vegetation along the lower end of the grading limits as the new design is raising the water elevation.

- During construction (not discussed in our meeting), keep in mind this facility still needs to function as it does now. If construction activity is happening and a rain event occurs, release rates must remain the same as now.
 - Just wanted to mention this, if work on the new outfall structures are completed on dry days this shouldn't be an issue.

Please let me know if you have any questions about any other this.

Best,
Jameson

From: Jeff Vanderdasson <vandodevelopment@gmail.com>
Sent: Monday, February 9, 2026 12:12 PM
To: Lumpkin, Jameson <JLumpkin@westlinnoregon.gov>
Subject: Discuss Parker Stormwater Report

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Jeff Vanderdasson invited you to a Microsoft Teams Meeting:

Discuss Parker Stormwater Report

Tuesday, February 10, 2026

10:30 AM - 11:00 AM (PST)

Meeting link: [Discuss Parker Stormwater Report | Microsoft Teams | Meetup-Join](#)

Please call me to discuss if necessary.

Thank you,



Jeff Vanderdasson, PE
Vando Development LLC
915 SW Rimrock Way, Ste 201-230
Redmond, OR 97756
(C) 503-407-2228

Jameson Lumpkin
Project Engineer
Public Works

22500 Salamo Rd.
West Linn, OR 97068
JLumpkin@westlinnoregon.gov
westlinnoregon.gov

503-722-4739



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Jameson Lumpkin
Project Engineer
Public Works

22500 Salamo Rd.
West Linn, OR 97068
JLumpkin@westlinnoregon.gov
westlinnoregon.gov
503-722-4739



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Clackamas County Official Records
Catherine McMullen, County Clerk

2025-032739

08/22/2025 03:11:04 PM

D-D Cnt=1 Stn=76 ALICIA
\$30.00 \$16.00 \$10.00 \$62.00

\$118.00

AFTER RECORDING RETURN TO:

Raymond Richard Hill
3945 S Parker Rd
West Linn, OR 97068

TAX STATEMENTS TO:

Same as above

Bargain and Sale DEED for PROPERTY LINE ADJUSTMENT

Raymond Richard Hill, Grantor, conveys to, Gary T. Randall, Grantee, the following described real property shown as Exhibit "B" in the County of Clackamas and State of Oregon:

See Exhibit "A" Conveyance to Tract 2
See Exhibit "B" Conveyance to Tract 1
See Exhibit "C" Legal Description Tract 1
See Exhibit "D" Legal Description Tract 2

THIS DEED IS BEING RECORDED TO COMPLETE A PROPERTY LINE ADJUSTMENT IN
Clackamas County CASEFILE NUMBER: Z0153-25.

Subject to all encumbrances of record.

The true consideration for this conveyance is \$ 0. However the actual consideration consists of other value or property give which is the whole consideration.

The information required by ORS 92.190(4) is as follows:

1. The names of the parties to this deed are as set forth above.
2. The description of the adjusted parcels is as follows: see exhibit A.
3. The deed where Grantor acquired title to the transferred property was recorded as 2023-006464 on February 28th, 2023 of Clackamas County Deed records.
4. The deed where Grantee acquired title to the transferred property was recorded as 2019-072494 on November 15th, 2019 of Clackamas County Deed records.

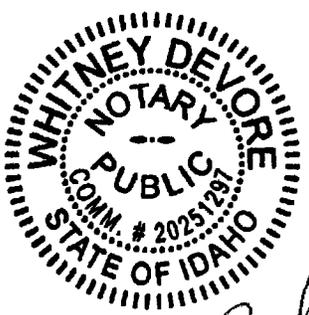
BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009, AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 2010. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007, SECTIONS 2 TO 9 AND 17, CHAPTER 855, OREGON LAWS 2009 AND SECTIONS 2 TO 7, CHAPTER 8, OREGON LAWS 20

G. T. Randall
By: Gary T. Randall

Idaho Ada
STATE OF OREGON, County of Clackamas) ss.
WD WD

This instrument was acknowledged before me on ~~July~~ ^{August} 20, 2025 by Gary T. Randall.

Whitney DeVore
Notary Public for Oregon ~~WD~~ ^{Idaho}
My Commission Expires: 4/4/2031



Raymond Richard Hill
By: Raymond Richard Hill

STATE OF OREGON, County of Clackamas) ss.

This instrument was acknowledged before me on ~~July~~ ^{August} 18, 2025 by Raymond Richard Hill.

Julie Rau
Notary Public for Oregon
My Commission Expires: 10-27-28



June 8, 2025
Project No. 25076

Page 1 of 1

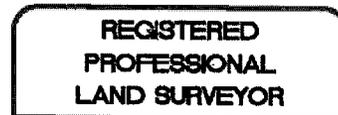
EXHIBIT 'A'
LEGAL DESCRIPTION: CONVEYANCE TO TRACT 2

Being a portion of that tract of land as described in Fee No. 2019-072494, Clackamas County deed records, situated in the Julia Ann Lewis Donation Land Claim No. 54, in the Southwest One-Quarter of Section 25, Township 2 South, Range 1 East, of the Willamette Meridian, Clackamas County, Oregon, being more particularly described as follows:

BEGINNING AT a point of intersection of the easterly line of said Fee No. 2019-072494, with the northeasterly line of Parker Road (CR 375, 60' wide) being at southwesterly corner of "KNOLLCREST" (Plat No. 4627), Clackamas County plat records, which point bears S23°39'45"W, 0.13' feet from the 5/8-inch iron rod set for said southwesterly corner of "KNOLLCREST"; thence along said easterly line, S23°39'45"W a distance of 30.12 feet to the southeast corner of said Fee No. 2019-072494, being a point on the centerline of said Parker Road; thence along the southerly line of said Fee No. 2019-072494, being coincident with said centerline, N61°16'54"W a distance of 94.73 feet to the southwest corner thereof; thence leaving said centerline and running along the westerly line of said Fee No. 2019-072494, N23°42'49"E a distance of 123.21 feet; thence leaving said westerly line, S61°16'29"E a distance of 94.62 feet to said easterly line of said Fee No. 2019-072494 being common with the westerly line of said "KNOLLCREST"; thence along said westerly line, S23°39'45"W a distance of 93.09 feet to the **POINT OF BEGINNING**.

EXCEPT that portion lying within the right of way of Parker Road, County Road No. 375.

Containing 8,778 square feet.



A handwritten signature in black ink, appearing to read "Brian Leggs".



RENEWS 12/31/2026

June 8, 2025
Project No. 25076

Page 1 of 1

EXHIBIT ' B '
LEGAL DESCRIPTION: CONVEYANCE TO TRACT 1

Being a portion of that tract of land as described in Fee No. 2023-006464, Clackamas County deed records, situated in the Julia Ann Lewis Donation Land Claim No. 54, in the Southwest One-Quarter of Section 25, Township 2 South, Range 1 East, of the Willamette Meridian, Clackamas County, Oregon, being more particularly described as follows:

BEGINNING AT a point on the northwesterly line of said Fee No. 2023-006464, being also common with Fee No. 2023-006357, which point also bears S61°15'53"E 3017.73 feet (S63°E 3019.25 feet, deed), and S23°42'49"W 256.67 feet from the northerly corner of said Julia Ann Lewis Donation Land Claim No. 54; thence along said westerly line of said Fee No. 2023-006464, N23°42'49"E a distance of 32.67 feet to the northwest corner thereof; thence along the northerly line thereof, S61°26'19"E a distance of 94.40 feet to northeasterly corner thereof; thence along the southeasterly line thereof, S23°42'49"W a distance of 29.40 feet; thence leaving said southeasterly line, N61°16'29"W a distance of 25.03 feet; thence S23°42'39"W a distance of 3.26 feet; thence N61°16'29"W a distance of 69.37 feet to the **POINT OF BEGINNING.**

Containing 2,990 square feet.



June 8, 2025
Project No. 25076

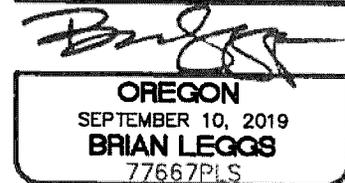
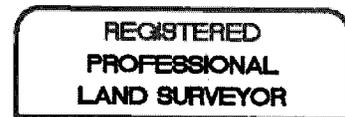
Page 1 of 1

EXHIBIT 'C'
LEGAL DESCRIPTION: TRACT 1

Being portions of those tracts of lands as described in Fee Numbers. 2019-072494 & 2023-006464, Clackamas County deed records, situated in the Julia Ann Lewis Donation Land Claim No. 54, in the Southwest One-Quarter of Section 25, Township 2 South, Range 1 East, of the Willamette Meridian, Clackamas County, Oregon, being more particularly described as follows:

BEGINNING AT a point on the northeasterly line of said Julia Ann Lewis Donation Land Claim (DLC) No. 54, being 3206.44 feet southeasterly of the northerly corner thereof, which point is the northeast corner of said Fee No. 2019-072494, and the northwest corner of "KNOLLCREST" (Plat No. 4627), Clackamas County plat records, which point bears S23°39'45"W 0.16 feet from a found 5/8-inch iron rod with a yellow plastic cap marked "AKS ENGR"; thence along said northeasterly DLC line, N61°15'53"W a distance of 188.71 feet to the northwest corner of said Fee No. 2019-072494, being also the northeast corner of Fee No. 2023-006357, a found 5/8-inch iron rod with a yellow plastic cap marked "LOVE LS747" bears N23°42'49"E 0.22 feet; then leaving said DLC line, and running along the common line of said Fee Numbers 2019-072494, 2023-006464, & 2023-006357, S23°42'49"W a distance of 256.67 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC" on the westerly line of said Fee No. 2023-006464; thence leaving westerly line, S61°16'29"E a distance of 69.37 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC"; thence N23°42'39"E a distance of 3.26 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC"; thence S61°16'29"E a distance of 25.03 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC" on the easterly line of said Fee No. 2023-006464; thence along the easterly line thereof, S23°42'49"W a distance of 85.39 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC"; thence leaving said easterly line, S61°16'29"E a distance of 94.62 feet to the easterly line of said Fee No. 2019-072494, being coincident with the westerly line of said "KNOLLCREST", said point being marked with a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC"; thence along said westerly line, N23°39'45"E a distance of 338.78 feet to the **POINT OF BEGINNING.**

Containing 55,934 square feet. (1.284 acres more or less)



RENEWS 12/31/2026

June 8, 2025
Project No. 25076



EXHIBIT ' D '
LEGAL DESCRIPTION: TRACT 2

Being portions of those tracts of lands as described in Fee Numbers. 2019-072494 & 2023-006464, Clackamas County deed records, situated in the Julia Ann Lewis Donation Land Claim No. 54, in the Southwest One-Quarter of Section 25, Township 2 South, Range 1 East, of the Willamette Meridian, Clackamas County, Oregon, being more particularly described as follows:

BEGINNING AT a point of intersection of the easterly line of said Fee No. 2019-072494, with the northeasterly line of Parker Road (CR 375, 60' wide) being at southwesterly corner of "KNOLLCREST" (Plat No. 4627), Clackamas County plat records, which point bears S23°39'45"W, 0.13' feet from the 5/8-inch iron rod set for said southwesterly corner of "KNOLLCREST"; thence along said easterly line, S23°39'45"W a distance of 30.12 feet to the southeast corner of said Fee No. 2019-072494, being a point on the centerline of said Parker Road; thence along the southerly line of said Fee Numbers 2019-072494 & 2023-006464, being coincident with said centerline, N61°16'54"W a distance of 189.12 feet to the southwesterly corner of said Fee No. 2023-006464, which point bears S23°42'49"W a distance of 30.11 feet from the intersection of the westerly line of said Fee No. 2023-006464 with said northerly right of way line of Parker Road; thence along the westerly line of Fee No. 2023-006464, N23°42'49"E a distance of 205.35 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC"; thence leaving westerly line, S61°16'29"E a distance of 69.37 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC"; thence N23°42'39"E a distance of 3.26 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC"; thence S61°16'29"E a distance of 25.03 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC" on the easterly line of said Fee No. 2023-006464; thence along the easterly line thereof, S23°42'49"W a distance of 85.39 feet to a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC"; thence leaving said easterly line, S61°16'29"E a distance of 94.62 feet to the easterly line of said Fee No. 2019-072494, being common with the westerly line of said "KNOLLCREST", said point being marked with a set 5/8-inch iron rod with a yellow plastic cap marked "ANDY PARIS & ASSOC INC"; thence along said westerly line, S23°39'45"W a distance of 93.09 feet to the **POINT OF BEGINNING**.

EXCEPT that portion lying within the right of way of Parker Road, County Road No. 375.

Containing 25,338 square feet. (0.582 acres more or less)

PROPERTY LINE ADJUSTMENT SURVEY

FOR: BLUE PALOUSE PROPERTIES
SITUATED IN THE JULIA ANN LEWIS DLC NO. 54
IN THE SW 1/4 SECTION 25, T.2S, R.1E, W.M.
CLACKAMAS COUNTY, OREGON

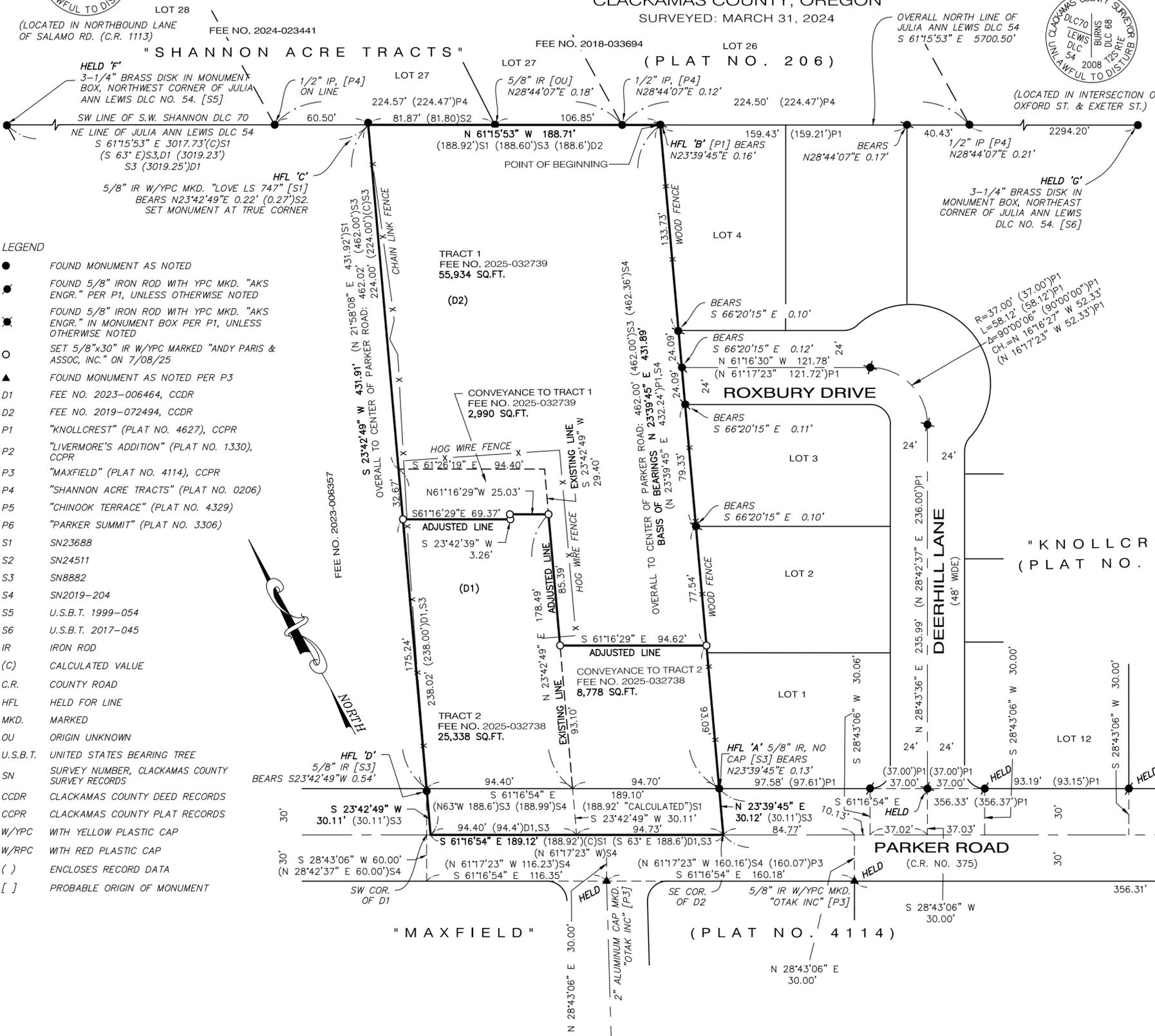
SURVEYED: MARCH 31, 2024

CLACKAMAS COUNTY SURVEYOR

DATE RECEIVED: _____

DATE ACCEPTED/FILED: _____

SURVEY NUMBER: _____



- LEGEND**
- FOUND MONUMENT AS NOTED
 - FOUND 5/8" IRON ROD WITH YPC MKD. "AKS ENGR." PER P1, UNLESS OTHERWISE NOTED
 - FOUND 5/8" IRON ROD WITH YPC MKD. "AKS ENGR." IN MONUMENT BOX PER P1, UNLESS OTHERWISE NOTED
 - SET 5/8"x30" IR W/YPC MARKED "ANDY PARIS & ASSOC. INC." ON 7/08/25
 - ▲ FOUND MONUMENT AS NOTED PER P3
 - D1 FEE NO. 2023-006464, CDDR
 - D2 FEE NO. 2019-072494, CDDR
 - P1 "KNOLLCREST" (PLAT NO. 4627), CCPR
 - P2 "LIVERMORE'S ADDITION" (PLAT NO. 1330), CCPR
 - P3 "MAXFIELD" (PLAT NO. 4114), CCPR
 - P4 "SHANNON ACRE TRACTS" (PLAT NO. 0206)
 - P5 "CHINOOK TERRACE" (PLAT NO. 4329)
 - P6 "PARKER SUMMIT" (PLAT NO. 3306)
 - S1 SN23688
 - S2 SN24511
 - S3 SN8882
 - S4 SN2019-204
 - S5 U.S.B.T. 1999-054
 - S6 U.S.B.T. 2017-045
 - IR IRON ROD
 - (C) CALCULATED VALUE
 - C.R. COUNTY ROAD
 - HFL HELD FOR LINE
 - MKD. MARKED
 - OU ORIGIN UNKNOWN
 - U.S.B.T. UNITED STATES BEARING TREE
 - SN SURVEY NUMBER, CLACKAMAS COUNTY SURVEY RECORDS
 - CDDR CLACKAMAS COUNTY DEED RECORDS
 - CCPR CLACKAMAS COUNTY PLAT RECORDS
 - W/YPC WITH YELLOW PLASTIC CAP
 - W/RPC WITH RED PLASTIC CAP
 - () ENCLOSES RECORD DATA
 - [] PROBABLE ORIGIN OF MONUMENT

PURPOSE
THE PURPOSE OF THIS SURVEY IS TO LOCATE AND ADJUST THE COMMON LINES BETWEEN TRACTS OF LANDS DESCRIBED IN FEE NUMBERS 2023-006464 AND 2019-072494, CLACKAMAS COUNTY DEED RECORDS, FOR THE PURPOSES OF A FUTURE SUBDIVISION.

BASIS OF BEARINGS
HELD N23°39'45"E PER S4 & P1, THROUGH MONUMENTS 'A' & 'B', SET IN S3 & P1 AS SHOWN.

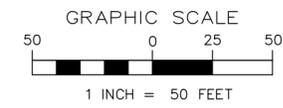
NARRATIVE
THE SOUTHERLY LINE OF D1 & D2 SUBJECT PROPERTIES, WAS HELD ALONG THE CENTERLINE OF PARKER ROAD PER D1, D2, S3 AND PLATS P1 & P5. THE CENTERLINE OF PARKER ROAD (COUNTY ROAD 375, 60' WIDE) WAS HELD BY HOLDING A LINE FROM MONUMENT 'E' [P5], THROUGH SEVERAL RECORD PLAT AND SURVEY OFFSETS OF 30.00' TO MONUMENTS ALONG RIGHT OF WAY LABELED "HELD" AS SHOWN. AFTER DEVELOPING THE CENTERLINE I HELD THE CENTERLINE THEREOF.

THE EASTERLY LINE OF D2 WAS HELD PER S3 & P1, RUNNING THROUGH MONUMENT 'A' SET IN S3 TO MONUMENT 'B' SET IN P1. EXTENDING SAID TO THE CENTERLINE OF PARKER ROAD PER D1, D2, & S3.

THE NORTHERLY LINE OF D2, BEING THE NORTHEASTERLY LINE OF DLC NO. 54 WAS HELD BETWEEN THE LOCATED DLC MONUMENTS 'F' & 'G' AS SHOWN.

THE WESTERLY LINE OF D1 & D2 WAS HELD PER S1 & S3 BY RUNNING A LINE THROUGH MONUMENTS 'C' SET IN S1 AND 'F' SET IN S3, EXTENDING SAID TO THE CENTERLINE OF PARKER ROAD PER D1, D2, & S3.

THE ADJUSTED LINES WERE DETERMINED BY PROPERTY OWNERS AND CLIENTS.



APPROVAL
APPROVED THIS _____ DAY OF _____, 20____
BY _____
CLACKAMAS COUNTY PLANNING DIVISION

REGISTERED PROFESSIONAL LAND SURVEYOR
Andy Paris
OREGON
SEPTEMBER 10, 2019
BRIAN LEGGS
77667PLS
RENEWS: DEC. 31, 2026

ANDY PARIS & ASSOCIATES
LAND SURVEYORS, SINCE 1952
15450 BOONES FERRY ROAD, SUITE 7, LAKE OSWEGO, OR 97035
PH. 503.636.3341 | WWW.ANDYPARIS.COM
PROJECT: 25076 | DRAWING: 25076PLA | DRAFTED: BL 6/08/2025

EXHIBIT C – PLAN SET



TOPOGRAPHIC SITE SURVEY
 FOR: BLUE PALOUSE PROPERTIES
 A PORTION OF THE JULIA ANN LEWIS DLC
 THE SW 1/4 SECTION 25, T.2S, R.1E, W.M.
 CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON
 SURVEYED: MARCH 31, 2024
 TAX MAP NO. 2 1E 25CC

VERTICAL DATUM

ELEVATIONS ARE BASED ON NAVD88 GPS OBSERVATIONS AND REDUCED NVD29 VERTICAL DATUM. NO GEODETIC BENCHMARK HAS BEEN REFERENCED IN THIS SURVEY.

MAP NOTES

THIS SURVEY IS MADE FOR THE ORIGINAL PURCHASER OF THE SURVEY ONLY. ANDY PARIS & ASSOCIATES, INC. ASSUMES NO LIABILITY FOR INFORMATION SHOWN HEREON TO ANY OTHER INSTITUTIONS OR SUBSEQUENT PURCHASERS OF THE PROPERTY.

SURVEY IS VALID ONLY IF PRINT HAS SEAL AND SIGNATURE OF SURVEYOR.

THE LOCATION AND OR EXISTENCE OF UTILITY SERVICE LINES AS SHOWN ON THIS MAP ARE BASED ON FIELD OBSERVATION ONLY. THERE MAY EXIST ADDITIONAL SERVICE LINES NOT SHOWN ON THIS SURVEY.

THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY SURVEYOR. THERE MAY EXIST EASEMENTS, CONDITIONS, OR RESTRICTIONS THAT COULD AFFECT THE TITLE OF THIS PROPERTY. NO ATTEMPT HAS BEEN MADE IN THIS SURVEY TO SHOW SUCH MATTERS THAT MAY AFFECT TITLE.

NO TITLE REPORT WAS PROVIDED OR REFERENCED FOR THIS SURVEY.

PER ORS 209.150(1), ANY PERSON OR PUBLIC AGENCY REMOVING, DISTURBING OR DESTROYING ANY SURVEY MONUMENT OF RECORD IN THE OFFICE OF THE COUNTY SURVEYOR OR COUNTY CLERK SHALL CAUSE A REGISTERED PROFESSIONAL LAND SURVEYOR TO REFERENCE AND REPLACE THE MONUMENT WITHIN 90 DAYS OF THE REMOVAL, DISTURBANCE OR DESTRUCTION. THIS SURVEYOR RECOMMENDS FLAGGING AND PROTECTING SURVEY MONUMENTS PRIOR TO, AND DURING CONSTRUCTION.

PER ORS 92.044(7) UTILITY INFRASTRUCTURE MAY NOT BE PLACED WITHIN ONE FOOT OF A SURVEY MONUMENT LOCATION NOTED ON A SUBDIVISION OR PARTITION PLAT. THIS SURVEYOR RECOMMENDS FLAGGING AND PROTECTING SURVEY MONUMENTS PRIOR TO, AND DURING UTILITY INFRASTRUCTURE CONSTRUCTION.

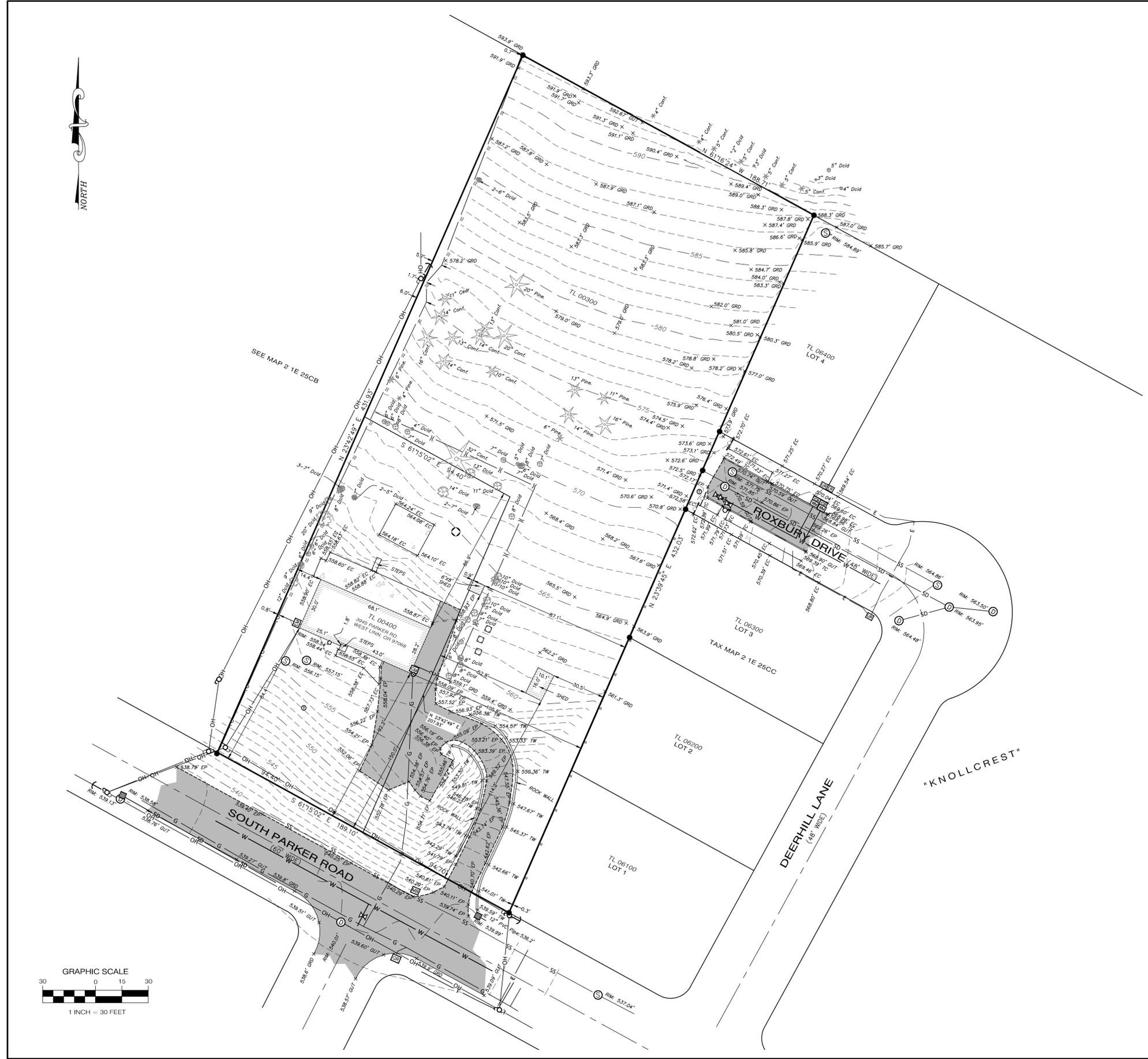
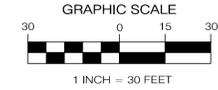
BOUNDARY NOTES

THE SUBJECT PROPERTY LINES SHOWN ON THIS MAP ARE BASED ON ACCEPTED CORNER MONUMENTS, AND/OR CALCULATED BASED ON FIELD MEASUREMENTS TO OTHER MONUMENTS. A THOROUGH AND COMPLETE BOUNDARY RETRACEMENT WAS NOT REQUESTED OR BUDGETED AT THIS TIME. PROPERTY LINES ARE BASED ON RECORD SURVEYS, PLATS, & DEED INFORMATION. THIS MAP DOES NOT REPRESENT A SURVEY TO BE RECORDED, AND ADDITIONAL BOUNDARY RESOLUTION MAY STILL BE REQUIRED.

THE ADJACENT PROPERTY BOUNDARIES SHOWN ON THIS MAP ARE CALCULATED FOR SITE/TOPO INFORMATION ONLY.

LEGEND

- | | | | |
|---|--------------------------------|--------------|------------------------------------|
| ● | FOUND PROPERTY CORNER MONUMENT | —SD— | UNDERGROUND STORM LINE |
| ○ | SANITARY SEWER MANHOLE | —T— | UNDERGROUND TELECOMMUNICATION LINE |
| ⊙ | STORM DRAIN MANHOLE | —SS— | UNDERGROUND SANITARY LINE |
| ⊖ | CATCH BASIN | —E— | UNDERGROUND POWER LINE |
| ⊕ | WATER METER | —W— | UNDERGROUND WATER LINE |
| ⊗ | WATER VALVE | —OH— | OVERHEAD UTILITY LINE |
| ⊙ | FIRE HYDRANT | —G— | UNDERGROUND GAS LINE |
| ⊙ | IRRIGATION CONTROL VALVE | —C— | CHAINLINK FENCE LINE |
| ⊙ | UTILITY POLE | —H— | HOGWIRE FENCE LINE |
| ⊙ | UTILITY RISER | —W— | WIRE FENCE LINE |
| ⊙ | UTILITY WELL | —E— | WOOD FENCE LINE |
| ⊙ | ELECTRIC METER | 0000.0 GRD X | GROUND SHOT - SPOT ELEVATION |
| ⊙ | ELECTRIC RISER | 0000.0 EC X | EDGE OF CONCRETE - SPOT ELEVATION |
| ⊙ | SIGN POST | 0000.0 TC X | TOP OF CURB - SPOT ELEVATION |
| ⊙ | MAILBOX | 0000.0 GUT X | GUTTER FLOWLINE - SPOT ELEVATION |
| ⊙ | GUY ANCHOR | 0000.0 TW X | TOP OF WALL - SPOT ELEVATION |
| ⊙ | BUILDING COLUMN | 0000.0 EP X | EDGE OF PAVEMENT - SPOT ELEVATION |
| ⊙ | BOLLARD | ⊙ | DECIDUOUS TREE |
| ⊙ | GAS METER | ⊙ | CONIFEROUS TREE |
| ⊙ | GAS RISER | ⊙ | CONCRETE |
| ⊙ | UTILITY OTHER - UNKNOWN | ⊙ | ASPHALT PAVEMENT |



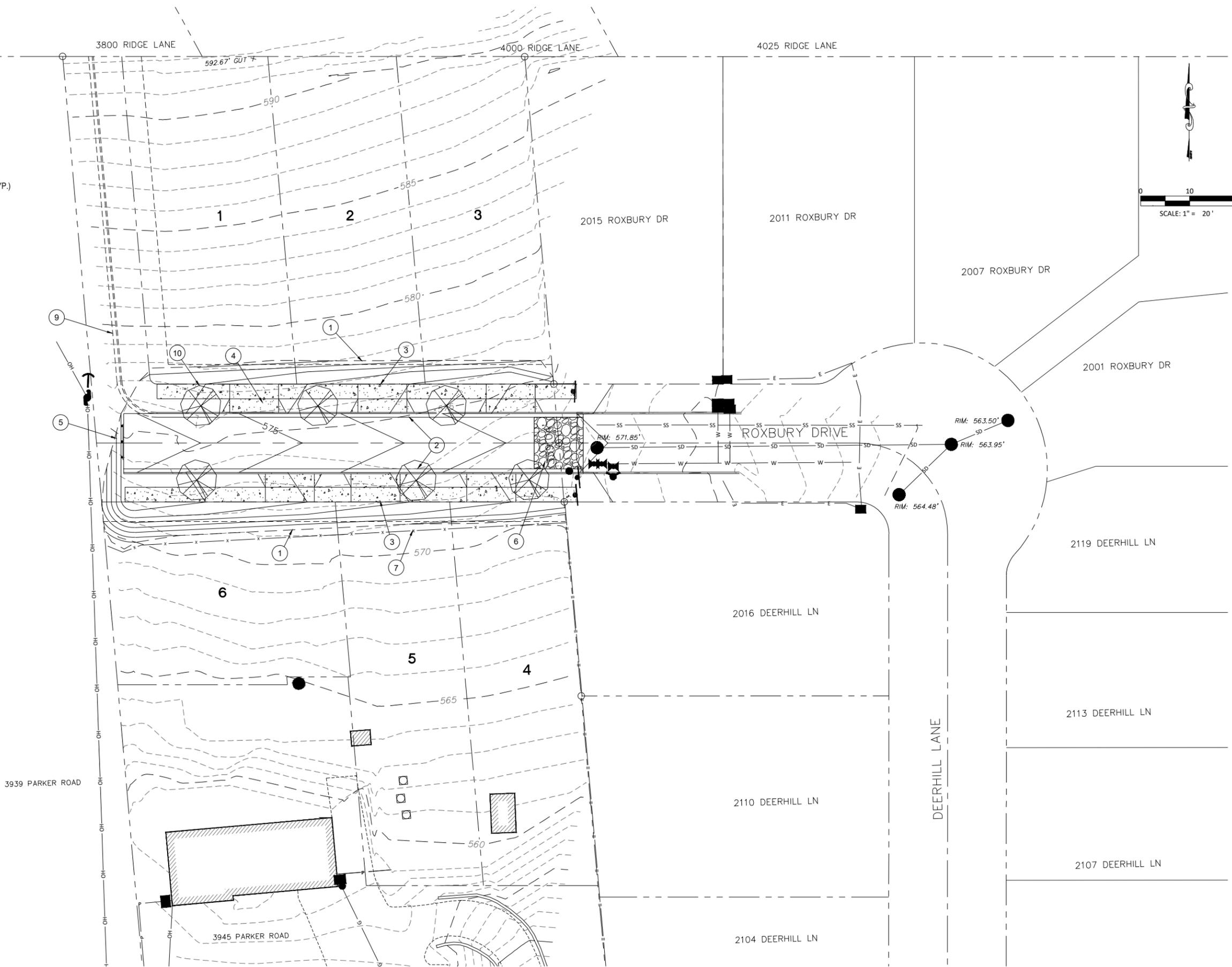
REGISTERED
 PROFESSIONAL
 LAND SURVEYOR

 OREGON
 SEPTEMBER 10, 2019
 BRIAN LEGGS
 77667PLS
 RENEWS: DEC. 31, 2026

ANDY PARIS & ASSOCIATES
 LAND SURVEYORS, SINCE 1952
 15450 BOONES FERRY ROAD, SUITE 7, LAKE OSWEGO, OR 97035
 PH. 503.636.3341 | WWW.ANDYPARIS.COM
 PROJECT: 25076 | DRAWING: 25076TP1 | DRAFTED: AR 04/07/2025

UTILITY NOTES

- ① PROPOSED LIMITS OF GRADING
- ② PROPOSED CURB & GUTTER
- ③ PROPOSED 5' SIDEWALK
- ④ PROPOSED 20' DRIVEWAY APPROACH (TYP.)
- ⑤ PROPOSED BARRICADE
- ⑥ PROPOSED CONSTRUCTION ENTRANCE
- ⑦ PROPOSED SEDIMENTATION FENCE
- ⑧ PROPOSED RETAINING WALL
- ⑨ FUTURE CURB LINE
- ⑩ PROPOSED STREET TREE (TYP.)



PARKER ROAD SUBDIVISION



Blue Palouse Properties
333 S. State Street, Suite V452
Lake Oswego, OR 97034

V
Vando Development LLC
915 SW Rimmock Way, Ste 201-230
Redmond, OR 97756
(C) 503-407-2228
vandodevelopment@gmail.com



NO.	DATE	DESCRIPTION

PROJECT NO.:
DESIGNED BY:

SHEET
C4
OF

DATE: 1/14/28
DRAWN BY:

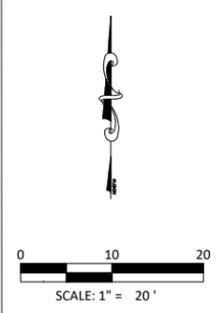
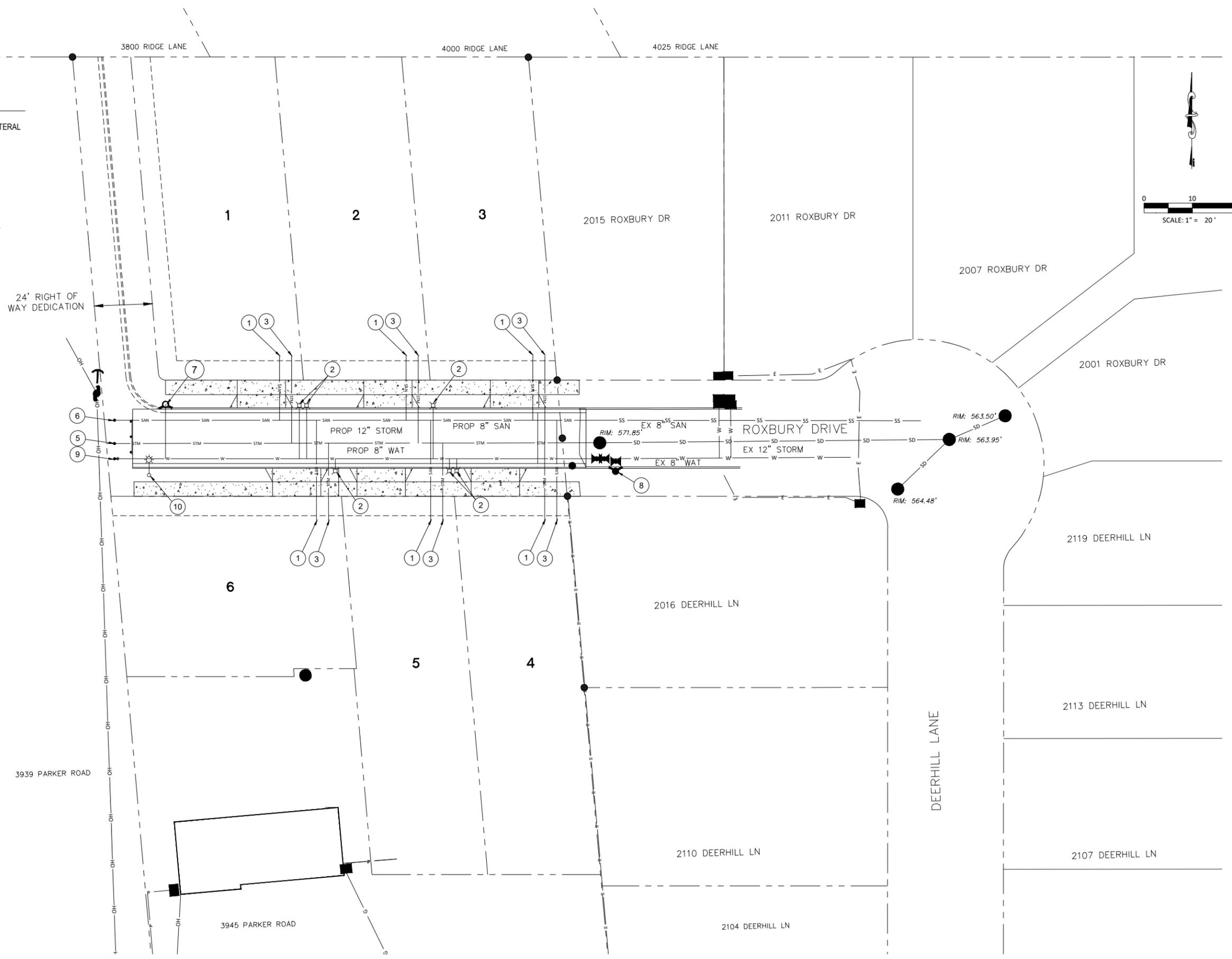
GRADING PLAN

PARKER ROAD - C4 GRADING PLAN.DWG

UTILITY NOTES

- ① PROPOSED SANITARY SEWER LATERAL
- ② PROPOSED WATER SERVICE
- ③ PROPOSED STORM LATERAL
- ④ PROPOSED 8" PUE
- ⑤ PROPOSED STORM CLEANOUT
- ⑥ PROPOSED SANITARY CLEANOUT
- ⑦ PROPOSED FIRE HYDRANT
- ⑧ EXISTING FIRE HYDRANT
- ⑨ PROPOSED 2" BLOWOFF
- ⑩ PROPOSED STREET LIGHTS

24' RIGHT OF WAY DEDICATION



PARKER ROAD SUBDIVISION



Blue Palouse Properties
333 S. State Street, Suite V452
Lake Oswego, OR 97034

Vando Development LLC
915 SW Rimrock Way, Ste 201-230
Redmond, OR 97756
(C) 503-407-2228
vandodevelopment@gmail.com



NO.	DATE	REVISIONS

DATE: 1/14/28
DRAWN BY:
PROJECT NO.:
DESIGNED BY:

UTILITY PLAN

SHEET
C5
OF

PARKER ROAD - C5 UTILITY PLAN.DWG

EXHIBIT D - PREAPPLICATION CONFERENCE NOTES



CITY OF WEST LINN
PRE-APPLICATION CONFERENCE MEETING
SUMMARY NOTES
May 1, 2025

SUBJECT: Proposed Annexation of 60,439 square foot lot within the Urban Growth Boundary (Tax Lot #21E25CC00300) and future Subdivision.

FILE: PA-25-11

APPLICANTS PRESENT: Jeff Vanderdasson (PE, Vando development); Rob Matthews (Blue Palouse Properties); Tracy Peterson (BHG Real Estate)

STAFF PRESENT: Aaron Gudelj, Associate Planner; Tyler Bobbett, Project Engineer

PUBLIC PRESENT: N/A

These pre-application summary notes have been prepared for the applicant to identify applicable code sections and critical issues for the proposed application and summarize the application process and fees. Pre-Application summary notes are based on preliminary information and may not include all considerations. Contact the assigned planner for additional information regarding the process, approval criteria, submittal requirements, questions, and clarifications. Pre-Application Conference summary notes are valid for eighteen months from the meeting date. Once a complete application is submitted, the final decision can take 6-10 months.*

SITE INFORMATION:

Site Address: No Situs – Parker Road/Roxbury Drive/Deerhill Lane
Tax Lot No.: 21E25CC00300
Site Area: 60,439 SF +/-
Neighborhood: Parker Crest Neighborhood Association
Comp. Plan: Low-Density Residential
Zoning: FU10 (Clackamas County)
Zoning Overlays: N/A

PROJECT DESCRIPTION:

The applicant proposes to annex a 60,439 square foot lot within the Urban Growth Boundary. The applicant proposes R-7 zoning and a 6-lot subdivision with the intent to construct single family detached residential homes.

APPLICABLE CODE SECTIONS:

Approval standards and criteria in effect when an application is *received* will be applied to the proposed development. The following Community Development Code (CDC) Chapters apply to this proposal:

Annexation

- West Linn [Municipal Code Section 2.915 – 2.940](#)
- West Linn [Community Development Code Chapter 81 – Boundary Changes](#)
- West Linn [Chapter 99: Procedures for Decision Making: Quasi-Judicial](#)
- West Linn [Community Development Code Chapter 105 – Amendments to the Code and Map](#)
- Metro [Chapter 3.09](#)

Subdivision

- [West Linn CDC Chapter 12: Residential, R-7](#)
- [West Linn CDC Chapter 48: Access, Egress and Circulation](#)
- [West Linn CDC Chapter 54: Landscaping](#)
- [West Linn CDC Chapter 85: Land Divisions – General Provisions](#)
- [West Linn CDC Chapter 92: Required Improvements](#)

- [West Linn CDC Chapter 96: Street Improvement Construction](#)
- [West Linn CDC Chapter 99: Procedures for Decision Making: Quasi Judicial](#)

KEY ISSUES & CONSIDERATIONS

Staff has identified the following development issues, design considerations, or procedural issues that you should be aware of as you prepare your formal application for submittal. The identification of these issues or considerations here does not preclude the future identification of additional issues or considerations:

- The proposed land swap with the adjacent property would need to be completed with Clackamas County prior to the subject annexation application being submitted.
- Additional right-of-way dedication will be required for the future connection of Ridge Lane to Parker Road (See Transportation System Plan)

RESPONSE TO APPLICANT QUESTIONS:

- 1) *Describe the annexation and subdivision process and the steps to process concurrently?*
 Answer: The annexation process and subdivision process must be processed separately. The annexation must be complete, with the annexation recorded with Clackamas County and City of West Linn prior to the application for the subdivision being submitted/accepted.
- 2) *Discuss required sewer extensions to upstream properties?*
 Answer: Please see the Engineering notes for sewer connections.
- 3) *Confirm the required street section for Roxbury Drive?*
 Answer: Roxbury Drive will be required to be stubbed at the west end of subject property as proposed. The City will require a 48' wide dedication consistent with the neighboring properties.

PUBLIC COMMENT:

No public comment was received.

ENGINEERING:

The Engineering department comments are attached. For further details, contact Clark Ide at 503-722-3437 or CIde@westlinnoregon.gov.

BUILDING:

For building code and ADA questions, contact Adam Bernert at abernert@westlinnoregon.gov or 503-742-6054 or Alisha Bloomfield at abloomfield@westlinnoregon.gov or 503-742-6053.

TUALATIN VALLEY FIRE & RESCUE:

A Service Provider Permit must be provided with this application - <https://www.tvfr.com/399/Service-Provider-Permit>. Contact Jason Arn at jason.arn@tvfr.com or 503-259-1510 with any questions.

TREES:

For information on the tree requirements for this proposal, contact the Mike Perkins, City Arborist at mperkins@westlinnoregon.gov or 503-742-4726.

PROCESS:

Clackamas County: Land Swap/Lot Line Adjustment with Clackamas County - The proposed land swap between the subject property and the neighboring property would need to be completed/platted with Clackamas County prior to an annexation application being accepted by the City.

City of West Linn

Annexation (3-6 month process)

An Annexation is a City Council Decision.

[Municipal Code 2.920](#)

Step 1: Land Use Decision. “When an annexation application has been properly initiated pursuant to ORS [222.111](#), [222.125](#), [222.170](#), or [222.840](#), Step 1 shall include review of the land use aspect of the petition pursuant to Community Development Code Chapter 81. If the application receives Council approval through the Step 1 process, the Council shall proceed to Step 2. A determination that the application meets the land use requirements does not obligate the City to approve the annexation application.”

[Municipal Code 2.930](#)

Step 2: Policy Decision

- 1) Step 2 of the annexation process is a policy decision and shall follow the steps in the subsections below.
- (2) If the annexation is approved in the Step 1 process, the Planning Director shall prepare a report which includes the following information:
 - (a) General information on the property or properties, including but not limited to location, size, access to infrastructure, recommended zone, protected resource areas and infrastructure status;
 - (b) Impact on the school district, including but not limited to impacted schools, taxes, and anticipated number of additional students;
 - (c) Cost to City of infrastructure that is not funded by SDCs; and
 - (d) Tax implications for the City.

Subdivision (3-6 month process)

Once the annexation has been approved by the City of West Linn and Clackamas County, the applicant may proceed with the subdivision application...

Before applying for a subdivision, the applicant must contact and discuss the proposed development with the Parker Crest Neighborhood Association at a neighborhood meeting. The purpose of the neighborhood meeting is to identify potential issues or conflicts regarding a proposed application to address them before the application is submitted. The applicant should initiate the neighborhood meeting by mailing a request letter (certified mail) to the neighborhood association president and designee formally requesting, within 60 days, a date and location for the neighborhood meeting. The meeting should be scheduled at the at the associations regularly scheduled monthly meeting or at another time at the Neighborhood Associations discretion. The complete requirements for the neighborhood meeting can be found in West Linn CDC Section 99.038. Email agudelj@westlinnoregon.gov to request the Parker Crest Neighborhood Association contact information.

A subdivision is a quasi-judicial decision where a public hearing is required. The applicant must present their proposal to the approval authority at the hearing. Once the application is complete, staff will review the application, schedule a public hearing date, send a 20-day public comment notice, and post a notice sign on the property. Staff will prepare a report with a recommendation available 10 days before the public hearing. After the approval authority decides, there is a 14-day appeal period. If the decision is not appealed, the applicant may proceed with the development.

HOW TO SUBMIT AN APPLICATION:

Submit a complete application in a single PDF document through the [Submit a Land Use Application](#) web portal. A complete application should include:

Annexation

1. Application materials identified in the [Development Review Checklist](#);
2. Provide completed - Clackamas County Signed - Annexation Petition (attachment 1)
3. Provide completed – Clackamas County Signed – Certification of Property Ownership form (attachment 2)
4. Provide responses to approval criteria in the following West Linn Code Sections (See Attachment 3):
 - a. West Linn Municipal Code Section 2.915 – 2.930
 - b. West Linn Community Development Code Chapter 81
 - c. West Linn Community Development Code Chapter 105

d. Metro Chapter 3.09

Subdivision

1. Application materials identified in the [Development Review Checklist](#);
2. A project summary outlining the scope of the project.
3. Full written responses to approval criteria in the identified CDC Chapters;
4. A Service Provider Letter from Tualatin Valley Fire and Rescue; and
5. Demonstration of compliance with Neighborhood Association meeting requirements per CDC 99.038

COMPLIANCE NARRATIVE:

Written responses supported by substantial evidence must address all applicable approval standards and criteria. Written materials must explain how and why the proposed application will meet each applicable approval criteria. “Not Applicable” is not an acceptable response to the approval criteria.

Submittal requirements may be waived, but the applicant must first identify the specific submittal requirement and request, in writing, that the Planning Manager waive the requirement. The applicant must identify the specific grounds for the waiver. The Planning Manager will respond with a written determination about the waiver request before applying.

APPLICATION FEES & DEPOSITS:

The Planning Division Fee Schedule can be found on our website: <https://westlinnoregon.gov/finance/current-fee-schedule>

- Application fee for an Annexation = \$8,000 base fee + \$1,000 per acre above 1.0 acre
- Deposit for a subdivision = \$4,500
- Fee for Final Plat Review = 2,000

Applications with deposits will be billed monthly for time and materials. Please provide the name and address of the party responsible for the final invoice in your application.

Timelines:

Once the application and payment are received, the City has 30 days to determine if the application is complete. If the application is incomplete, the applicant has 180 days to complete it or provide written notice to staff that no other information will be provided. Once complete, the City has 120 days from the completeness determination to make a final decision on the application. Typical land use applications can take 6-10 months from beginning to end.

*** DISCLAIMER:** *These pre-application notes have been prepared per [CDC Section 99.030.B.7](#). The information provided is an overview of the proposal considerations and requirements. Staff responses are based on limited material presented at the pre-application conference. New issues and requirements can emerge as the application is developed. Failure to provide information does not constitute a waiver of the applicable standards or requirements. The applicant has the burden of proof to demonstrate that all approval criteria have been satisfied. These notes do not constitute an endorsement of the proposed application or assure project approval.*

Attachment 1: Annexation Petition form

Attachment 2: Certification of Property Ownership form (Clackamas County Signed)

Attachment 3: Annexation Narrative Template (attached to email)

Attachment 4: Tri-City Annexation Application weblink

<https://dochub.clackamas.us/documents/drupal/41abe357-8c04-4bc9-9e16-7f098bac5396>

Attachment 5: 2021 City of West Linn Annexation – ANX-21-01 - 19676 Kapteyns St Annexation of 2.3 Acres

[19676 Kapteyns St Annexation of 2.3 acres | City of West Linn Oregon Official Website](#)

Attachment 6: City of West Linn Transportation System Plan 2016; [Transportation System Plan | City of West Linn Oregon Official Website](#)



CITY OF
**West
Linn**

Pre-app Comments

Project Number: PA-25-11
Tax Lot 21E25CC00300 near
Parker Road: Annexation

Engineering Contact:

Tyler Bobbett
tbobbett@westlinnoregon.gov
Telephone: 503-722-3424

Project Description: Proposed annexation for a 1.4-acre property.

Pre-application meeting date: April 30, 2025

The comments provided below are based upon material provided as part of the pre-application packet and are intended to identify potential design challenges associated with the development. Comments are not intended to be exhaustive and do not preclude the engineering department from making additional comments as part of the formal land use application process.

TRANSPORTATION

Minimum Required Improvement:

- Parker Road
 - Parker Road is classified as a collector.
 - Parker Road has approximately 62 feet of ROW surrounding this property.
 - Frontage Improvements are not required if the Clackamas County lot line adjustment occurs prior to annexation.
- Roxbury Drive
 - Roxbury Drive is classified as a local street.
 - Roxbury Drive has 48 feet of ROW surrounding this property.
- All new distribution and communication franchise utilities and their services must be placed underground.
- One driveway allowed per frontage.

SANITARY SEWER

Minimum Required Improvement:

- Existing 8" PVC main on Roxbury Drive has the capacity to serve this development.
- Existing 8" PVC main on Roxbury Drive will be extended with the new road section.

DOMESTIC WATER

Minimum Required Improvement:

- There is an existing 8" DI water main in Roxbury Drive that has adequate capacity for serving this development.
- Existing 8" DI water main will be extended with the new road section.

SURFACE WATER (STORM SEWER)

Minimum Required Improvement:

- Onsite run-off generated from new impervious areas of greater than 1000 square feet must be



CITY OF
**West
Linn**

Pre-app Comments

Project Number: PA-25-11
Tax Lot 21E25CC00300 near
Parker Road: Annexation

Engineering Contact:

Tyler Bobbett
tbobbett@westlinnoregon.gov
Telephone: 503-722-3424

captured, treated, detained, and conveyed to the nearest public stormwater system in accordance with the *Portland Stormwater Management Manual*, the Uniform Plumbing Code, and *City of West Linn Public Works Standards*.

- Preferred stormwater management would be to capture, treat, and infiltrate on site. This must be done for whatever impervious area the existing facility for the Knollcrest Subdivision does not cover. A licensed engineer must prove that the existing facility has the capacity for what is proposed.
- All new stormwater facilities must be designed and accepted by a licensed engineer.
- The 12" main on Roxbury Drive has the capacity to serve this development.
- The 12" main on Roxbury Drive will be extended with the new road section.

OTHER

- Any laterals crossing property lines shall be located in an easement.
- Development shall pay all applicable System Development Charges (SDC) fees at the time of home construction for newly created lots.
- The proposed development will disturb more than 1 acre, therefore a West Linn Erosion Control Permit Application, as outlined in Section 2.0066 of the *City of West Linn Public Works Standards*, will be required prior to the commencement of construction.
- A dedication of 24' on the west side will be required. The street extension will terminate at this point. Utilities are not required to extend beyond this point.

QUESTIONS

- 1) See planning notes.
- 2) The existing sanitary sewer main in Roxbury Drive must be extended with the new road section.
- 3) The required street section extension must match existing Roxbury Drive.

Attachment 1: Annexation Petition Form

Attachment 2: Certification of Property Ownership

CITY OF WEST LINN

CERTIFICATION OF PROPERTY OWNERSHIP

I hereby certify that the attached petition for annexation of the territory described herein to the City of West Linn contains the names of the owners* of a majority of the land area of the territory to be annexed, as shown on the last available complete assessment roll.

NAME _____

TITLE _____

DEPARTMENT _____

CLACKAMAS COUNTY ASSESSOR'S OFFICE

DATE _____

* "Owner" means the owner of the title to real property or the contract purchaser of real property.

* * * * *

CERTIFICATION OF REGISTERED VOTERS

I hereby certify that the attached petition for annexation of territory described herein to the City of West Linn contains the names of at least a majority of the electors registered in the territory to be annexed.

NAME _____

TITLE _____

DEPARTMENT _____

CLACKAMAS COUNTY ASSESSOR'S OFFICE

DATE _____

CITY OF WEST LINN

CERTIFICATION OF LEGAL DESCRIPTION AND MAP

I hereby certify that the description of the property included within the attached petition (located on Assessor's Map _____) has been checked by me and it is a true and exact description of the property under consideration, and the description corresponds to the attached map indicating the property under consideration.

NAME _____

TITLE _____

DEPARTMENT _____

CLACKAMAS COUNTY ASSESSOR'S OFFICE

DATE _____

EXHIBIT E – PRELIMINARY STORMWATER REPORT



Stormwater Report

For

Parker Road 6-lot Subdivision

West Linn, OR

Revised February 16, 2026



Renews 6/30/26

Prepared By:



Vando Development LLC

915 SW Rimrock Way Ste 201-230

Redmond, OR 97756-2340

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Purpose and Objectives 1
Existing Conditions 1
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 1.5.2 Water Quality 1
 1.5.3 Flow Control 1
Developed Runoff Analysis 2
 Water Quality 2
 Flow Control 2
Conveyance 3
Conclusion 3

Appendices Index

Appendix A – Exhibits

- Vicinity Map
- Proposed Basin Map

Appendix B – Analysis

- Hydrocad Design
- Check Existing Knollcrest Water Quality Swale

Appendix C – NRCS Custom Soil Report

Appendix D – Pond Modification Exhibits

- Pond Re-grading Exhibit
- Flow Control Structure Modifications

Project Description

The proposed project is at an unaddressed site located off Parker Road in West Linn, Clackamas County, Oregon. The property is identified as 21E25CC TL 300.

The six proposed single-family residences and driveways will create 2,500 square feet of new impervious area for each home. The proposed Roxbury Drive extension will bisect the site. Storm laterals will be provided for each lot. The proposed storm conveyance system will connect to an existing 12" storm sewer main that has been stubbed to the existing westerly terminus of Roxbury Drive. That pipe drains to the existing stormwater facility located at the southeast corner of the Knoll Crest Subdivision.

The existing Knollcrest Subdivision stormwater facility will be utilized for the proposed project. That facility was constructed in 2018. The original stormwater report was prepared by AKS Engineering & Forestry and dated July 2018. Relevant portions of that report are included throughout this report.

Purpose and Objectives

The purpose of this drainage report is to present the best management practices (BMP) for the City of West Linn flow control and water quality treatment requirements, as outlined in May 2025 Stormwater Management Manual.

Existing Conditions

The site is currently undeveloped with a few trees and grass cover. The project site slopes from north to south. A NRCS Custom Soil Resource Report for the project is included in Appendix B.

Pre-developed Run off Analysis

The post-developed runoff rates from the Knollcrest Subdivision Stormwater report will be used as the pre-developed runoff rates for this project. That analysis included a portion of the proposed site since it was an upstream area that ran off into the Parker Road right of way. This results in a smaller existing and proposed pervious areas in the project sub area.

Performance Standards

The following City performance standards apply:

1.5.1 Infiltration

Site soils have poor infiltration rates and therefore will not be utilized. See the NRCS Soil Report provided in Appendix B.

1.5.2 Water Quality

To meet the water quality performance standard, stormwater management facilities must be selected based on the following order of prioritization to manage the water quality design storm:

- 1. Full infiltration or Partial infiltration, as determined by the design infiltration rate of the site (collectively referred to as "infiltration" stormwater management facilities).*
- 2. Vegetated Filtration or other Green Infrastructure.*
- 3. Alternative Treatment (i.e., manufactured stormwater treatment technology).*
- 4. Offsite mitigation.*

As discussed in the project preapplication conference, city staff agreed that there was no need to construct an on-site treatment facility if the existing public storm facility in the Knollcrest Subdivision had additional capacity.

The information from the storm report prepared by AKS and dated July 2018 was populated into Hydrocad to evaluate how much capacity was available. A basin for the proposed 6-lot Parker Development was added to the model. The Hydrocad report is included in Appendix B.

1.5.3 Flow Control

Stormwater management facilities will be required to maintain the post-development peak flow rates to levels at, or below the pre-development peak flow rates (Table 1-1) for specified design storms. Overflow conveyance for the 25-year design storm event is required for any stormwater management facility not designed to infiltrate the 25-year design storm event.



Table 1-1. Flow Control Performance Requirements

Post-Development Peak Flow Rate	Pre-Development Peak Flow Rate Target	24-hour Design Storm Event, in.
2-year, 24-hour	2-year, 24-hour	2.50
10-year, 24-hour	10-year, 24-hour	3.45
25-year, 24-hour	25-year, 24-hour	3.90

Developed Runoff Analysis

Developed Basin Area and Hydrologic Information

Drainage Basin	Total Area (sf)	Pervious Area (sf)	Impervious Area (sf)	Pervious Land Cover	Hydraulic Soil Group	Pervious CN	TC (min)
Parker 1	27,774	8,784	18,960	grass	C	74	5

Water Quality

This report applies the current standard when evaluating the swale:

“Stormwater management facilities must be designed to treat 80% of the average annual runoff. The water quality design storm is 1 in. during a 24-hour period, which is the estimated equivalent to 80% of the average annual runoff in West Linn.”

The proposed hydrograph for the WQ event is included in Appendix B.

The existing swale in the bottom of the stormwater facility was analyzed and has the capacity to treat the proposed impervious areas from the project. The swale is 4 feet wide, with 4:1 side slopes and a slope of 0.5%. The original design resulted in a flow depth of 0.29 feet. The proposed flow depth with the proposed project flows will be 0.37 feet. The original design velocity was 0.15 fps. The proposed velocity is 0.18 fps. The residence time decreases from 15.9 minutes to 13.2 minutes. The required 9-minute residence time is still met.

Flow Control

The pre-developed flow rates are from the original AKS report and have been adjusted for current 24-hr design events.

Peak Pre and Post Development Flow Comparison

Design Storm	Pre-Developed Peak Discharge Rate (cfs)	Post Development Peak Discharge Rate with Flow Control (cfs)	Water Surface Elevation
2-year	0.40	0.40	523.80
10-year	0.92	0.90	524.44
25-year	1.18	1.17	524.68
100-year			524.97

The flow structure in the existing upper field will be modified or replaced with a different orifice configuration in the plate. The grate will be set at the new maxim pond water surface elevation. See marked up detail from original AKS plan in Appendix C.



Existing Flow Control Structure

Device	Invert	Outlet Device
1	518.53	12" Culvert
2	521.50	3.2" Orifice
3	523.20	5.5" Orifice
4	524.00	Broad Crested Weir (Field Inlet)

Proposed Flow Control Structure

Device	Invert	Outlet Device
1	518.53	12" Culvert
2	521.50	2.9" Orifice
3	524.00	6.0" Orifice
4	524.75	Broad Crested Weir (Field Inlet)

In order to meet the 1-foot freeboard requirement, the pond berm embankment and emergency rip-rap overflow will have to be re-graded, raising the top of the pond berm embankment from 525.00 to 525.75.

Conveyance

Runoff on site will be conveyed to an existing 12" storm sewer main that has been stubbed to the existing westerly terminus of Roxbury Drive. A 12" storm main will be extended thru the site convey the 25-year design event, as required by City standards.

Conclusion

Based on the above analysis and the attached appendices, the proposed stormwater management facilities can meet the requirements, as outlined in the City of West Linn Stormwater Management Manual, dated May 2025.

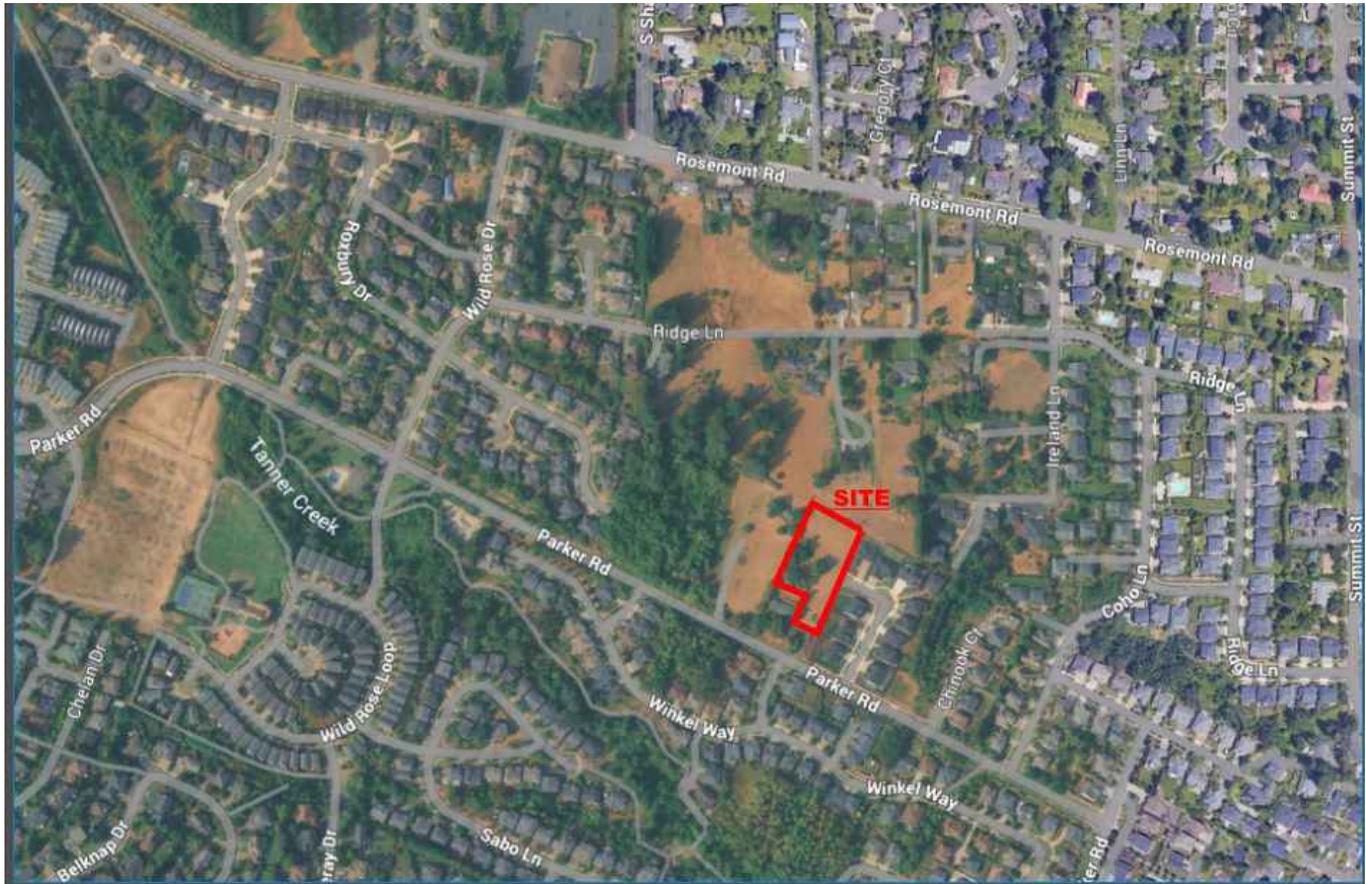


APPENDIX A – Exhibits





NTS



Vando Development LLC
915 SW Rimrock Way, Ste 201-230
Redmond, OR 97756

VICINITY MAP

DATE

FIGURE



SCALE: 1" = 100 FEET



DATE: 07/12/2018

FIGURE

POST-DEVELOPED BASIN DELINEATION

KNOLLCREST SUBDIVISION

AKS ENGINEERING & FORESTRY, LLC

12965 SW HERMAN RD, STE 100

TUALATIN, OR 97062

P: 503.563.6151 F: 503.563.6152 aks-eng.com

3-1

DRWN: NSL

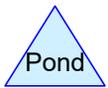
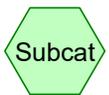
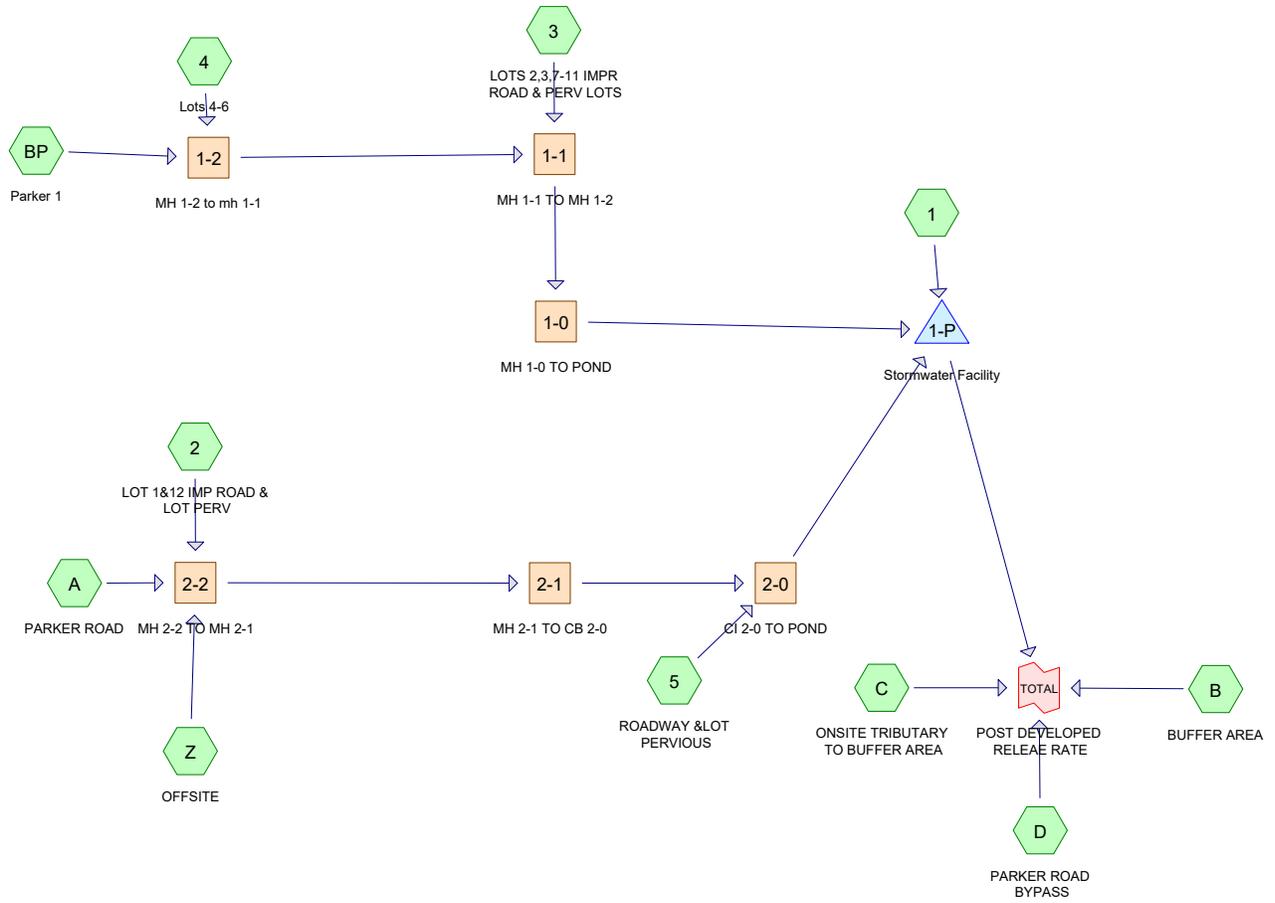
CHKD: MBH

AKS JOB: 5132



APPENDIX B – Analysis





Routing Diagram for Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26

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Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26

Prepared by Vando Development, LLC

Printed 2/14/2026

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-year	Type IA 24-hr		Default	24.00	1	2.50	2
2	10-year	Type IA 24-hr		Default	24.00	1	3.45	2
3	25-year	Type IA 24-hr		Default	24.00	1	3.90	2
4	100-year	Type IA 24-hr		Default	24.00	1	4.40	2

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.194	74	(1, 2, 3, 5, BP, C, D)
1.850	98	(2, 3, 4, 5, A, BP, D, Z)
0.452	82	(B)
1.199	79	(Z)
5.695	83	TOTAL AREA

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
5.695	Other	1, 2, 3, 4, 5, A, B, BP, C, D, Z
5.695		TOTAL AREA

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	5.695	5.695		1, 2, 3, 4, 5, A, B, BP, C, D, Z
0.000	0.000	0.000	0.000	5.695	5.695	TOTAL AREA	

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	1-0	537.38	522.32	146.9	0.1025	0.013	0.0	12.0	0.0	
2	1-1	558.89	537.58	185.3	0.1150	0.013	0.0	12.0	0.0	
3	1-2	568.44	559.09	143.9	0.0650	0.013	0.0	12.0	0.0	
4	2-0	523.83	521.99	46.1	0.0399	0.013	0.0	12.0	0.0	
5	2-1	529.57	523.83	127.6	0.0450	0.013	0.0	12.0	0.0	
6	2-2	531.44	529.77	27.8	0.0601	0.013	0.0	12.0	0.0	
7	1-P	518.53	517.73	40.2	0.0199	0.013	0.0	12.0	0.0	

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1:	Runoff Area=14,778 sf 0.00% Impervious Runoff Depth>0.61" Tc=5.0 min CN=74/0 Runoff=0.03 cfs 0.017 af
Subcatchment2: LOT 1&12 IMP ROAD &	Runoff Area=53,136 sf 36.58% Impervious Runoff Depth>1.21" Tc=5.0 min CN=74/98 Runoff=0.32 cfs 0.123 af
Subcatchment3: LOTS 2,3,7-11 IMPR	Runoff Area=50,099 sf 49.33% Impervious Runoff Depth>1.43" Tc=5.0 min CN=74/98 Runoff=0.37 cfs 0.137 af
Subcatchment4: Lots 4-6	Runoff Area=7,500 sf 100.00% Impervious Runoff Depth>2.27" Tc=5.0 min CN=0/98 Runoff=0.10 cfs 0.033 af
Subcatchment5: ROADWAY&LOT	Runoff Area=5,316 sf 58.09% Impervious Runoff Depth>1.57" Tc=5.0 min CN=74/98 Runoff=0.04 cfs 0.016 af
SubcatchmentA: PARKER ROAD	Runoff Area=1,162 sf 100.00% Impervious Runoff Depth>2.27" Tc=5.0 min CN=0/98 Runoff=0.02 cfs 0.005 af
SubcatchmentB: BUFFER AREA	Runoff Area=19,707 sf 0.00% Impervious Runoff Depth>0.98" Tc=26.3 min CN=82/0 Runoff=0.07 cfs 0.037 af
SubcatchmentBP: Parker 1	Runoff Area=27,744 sf 68.34% Impervious Runoff Depth>1.74" Tc=5.0 min CN=74/98 Runoff=0.27 cfs 0.092 af
SubcatchmentC: ONSITE TRIBUTARYTO	Runoff Area=9,328 sf 0.00% Impervious Runoff Depth>0.61" Tc=5.0 min CN=74/0 Runoff=0.02 cfs 0.011 af
SubcatchmentD: PARKER ROAD BYPASS	Runoff Area=3,887 sf 64.60% Impervious Runoff Depth>1.68" Tc=5.0 min CN=74/98 Runoff=0.04 cfs 0.012 af
SubcatchmentZ: OFFSITE	Runoff Area=55,422 sf 5.77% Impervious Runoff Depth>0.91" Tc=20.8 min CN=79/98 Runoff=0.18 cfs 0.096 af
Reach 1-0: MH 1-0 TO POND	Avg. Flow Depth=0.17' Max Vel=8.17 fps Inflow=0.74 cfs 0.261 af 12.0" Round Pipe n=0.013 L=146.9' S=0.1025 '/' Capacity=11.41 cfs Outflow=0.74 cfs 0.261 af
Reach 1-1: MH 1-1 TO MH 1-2	Avg. Flow Depth=0.17' Max Vel=8.51 fps Inflow=0.74 cfs 0.261 af 12.0" Round Pipe n=0.013 L=185.3' S=0.1150 '/' Capacity=12.08 cfs Outflow=0.74 cfs 0.261 af
Reach 1-2: MH 1-2 to mh 1-1	Avg. Flow Depth=0.14' Max Vel=5.65 fps Inflow=0.37 cfs 0.125 af 12.0" Round Pipe n=0.013 L=143.9' S=0.0650 '/' Capacity=9.08 cfs Outflow=0.37 cfs 0.125 af
Reach 2-0: CI 2-0 TO POND	Avg. Flow Depth=0.19' Max Vel=5.38 fps Inflow=0.55 cfs 0.241 af 12.0" Round Pipe n=0.013 L=46.1' S=0.0399 '/' Capacity=7.12 cfs Outflow=0.55 cfs 0.241 af
Reach 2-1: MH 2-1 TO CB 2-0	Avg. Flow Depth=0.18' Max Vel=5.47 fps Inflow=0.51 cfs 0.225 af 12.0" Round Pipe n=0.013 L=127.6' S=0.0450 '/' Capacity=7.56 cfs Outflow=0.51 cfs 0.225 af

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Reach 2-2: MH 2-2 TO MH 2-1 Avg. Flow Depth=0.16' Max Vel=6.06 fps Inflow=0.51 cfs 0.225 af
12.0" Round Pipe n=0.013 L=27.8' S=0.0601 '/' Capacity=8.73 cfs Outflow=0.51 cfs 0.225 af

Pond 1-P: Stormwater Facility Peak Elev=523.80' Storage=4,381 cf Inflow=1.31 cfs 0.519 af
Outflow=0.33 cfs 0.476 af

Link TOTAL: POST DEVELOPED RELEASE RATE Inflow=0.40 cfs 0.537 af
Primary=0.40 cfs 0.537 af

Total Runoff Area = 5.695 ac Runoff Volume = 0.580 af Average Runoff Depth = 1.22"
67.52% Pervious = 3.845 ac 32.48% Impervious = 1.850 ac

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment 1:

Runoff = 0.03 cfs @ 8.00 hrs, Volume= 0.017 af, Depth> 0.61"
 Routed to Pond 1-P : Stormwater Facility

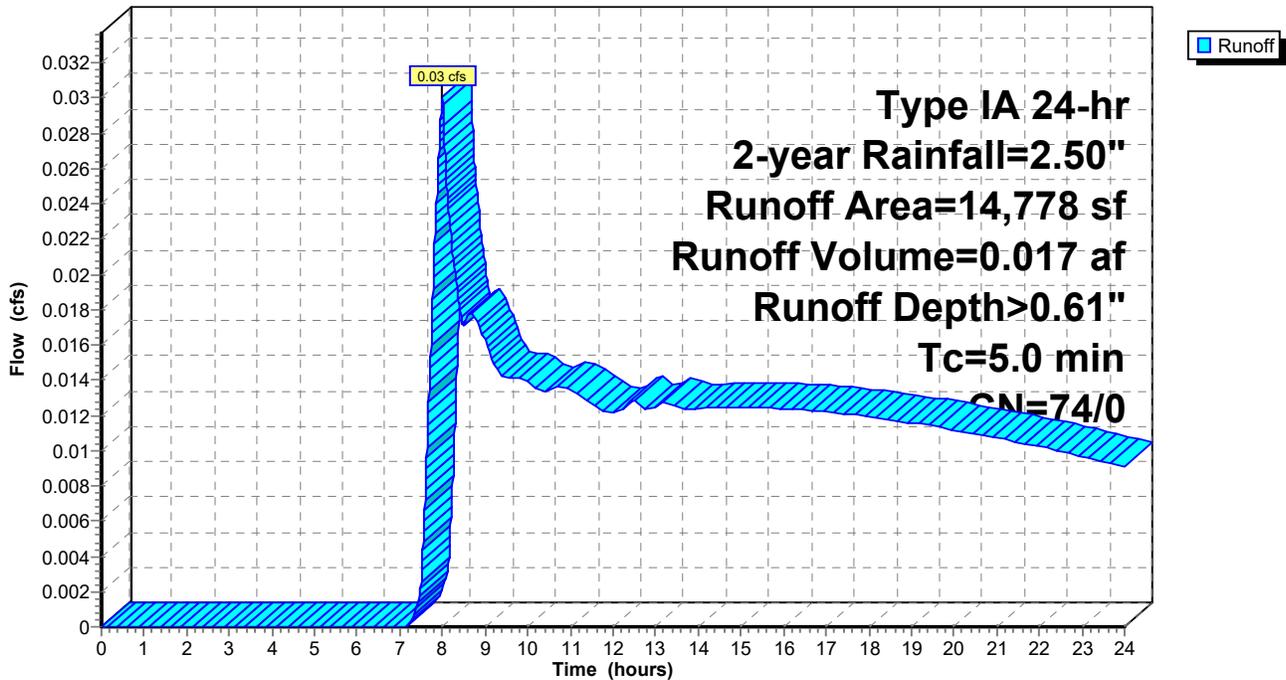
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

Area (sf)	CN	Description
* 14,778	74	
14,778	74	100.00% Pervious Area

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

Subcatchment 1:

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

Prepared by Vando Development, LLC

Printed 2/14/2026

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Summary for Subcatchment 2: LOT 1&12 IMP ROAD & LOT PERV

Runoff = 0.32 cfs @ 7.95 hrs, Volume= 0.123 af, Depth> 1.21"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

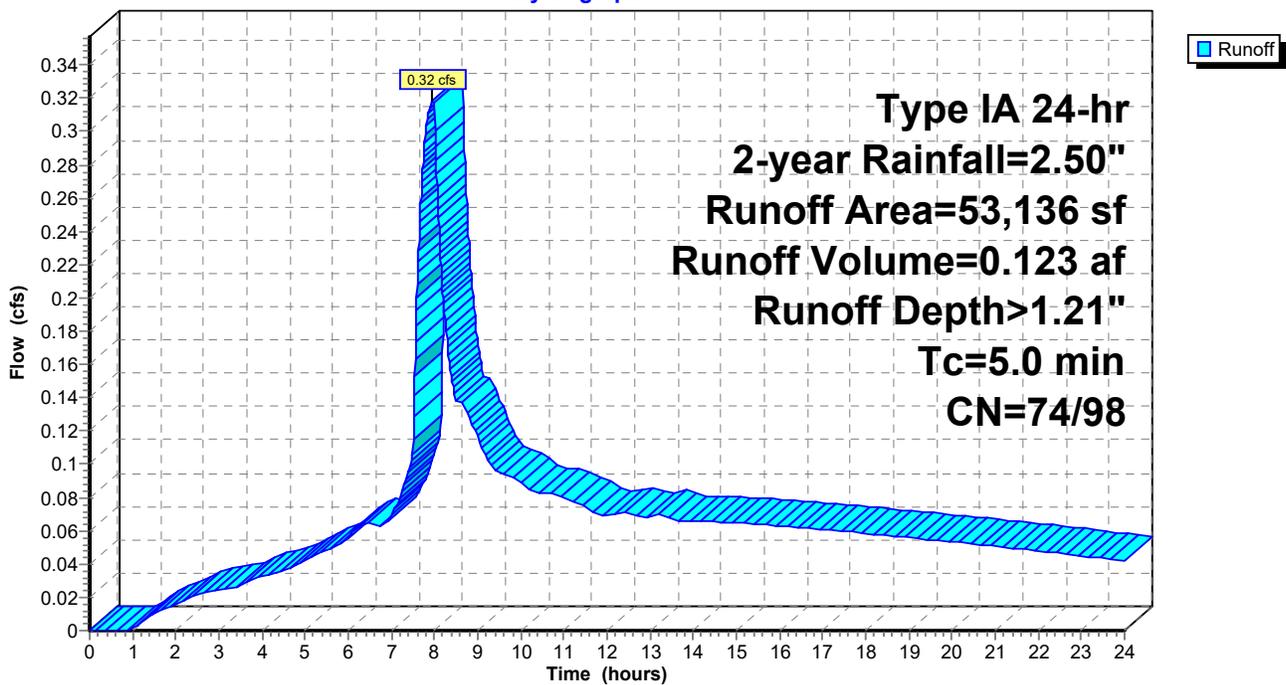
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

	Area (sf)	CN	Description
*	19,437	98	
*	33,699	74	
	53,136	83	Weighted Average
	33,699	74	63.42% Pervious Area
	19,437	98	36.58% Impervious Area

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

Subcatchment 2: LOT 1&12 IMP ROAD & LOT PERV

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment 3: LOTS 2,3,7-11 IMPR ROAD & PERV LOTS

Runoff = 0.37 cfs @ 7.93 hrs, Volume= 0.137 af, Depth> 1.43"
 Routed to Reach 1-1 : MH 1-1 TO MH 1-2

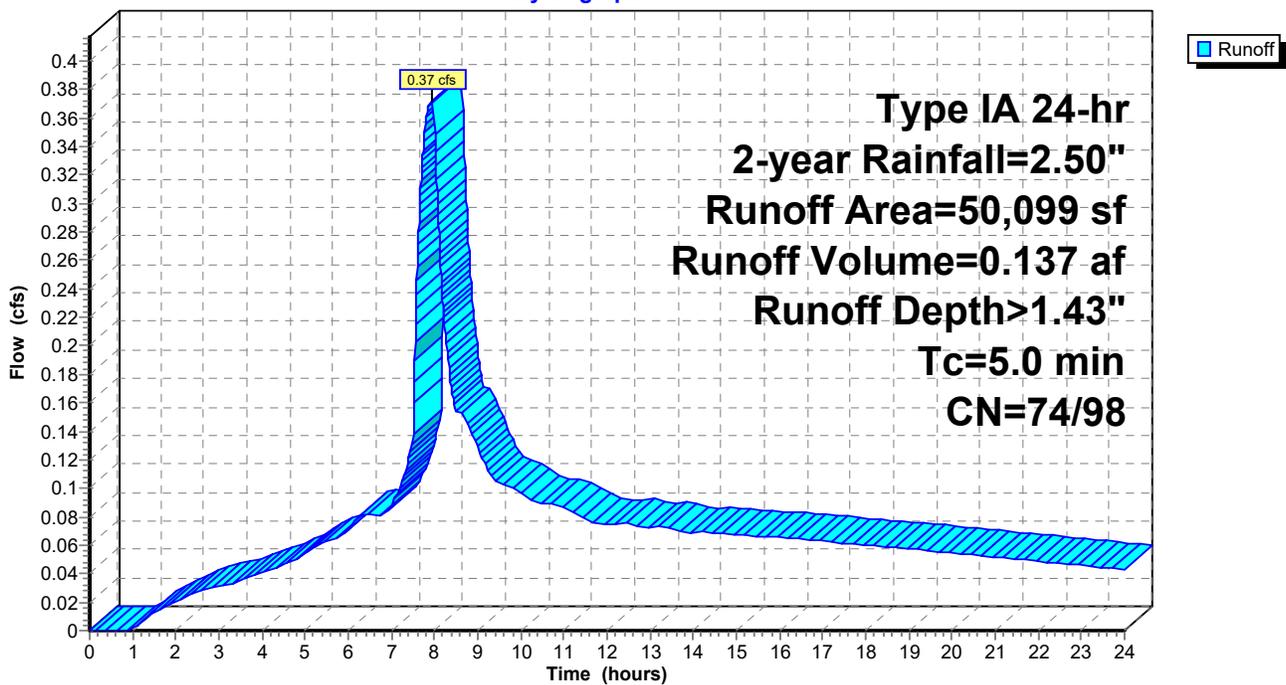
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

	Area (sf)	CN	Description
*	25,385	74	
*	24,714	98	
	50,099	86	Weighted Average
	25,385	74	50.67% Pervious Area
	24,714	98	49.33% Impervious Area

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

Subcatchment 3: LOTS 2,3,7-11 IMPR ROAD & PERV LOTS

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment 4: Lots 4-6

Runoff = 0.10 cfs @ 7.88 hrs, Volume= 0.033 af, Depth> 2.27"
 Routed to Reach 1-2 : MH 1-2 to mh 1-1

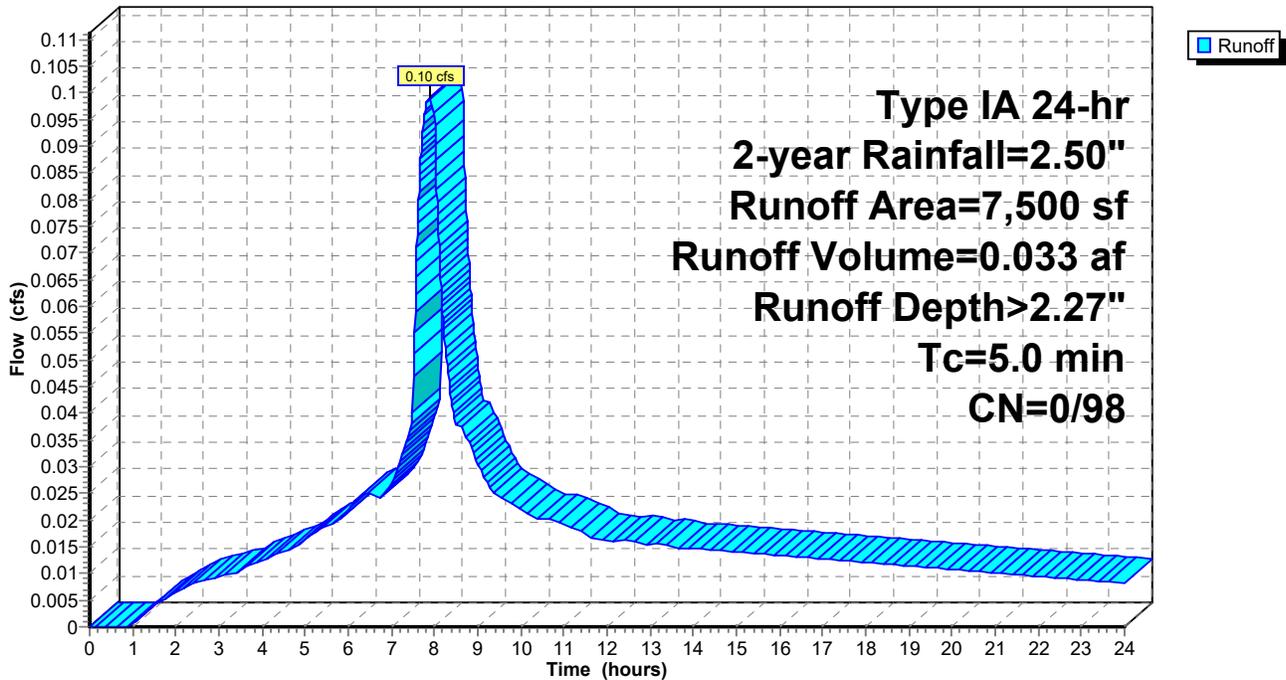
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

Area (sf)	CN	Description
* 7,500	98	
7,500	98	100.00% Impervious Area

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

Subcatchment 4: Lots 4-6

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment 5: ROADWAY & LOT PERVIOUS

Runoff = 0.04 cfs @ 7.91 hrs, Volume= 0.016 af, Depth> 1.57"
 Routed to Reach 2-0 : CI 2-0 TO POND

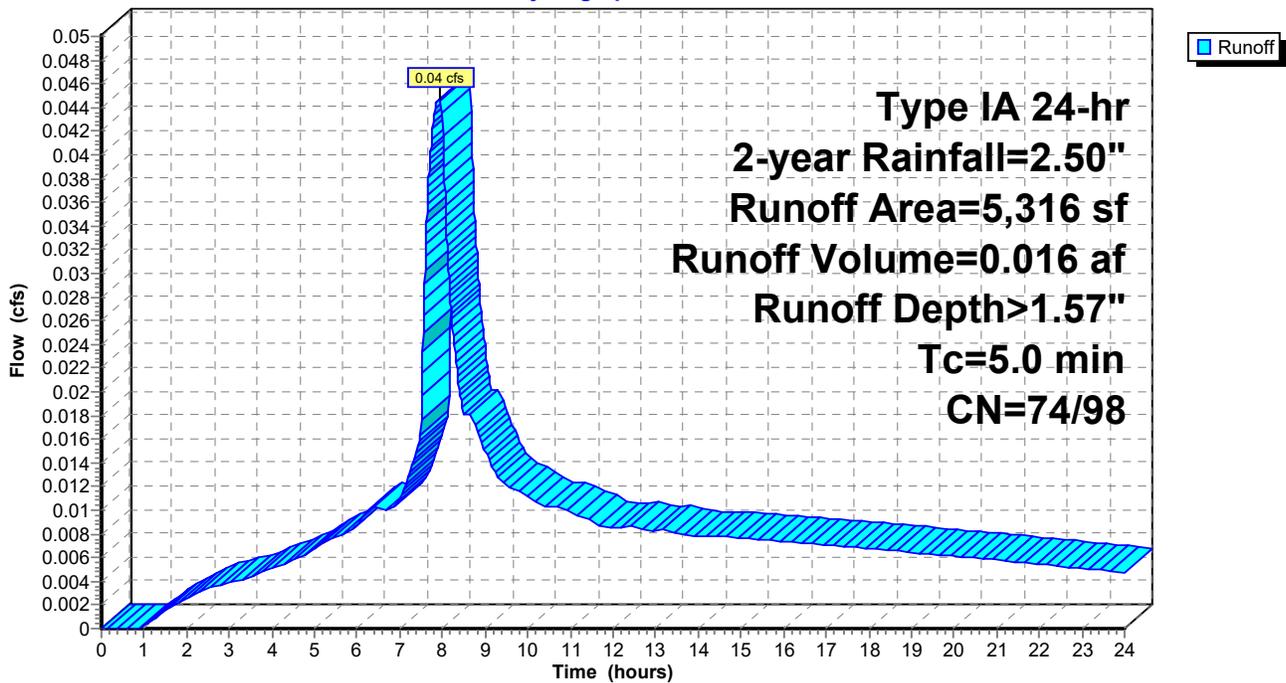
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

	Area (sf)	CN	Description
*	3,088	98	
*	2,228	74	
	5,316	88	Weighted Average
	2,228	74	41.91% Pervious Area
	3,088	98	58.09% Impervious Area

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

Subcatchment 5: ROADWAY & LOT PERVIOUS

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment A: PARKER ROAD

Runoff = 0.02 cfs @ 7.88 hrs, Volume= 0.005 af, Depth> 2.27"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

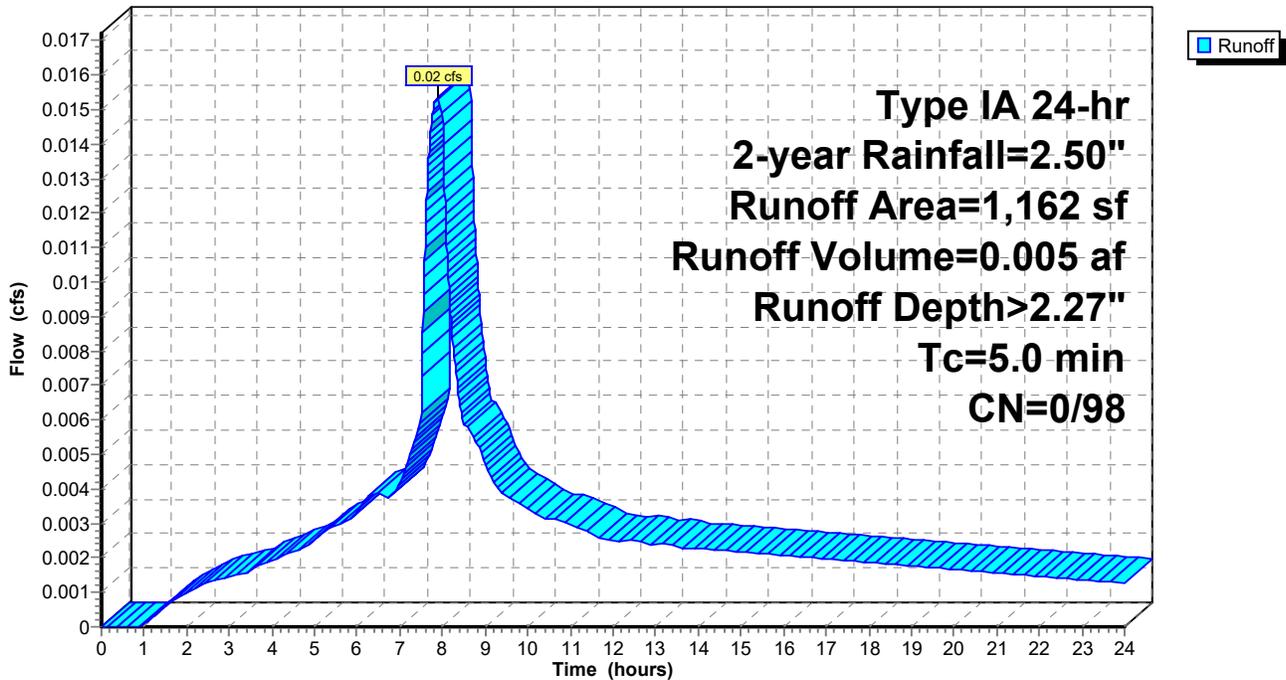
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

Area (sf)	CN	Description
* 1,162	98	
1,162	98	100.00% Impervious Area

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

Subcatchment A: PARKER ROAD

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment B: BUFFER AREA

Runoff = 0.07 cfs @ 8.05 hrs, Volume= 0.037 af, Depth> 0.98"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

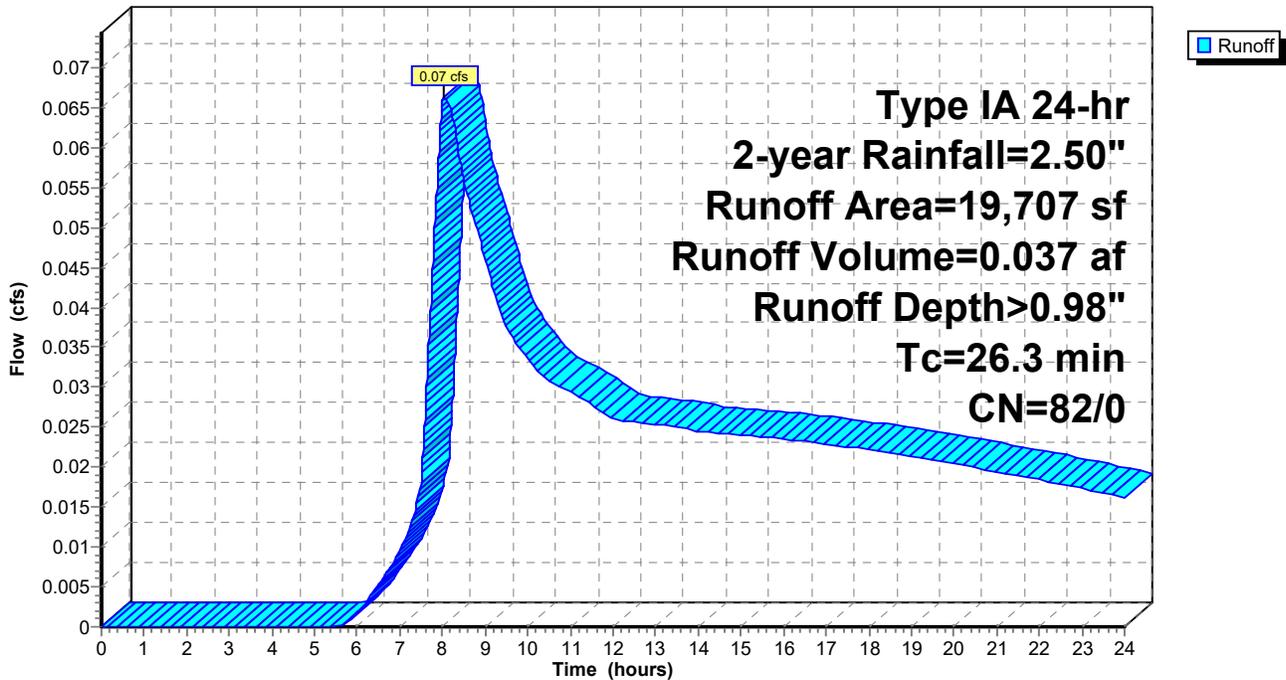
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

Area (sf)	CN	Description
* 19,707	82	
19,707	82	100.00% Pervious Area

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

Subcatchment B: BUFFER AREA

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment BP: Parker 1

Runoff = 0.27 cfs @ 7.90 hrs, Volume= 0.092 af, Depth> 1.74"
 Routed to Reach 1-2 : MH 1-2 to mh 1-1

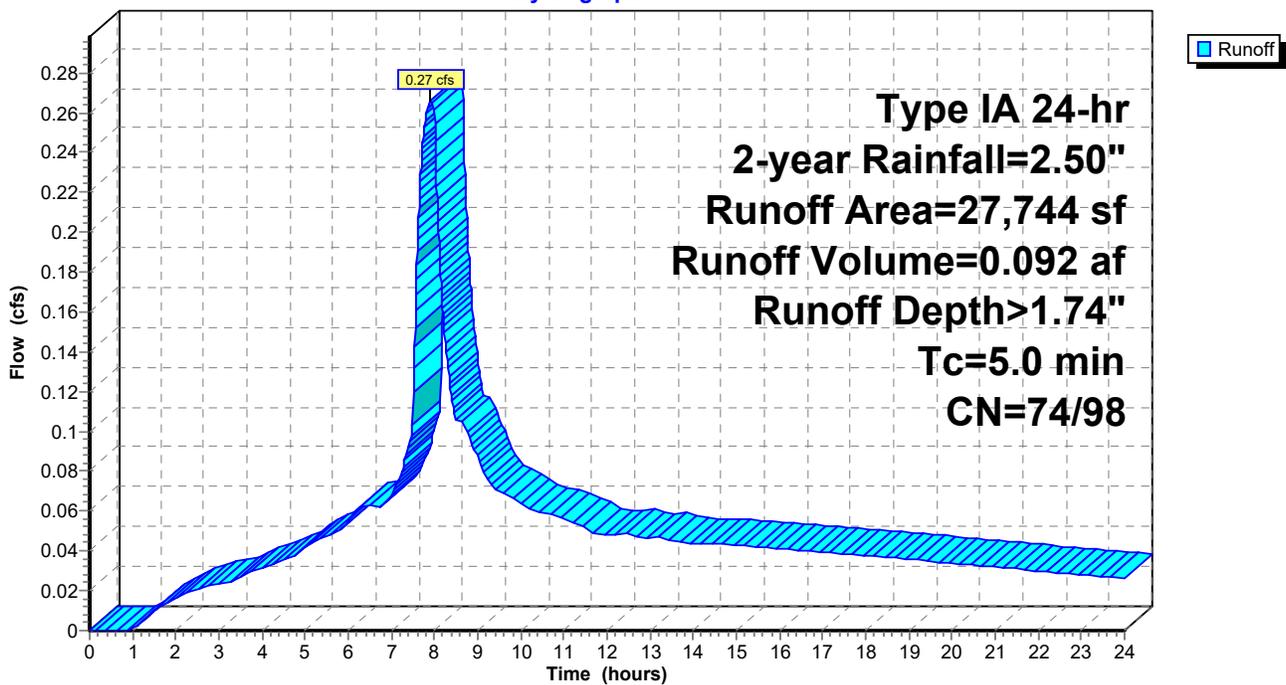
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

	Area (sf)	CN	Description
*	18,960	98	
*	8,784	74	
	27,744	90	Weighted Average
	8,784	74	31.66% Pervious Area
	18,960	98	68.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 10

Subcatchment BP: Parker 1

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment C: ONSITE TRIBUTARY TO BUFFER AREA

Runoff = 0.02 cfs @ 8.00 hrs, Volume= 0.011 af, Depth> 0.61"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

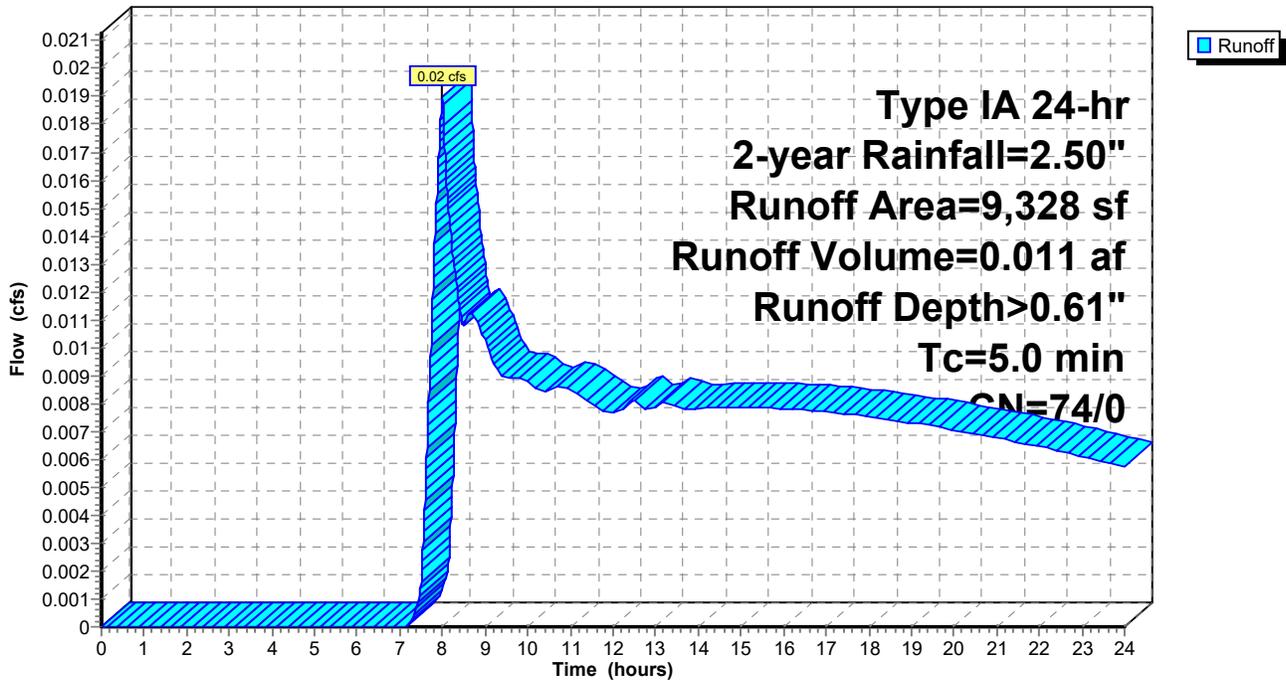
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

Area (sf)	CN	Description
* 9,328	74	
9,328	74	100.00% Pervious Area

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

Subcatchment C: ONSITE TRIBUTARY TO BUFFER AREA

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment D: PARKER ROAD BYPASS

Runoff = 0.04 cfs @ 7.91 hrs, Volume= 0.012 af, Depth> 1.68"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

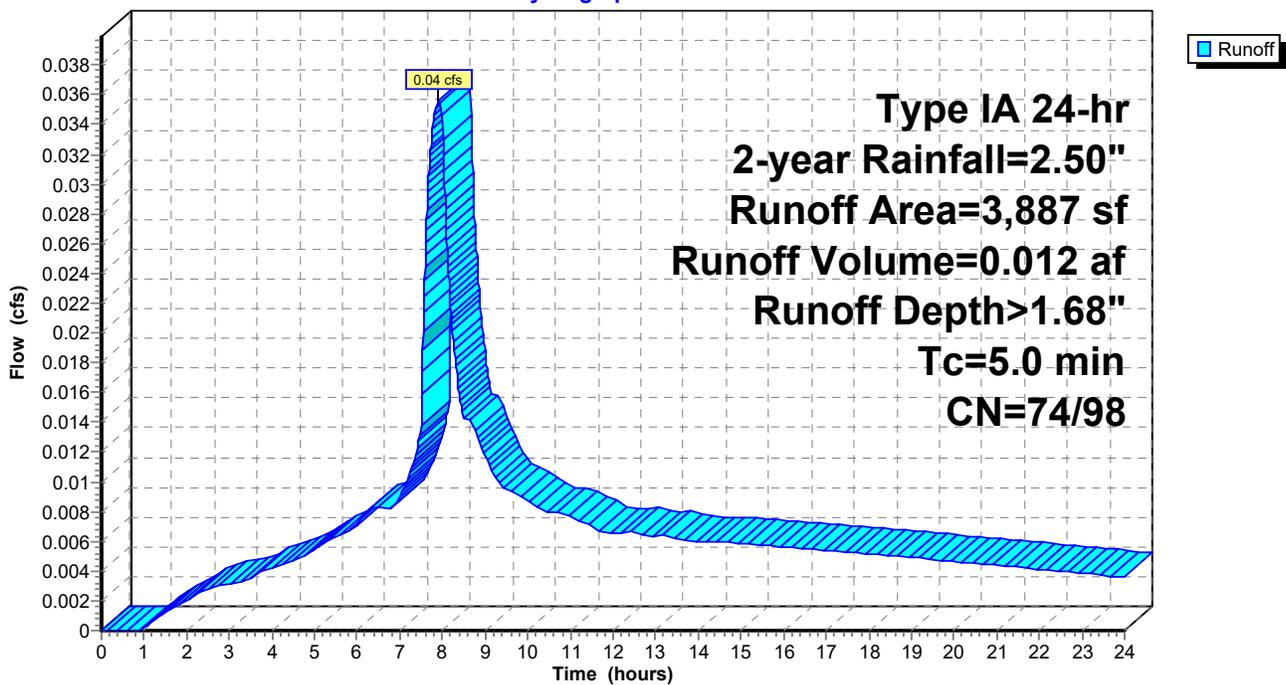
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

	Area (sf)	CN	Description
*	2,511	98	
*	1,376	74	
	3,887	90	Weighted Average
	1,376	74	35.40% Pervious Area
	2,511	98	64.60% Impervious Area

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

Subcatchment D: PARKER ROAD BYPASS

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Subcatchment Z: OFFSITE

Runoff = 0.18 cfs @ 8.01 hrs, Volume= 0.096 af, Depth> 0.91"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

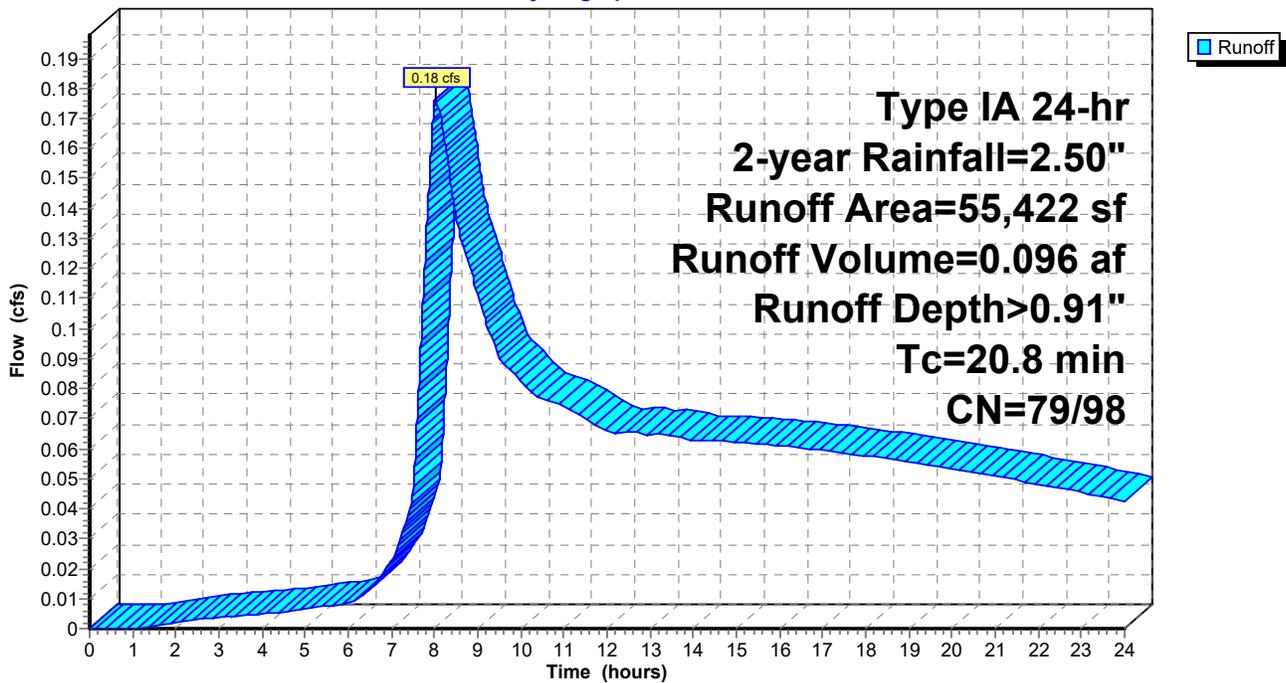
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 2-year Rainfall=2.50"

	Area (sf)	CN	Description
*	3,198	98	
*	52,224	79	
	55,422	80	Weighted Average
	52,224	79	94.23% Pervious Area
	3,198	98	5.77% Impervious Area

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

Subcatchment Z: OFFSITE

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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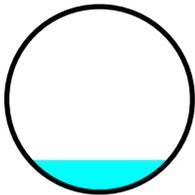
Summary for Reach 1-0: MH 1-0 TO POND

Inflow Area = 1.959 ac, 59.96% Impervious, Inflow Depth > 1.60" for 2-year event
Inflow = 0.74 cfs @ 7.92 hrs, Volume= 0.261 af
Outflow = 0.74 cfs @ 7.92 hrs, Volume= 0.261 af, Atten= 0%, Lag= 0.2 min
Routed to Pond 1-P : Stormwater Facility

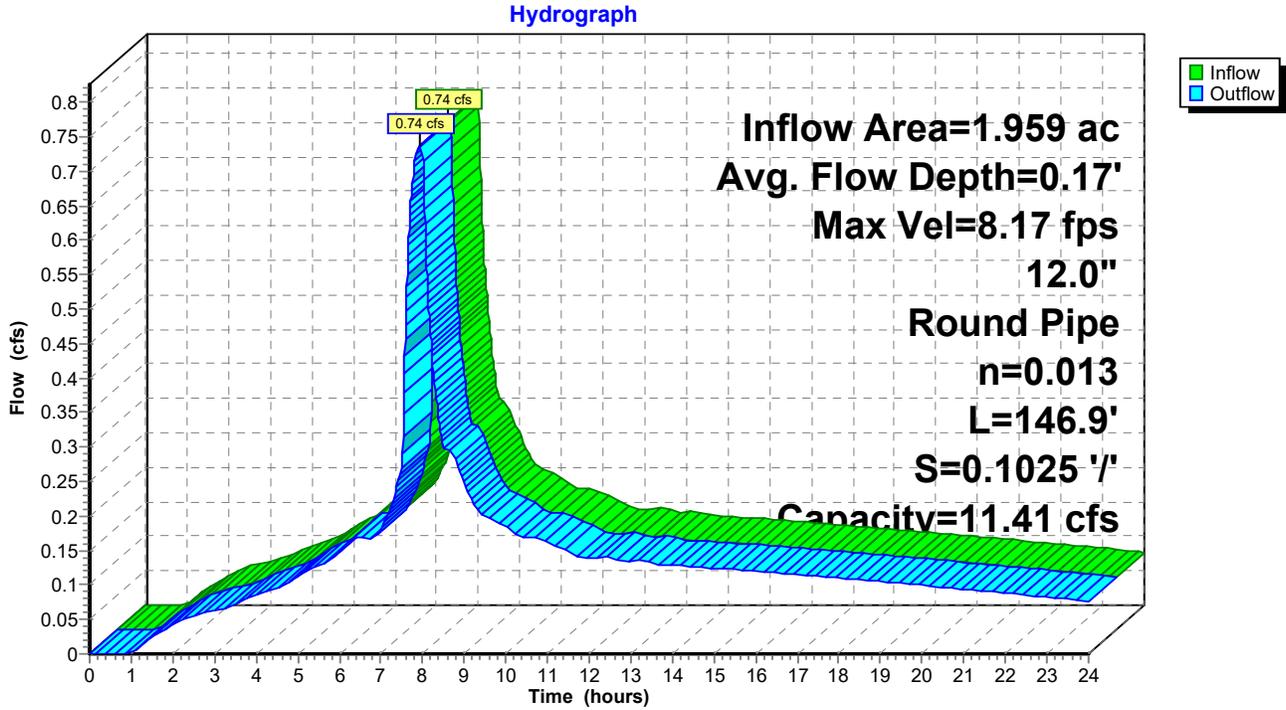
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.17 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 4.75 fps, Avg. Travel Time= 0.5 min

Peak Storage= 13 cf @ 7.92 hrs
Average Depth at Peak Storage= 0.17' , Surface Width= 0.76'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 11.41 cfs

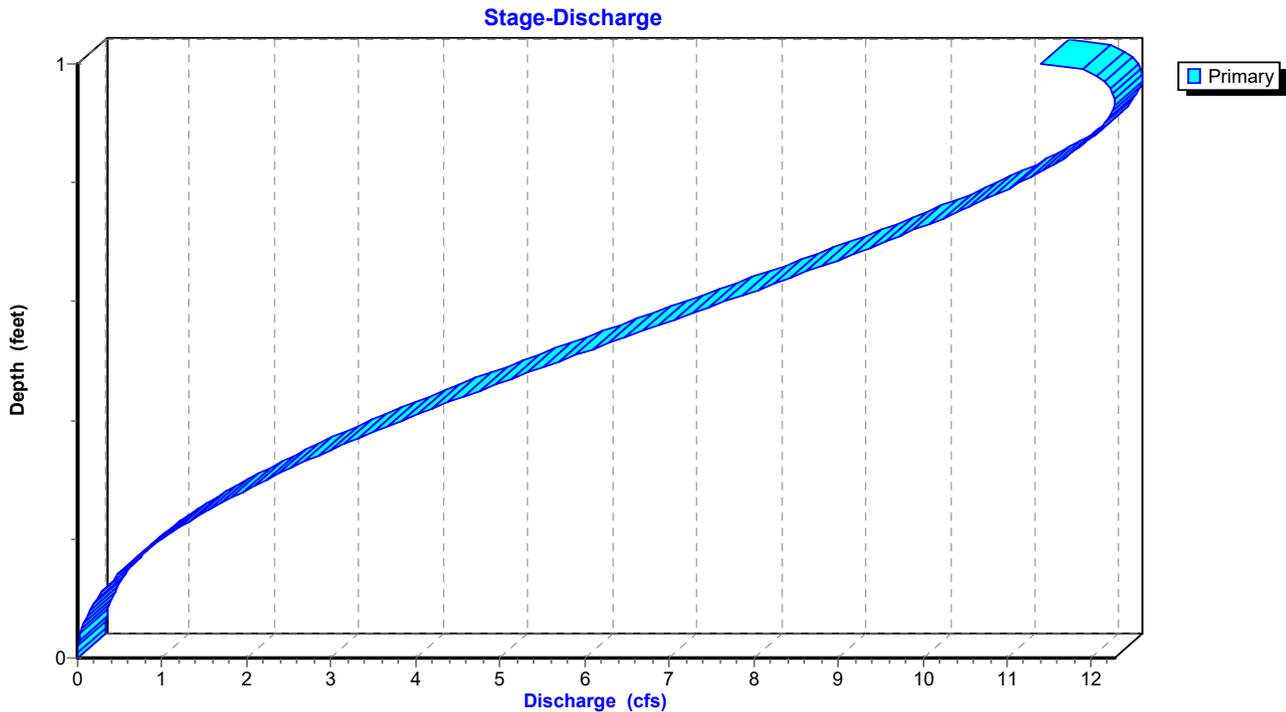
12.0" Round Pipe
n= 0.013
Length= 146.9' Slope= 0.1025 '/'
Inlet Invert= 537.38', Outlet Invert= 522.32'



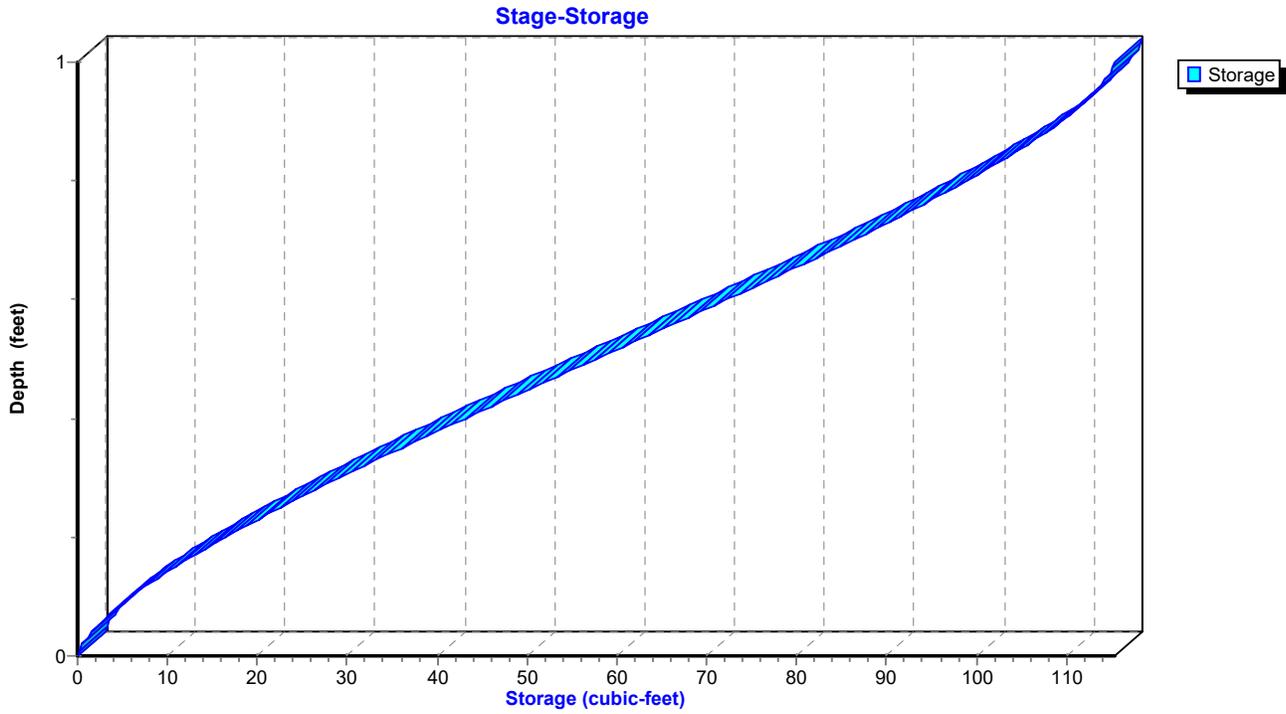
Reach 1-0: MH 1-0 TO POND



Reach 1-0: MH 1-0 TO POND



Reach 1-0: MH 1-0 TO POND



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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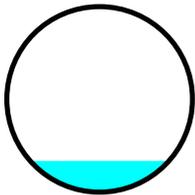
Summary for Reach 1-1: MH 1-1 TO MH 1-2

Inflow Area = 1.959 ac, 59.96% Impervious, Inflow Depth > 1.60" for 2-year event
Inflow = 0.74 cfs @ 7.92 hrs, Volume= 0.261 af
Outflow = 0.74 cfs @ 7.92 hrs, Volume= 0.261 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 1-0 : MH 1-0 TO POND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.51 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 4.94 fps, Avg. Travel Time= 0.6 min

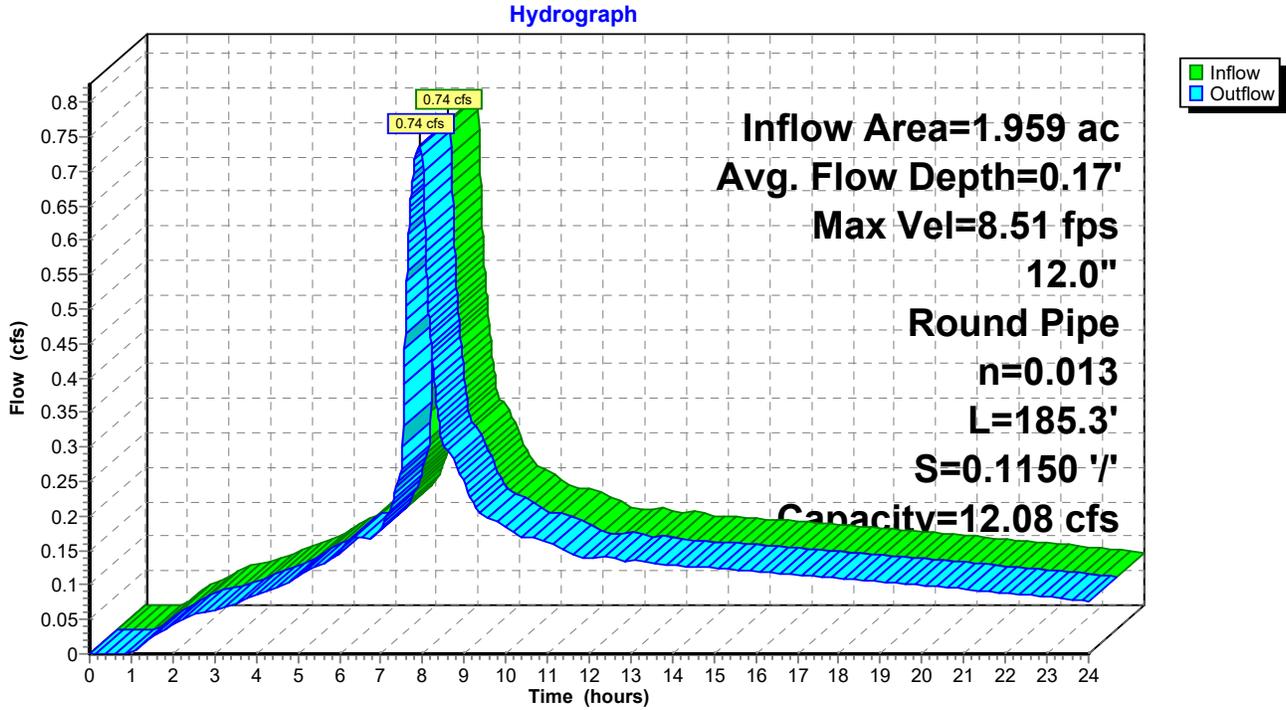
Peak Storage= 16 cf @ 7.92 hrs
Average Depth at Peak Storage= 0.17' , Surface Width= 0.75'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 12.08 cfs

12.0" Round Pipe
n= 0.013
Length= 185.3' Slope= 0.1150 '/'
Inlet Invert= 558.89', Outlet Invert= 537.58'

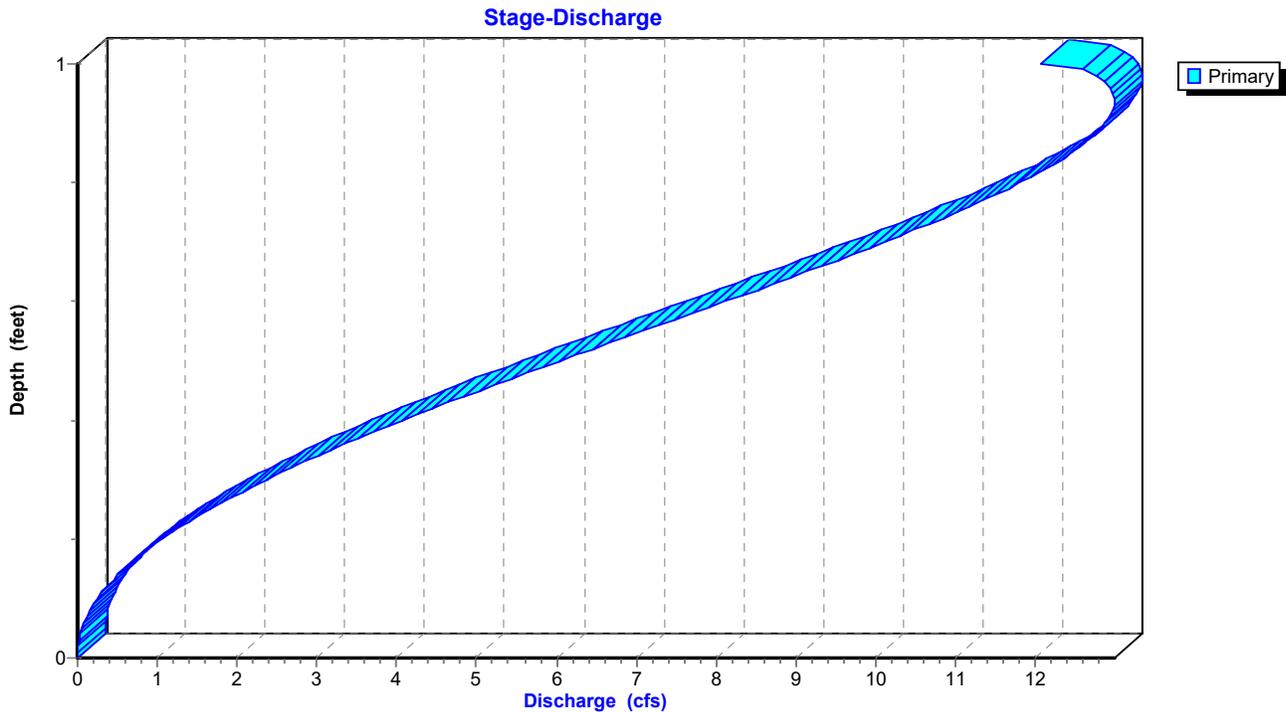


Reach 1-1: MH 1-1 TO MH 1-2

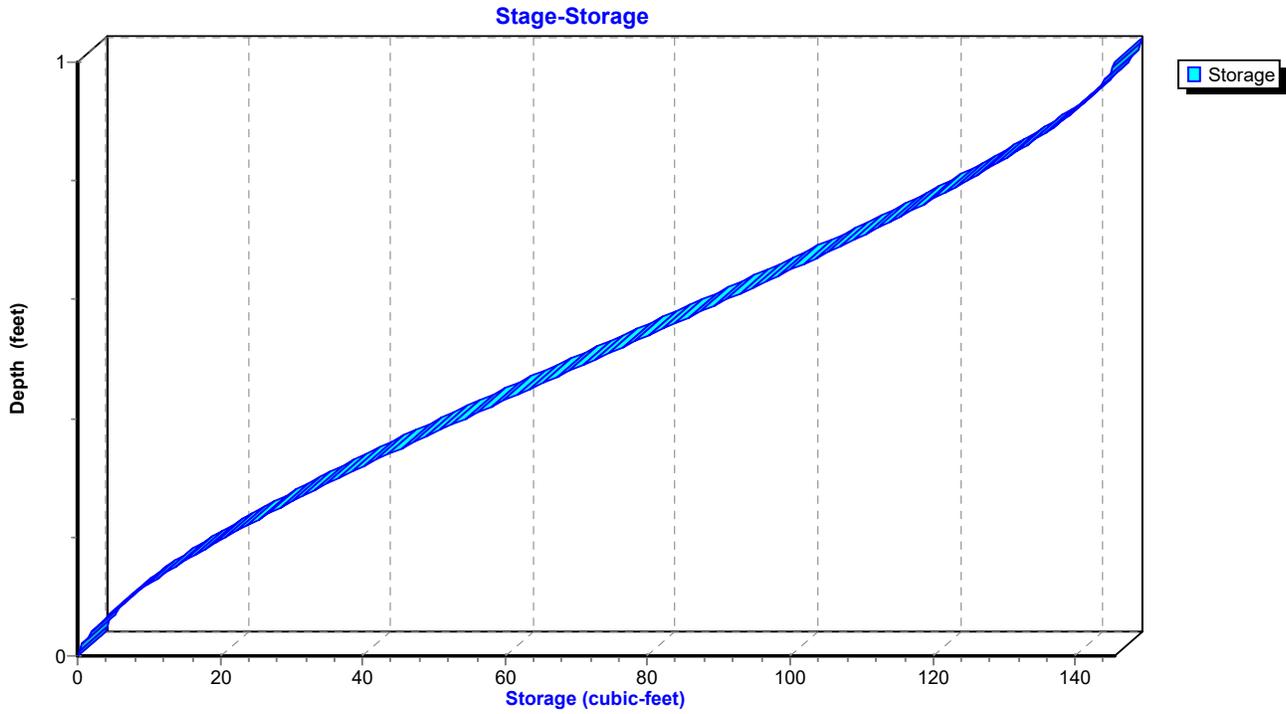
Reach 1-1: MH 1-1 TO MH 1-2



Reach 1-1: MH 1-1 TO MH 1-2



Reach 1-1: MH 1-1 TO MH 1-2



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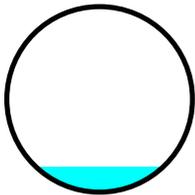
Summary for Reach 1-2: MH 1-2 to mh 1-1

Inflow Area = 0.809 ac, 75.08% Impervious, Inflow Depth > 1.85" for 2-year event
Inflow = 0.37 cfs @ 7.90 hrs, Volume= 0.125 af
Outflow = 0.37 cfs @ 7.90 hrs, Volume= 0.125 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 1-1 : MH 1-1 TO MH 1-2

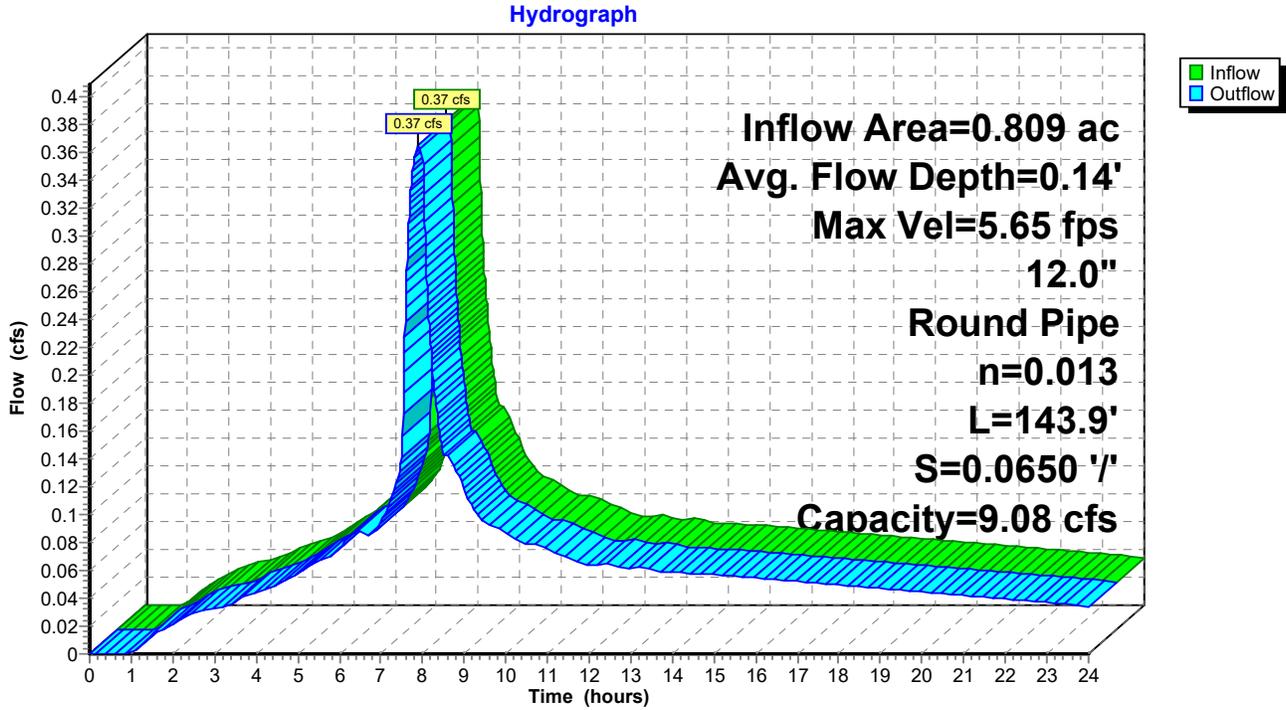
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.65 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.23 fps, Avg. Travel Time= 0.7 min

Peak Storage= 9 cf @ 7.90 hrs
Average Depth at Peak Storage= 0.14' , Surface Width= 0.69'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.08 cfs

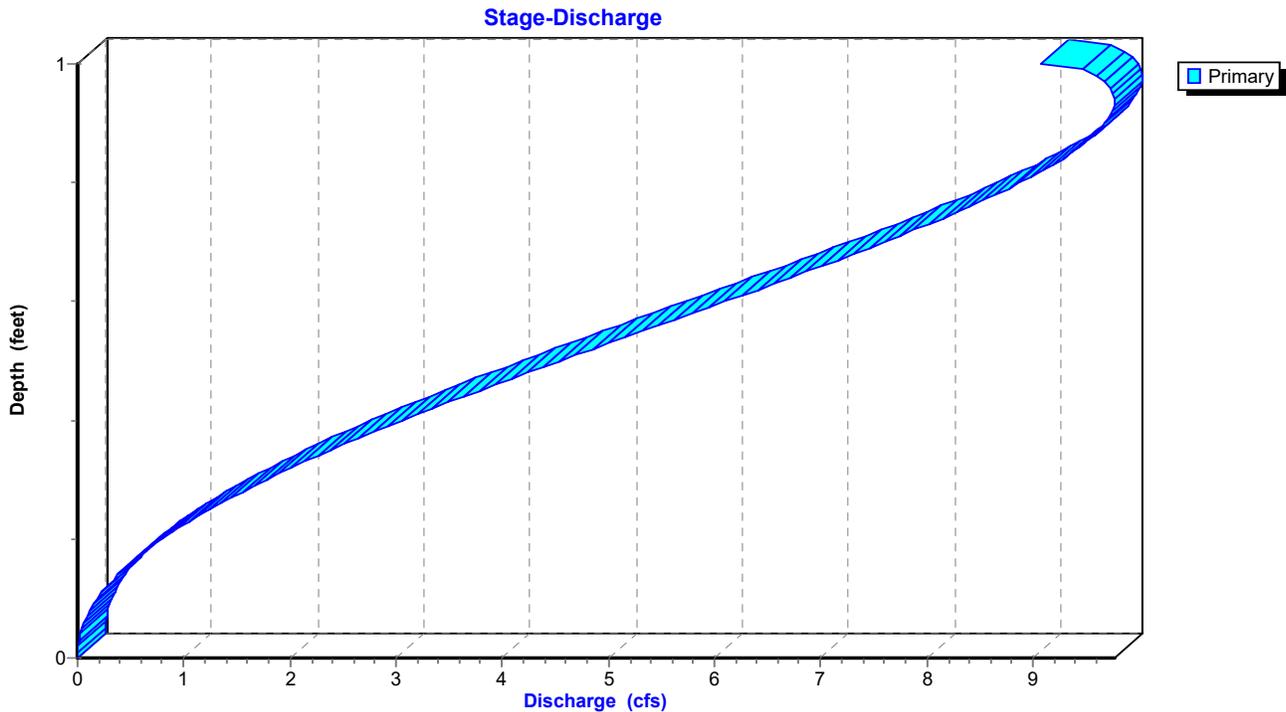
12.0" Round Pipe
n= 0.013
Length= 143.9' Slope= 0.0650 '/'
Inlet Invert= 568.44', Outlet Invert= 559.09'



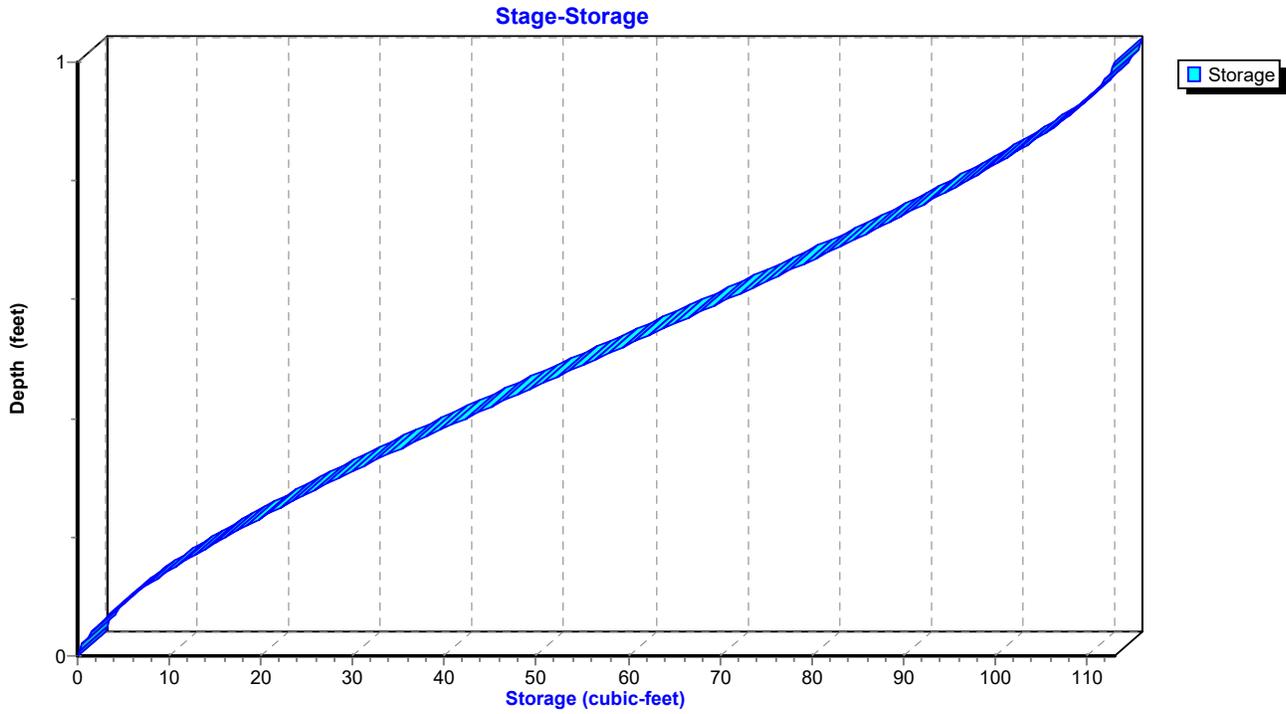
Reach 1-2: MH 1-2 to mh 1-1



Reach 1-2: MH 1-2 to mh 1-1



Reach 1-2: MH 1-2 to mh 1-1



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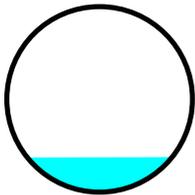
Summary for Reach 2-0: CI 2-0 TO POND

Inflow Area = 2.641 ac, 23.37% Impervious, Inflow Depth > 1.09" for 2-year event
Inflow = 0.55 cfs @ 8.00 hrs, Volume= 0.241 af
Outflow = 0.55 cfs @ 8.00 hrs, Volume= 0.241 af, Atten= 0%, Lag= 0.1 min
Routed to Pond 1-P : Stormwater Facility

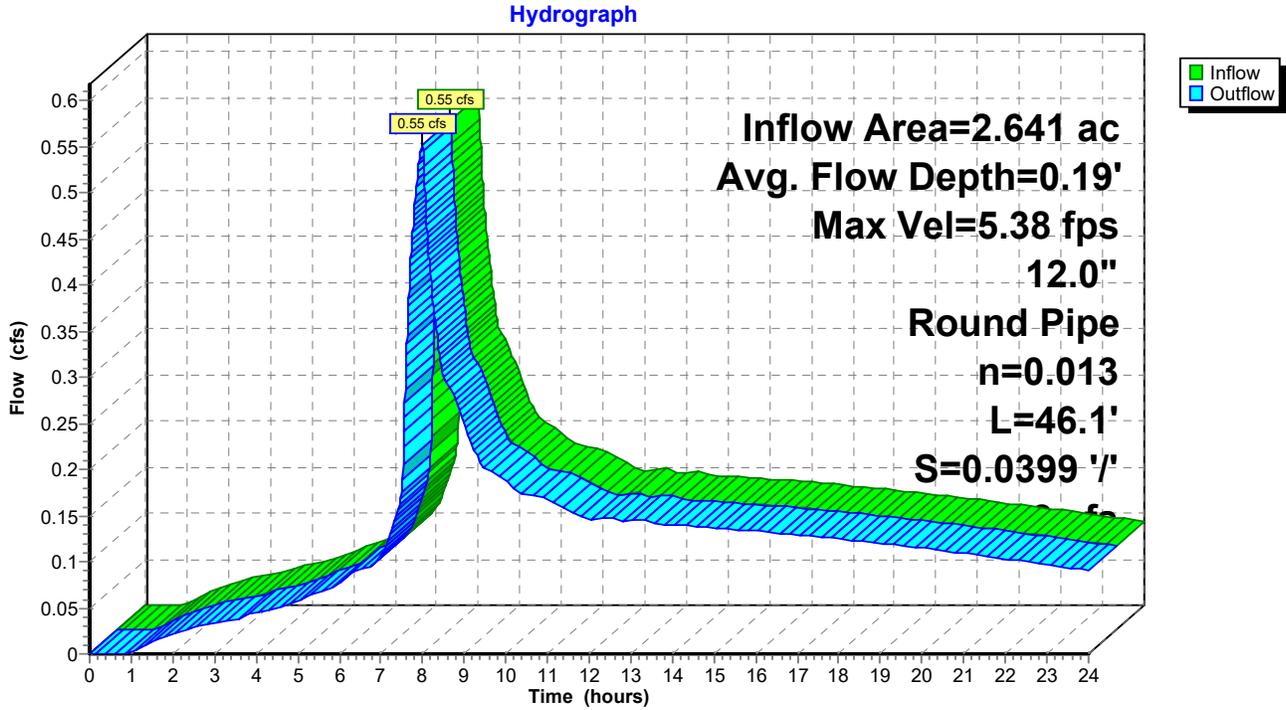
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.38 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.31 fps, Avg. Travel Time= 0.2 min

Peak Storage= 5 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.19' , Surface Width= 0.78'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.12 cfs

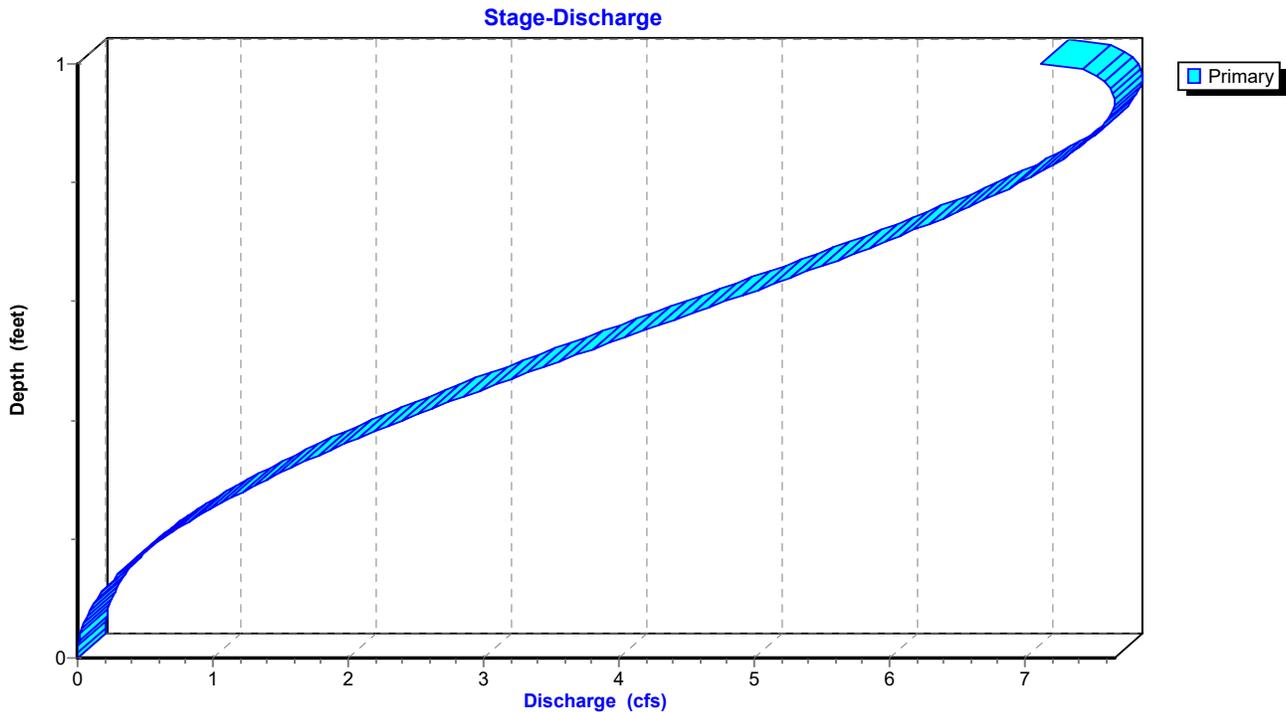
12.0" Round Pipe
n= 0.013
Length= 46.1' Slope= 0.0399 '/
Inlet Invert= 523.83', Outlet Invert= 521.99'



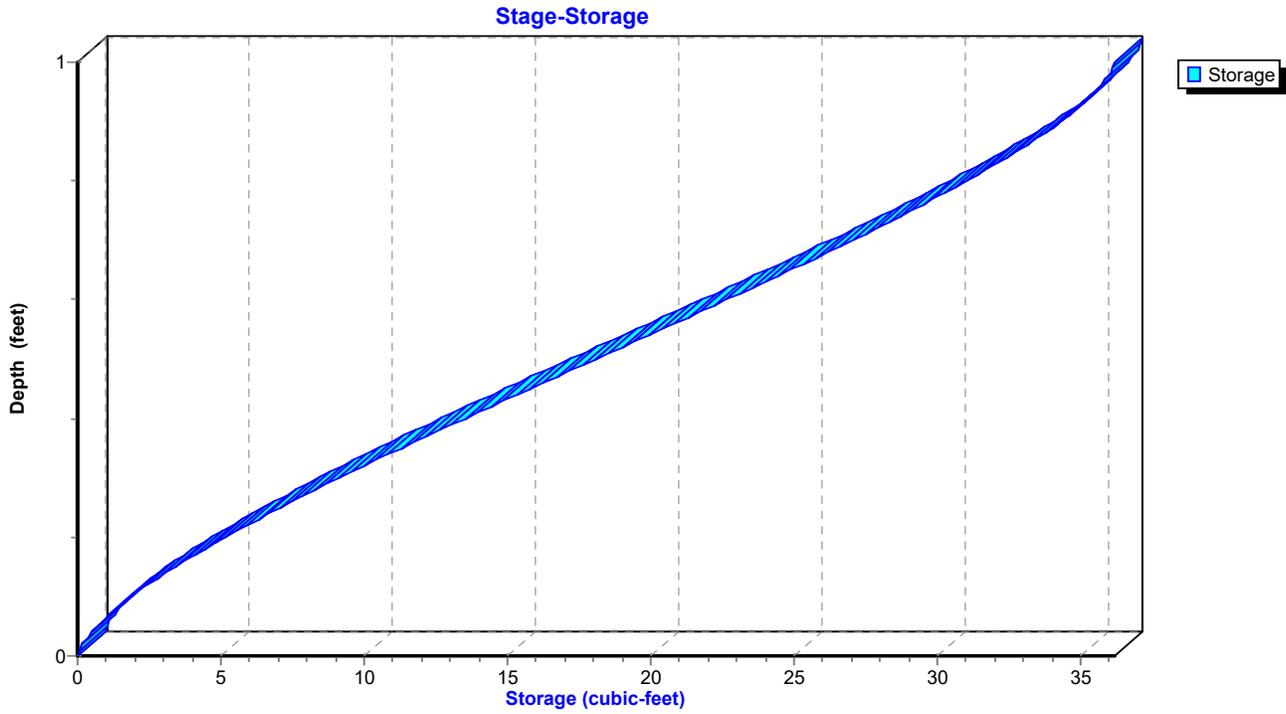
Reach 2-0: CI 2-0 TO POND



Reach 2-0: CI 2-0 TO POND



Reach 2-0: CI 2-0 TO POND



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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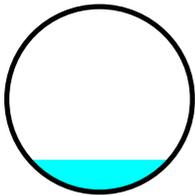
Summary for Reach 2-1: MH 2-1 TO CB 2-0

Inflow Area = 2.519 ac, 21.69% Impervious, Inflow Depth > 1.07" for 2-year event
 Inflow = 0.51 cfs @ 8.00 hrs, Volume= 0.225 af
 Outflow = 0.51 cfs @ 8.00 hrs, Volume= 0.225 af, Atten= 0%, Lag= 0.1 min
 Routed to Reach 2-0 : CI 2-0 TO POND

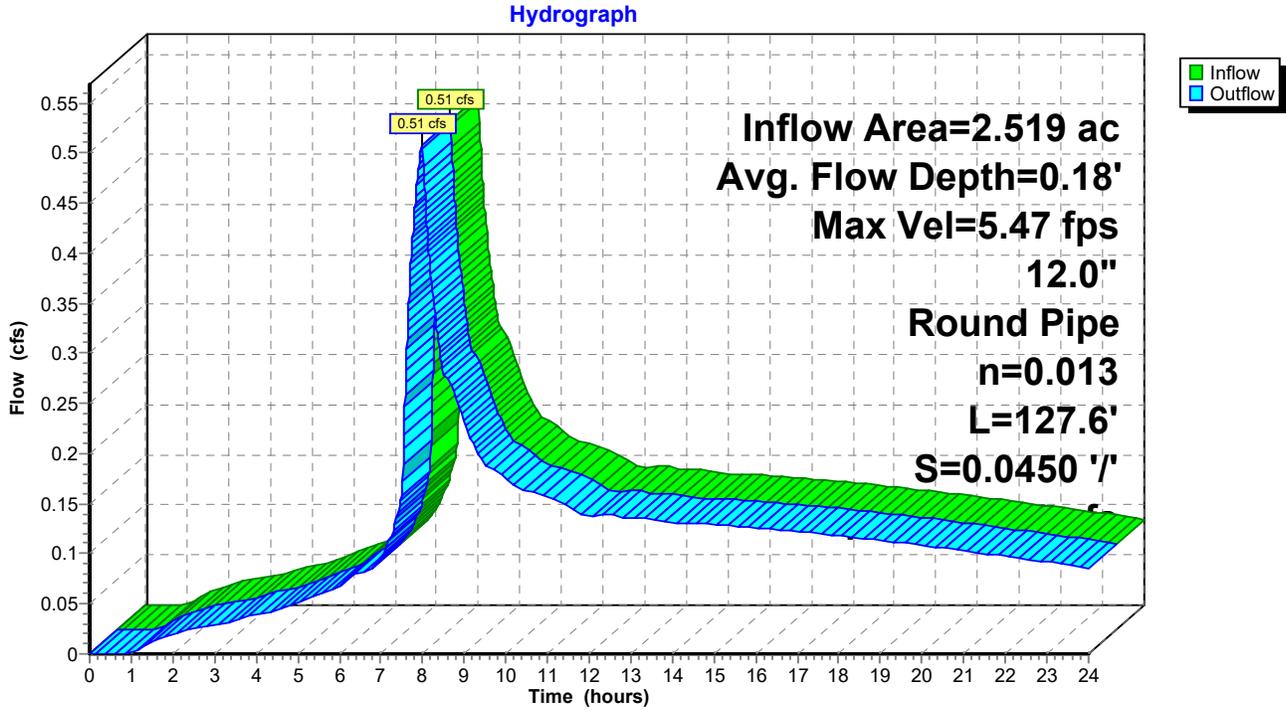
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Max. Velocity= 5.47 fps, Min. Travel Time= 0.4 min
 Avg. Velocity = 3.38 fps, Avg. Travel Time= 0.6 min

Peak Storage= 12 cf @ 8.00 hrs
 Average Depth at Peak Storage= 0.18' , Surface Width= 0.76'
 Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.56 cfs

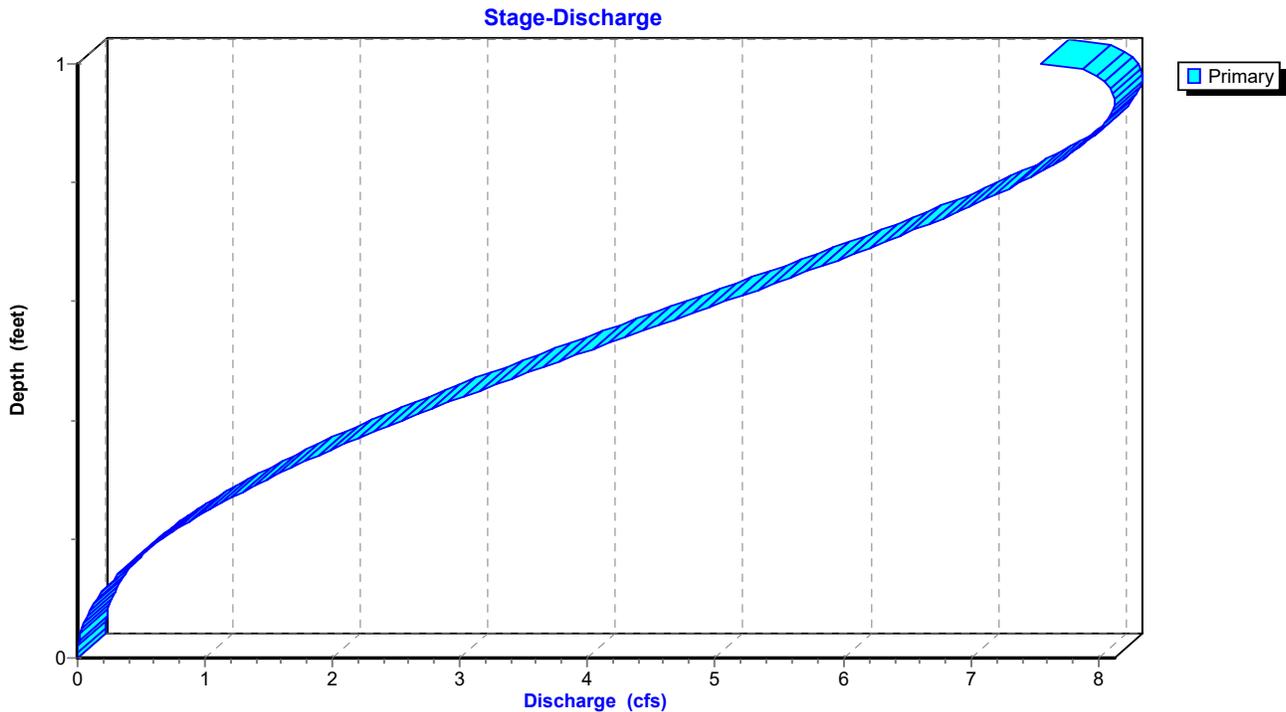
12.0" Round Pipe
 n= 0.013
 Length= 127.6' Slope= 0.0450 '/'
 Inlet Invert= 529.57', Outlet Invert= 523.83'



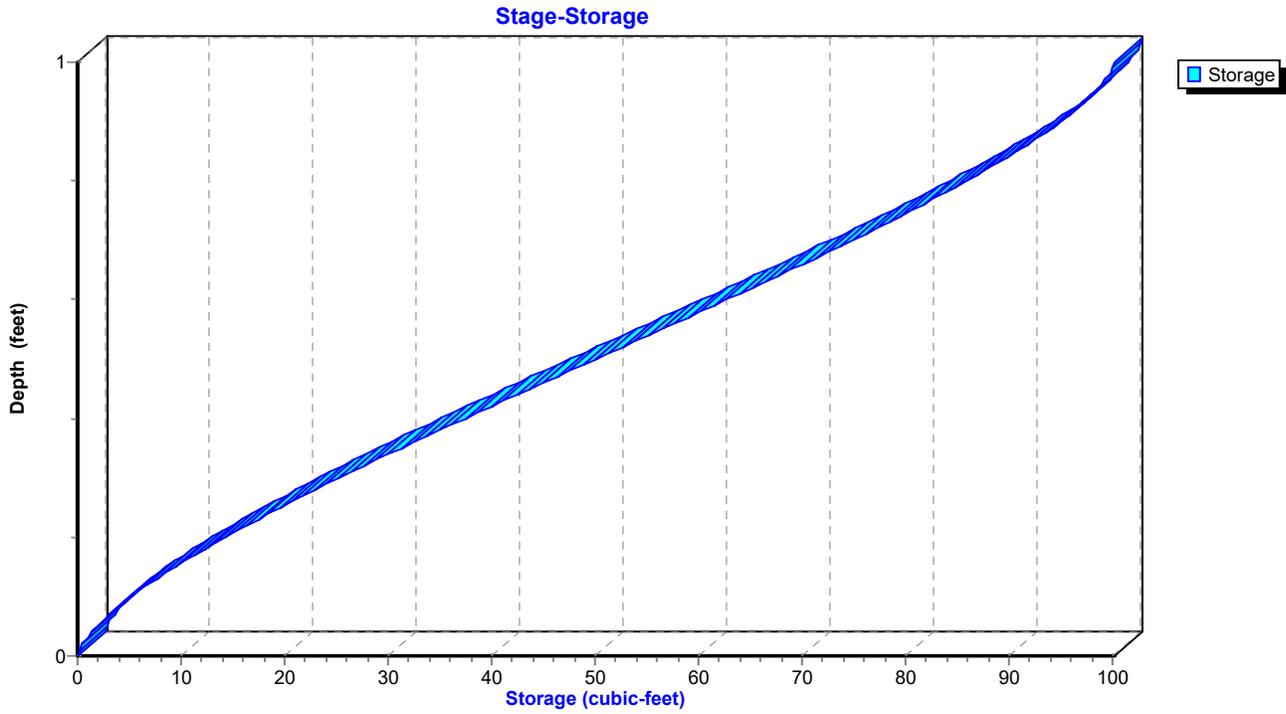
Reach 2-1: MH 2-1 TO CB 2-0



Reach 2-1: MH 2-1 TO CB 2-0



Reach 2-1: MH 2-1 TO CB 2-0



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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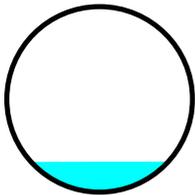
Summary for Reach 2-2: MH 2-2 TO MH 2-1

Inflow Area = 2.519 ac, 21.69% Impervious, Inflow Depth > 1.07" for 2-year event
Inflow = 0.51 cfs @ 8.00 hrs, Volume= 0.225 af
Outflow = 0.51 cfs @ 8.00 hrs, Volume= 0.225 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2-1 : MH 2-1 TO CB 2-0

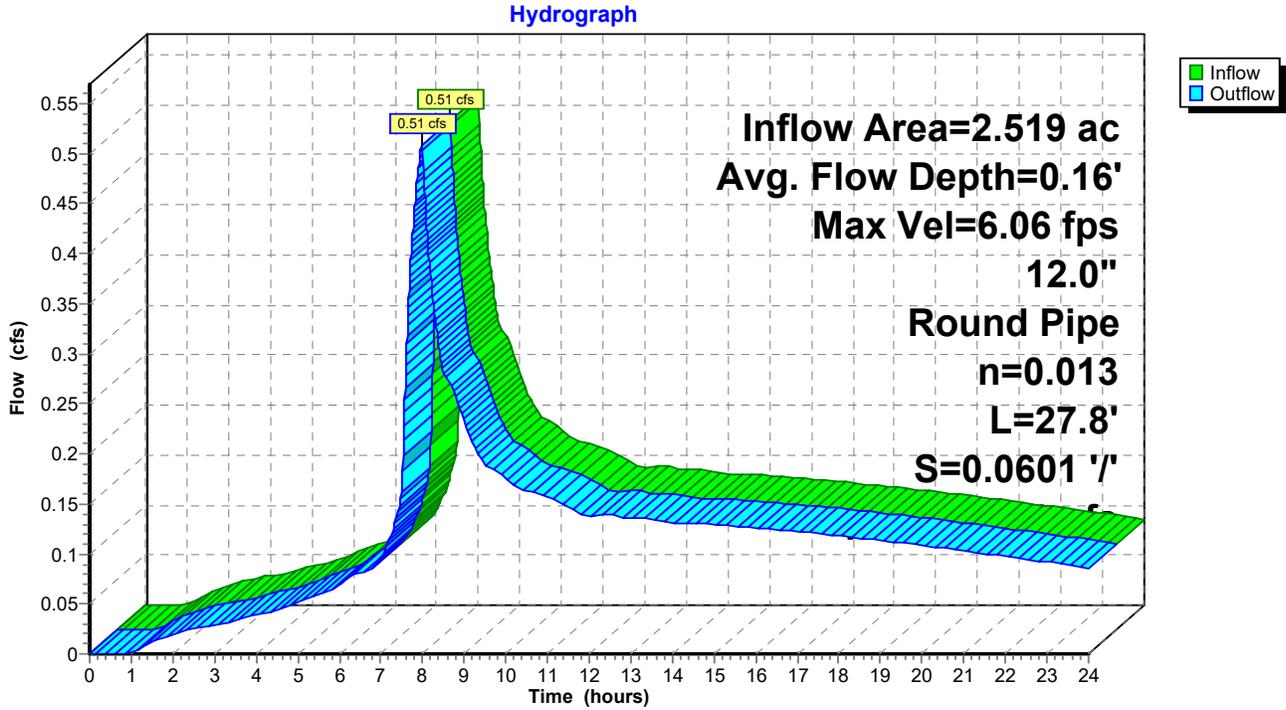
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.06 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.74 fps, Avg. Travel Time= 0.1 min

Peak Storage= 2 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.16' , Surface Width= 0.74'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.73 cfs

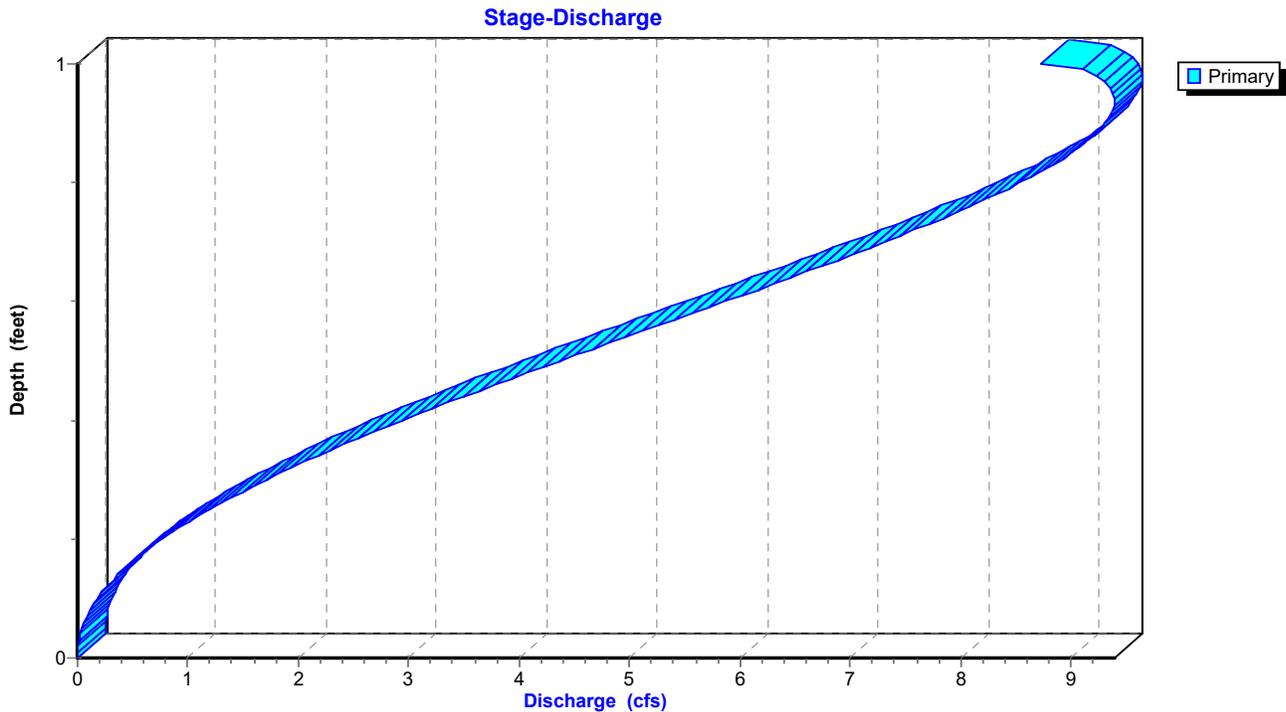
12.0" Round Pipe
n= 0.013
Length= 27.8' Slope= 0.0601 '/'
Inlet Invert= 531.44', Outlet Invert= 529.77'



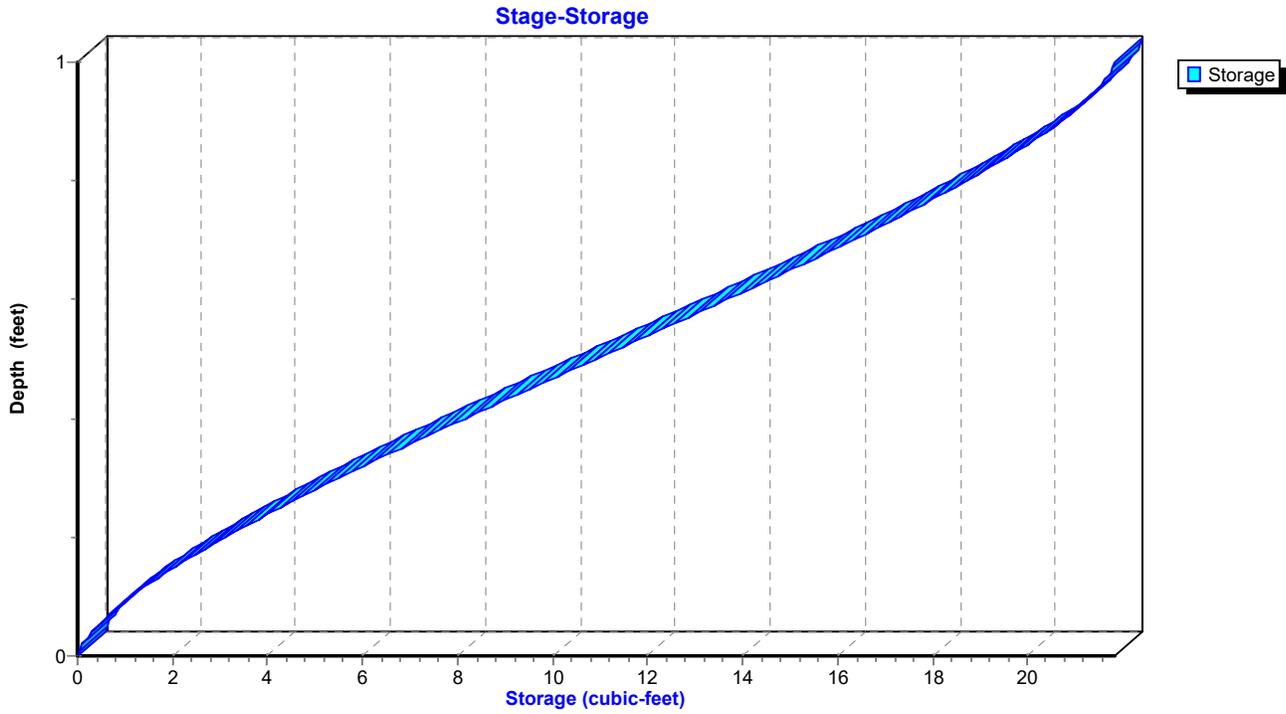
Reach 2-2: MH 2-2 TO MH 2-1



Reach 2-2: MH 2-2 TO MH 2-1



Reach 2-2: MH 2-2 TO MH 2-1



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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Summary for Pond 1-P: Stormwater Facility

Inflow Area = 4.939 ac, 36.28% Impervious, Inflow Depth > 1.26" for 2-year event
 Inflow = 1.31 cfs @ 7.97 hrs, Volume= 0.519 af
 Outflow = 0.33 cfs @ 11.34 hrs, Volume= 0.476 af, Atten= 75%, Lag= 202.1 min
 Primary = 0.33 cfs @ 11.34 hrs, Volume= 0.476 af
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 523.80' @ 11.34 hrs Surf.Area= 3,612 sf Storage= 4,381 cf

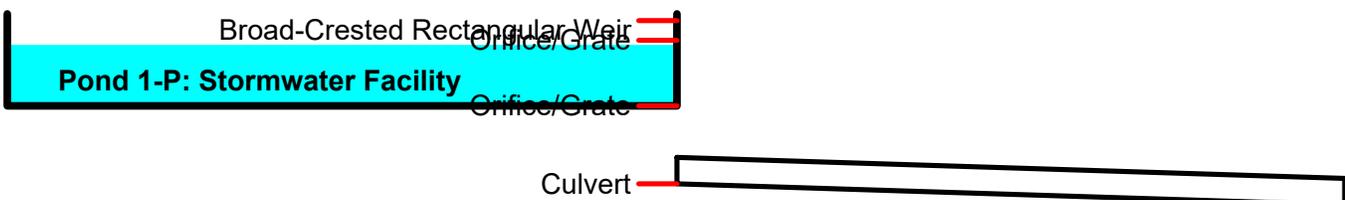
Plug-Flow detention time= 160.4 min calculated for 0.476 af (92% of inflow)
 Center-of-Mass det. time= 105.8 min (852.3 - 746.5)

Volume	Invert	Avail.Storage	Storage Description
#1	521.50'	9,545 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
521.50	5	0	0
522.00	652	164	164
522.50	1,588	560	724
523.00	2,740	1,082	1,806
523.50	3,268	1,502	3,308
524.00	3,837	1,776	5,085
524.50	4,450	2,072	7,156
525.00	5,106	2,389	9,545

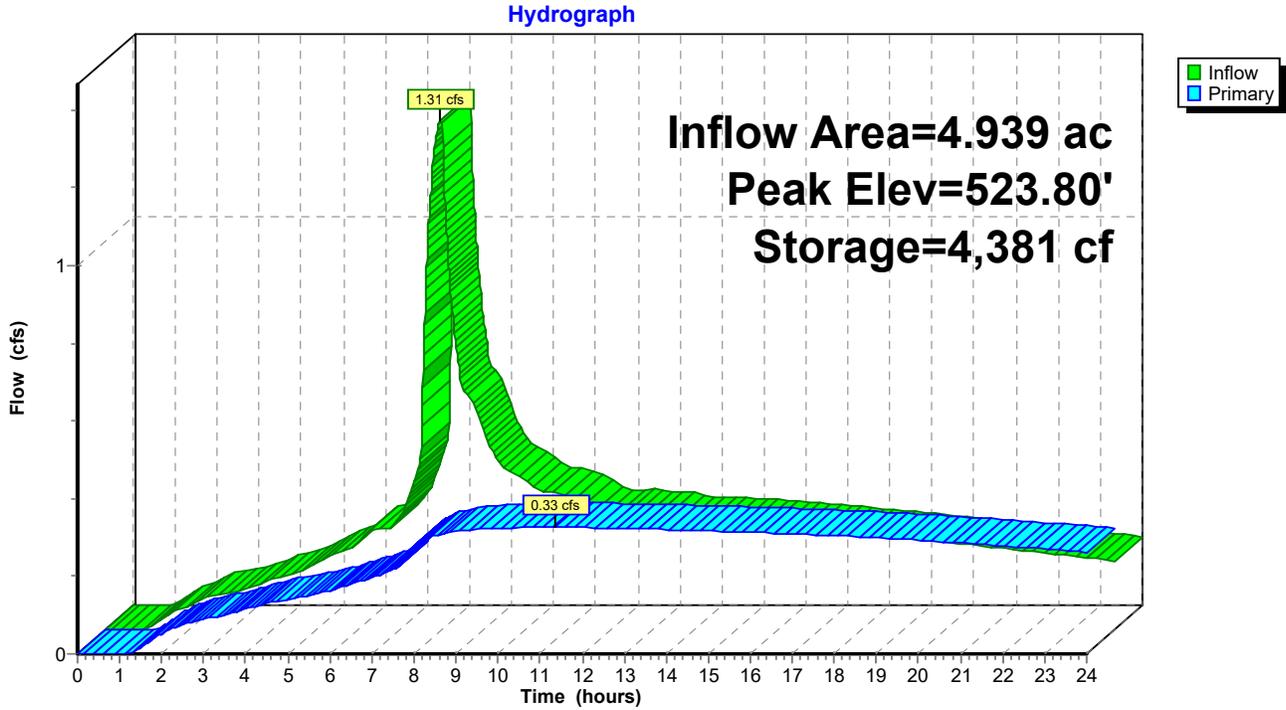
Device	Routing	Invert	Outlet Devices
#1	Primary	518.53'	12.0" Round Culvert L= 40.2' Ke= 0.500 Inlet / Outlet Invert= 518.53' / 517.73' S= 0.0199 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	521.50'	2.9" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	524.00'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	524.75'	2.0' long Broad-Crested Rectangular Weir Head (feet) 0.49 0.98 1.48 1.97 2.46 2.49 Coef. (English) 2.84 3.13 3.26 3.30 3.31 3.31

Primary OutFlow Max=0.33 cfs @ 11.34 hrs HW=523.80' TW=0.00' (Dynamic Tailwater)

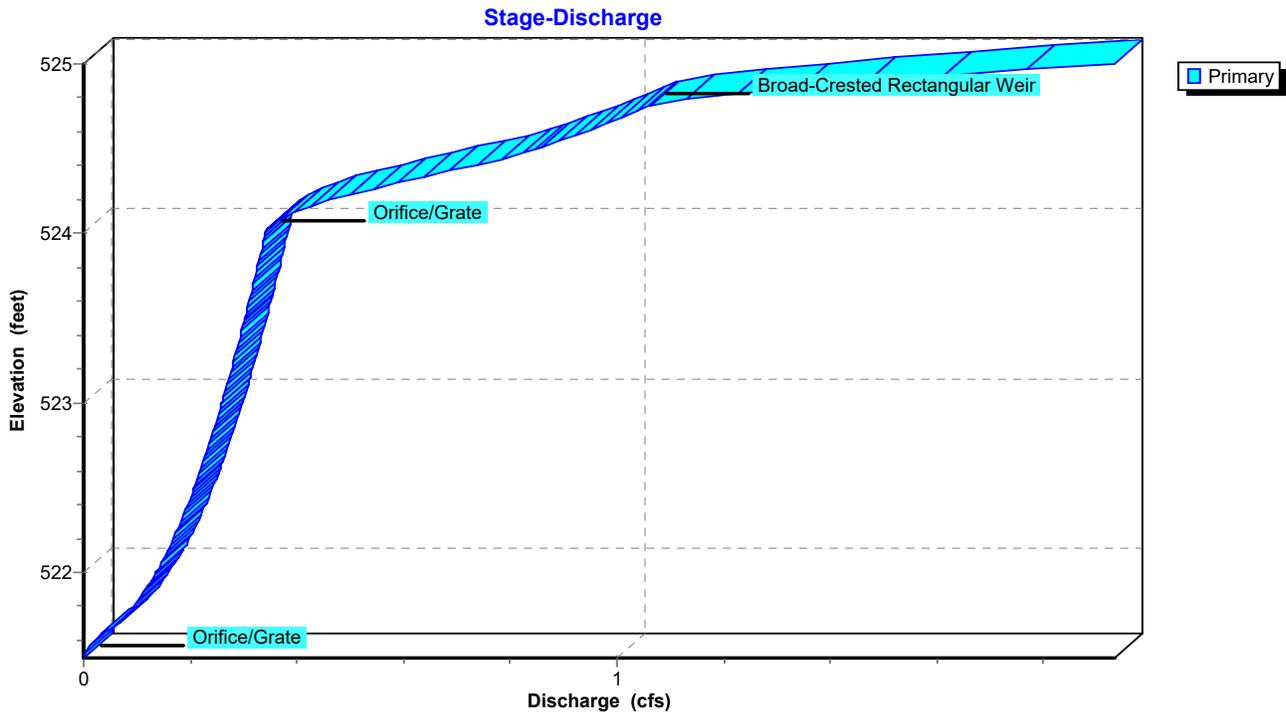
- 1=Culvert (Passes 0.33 cfs of 8.26 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.33 cfs @ 7.11 fps)
- 3=Orifice/Grate (Controls 0.00 cfs)
- 4=Broad-Crested Rectangular Weir(Controls 0.00 cfs)



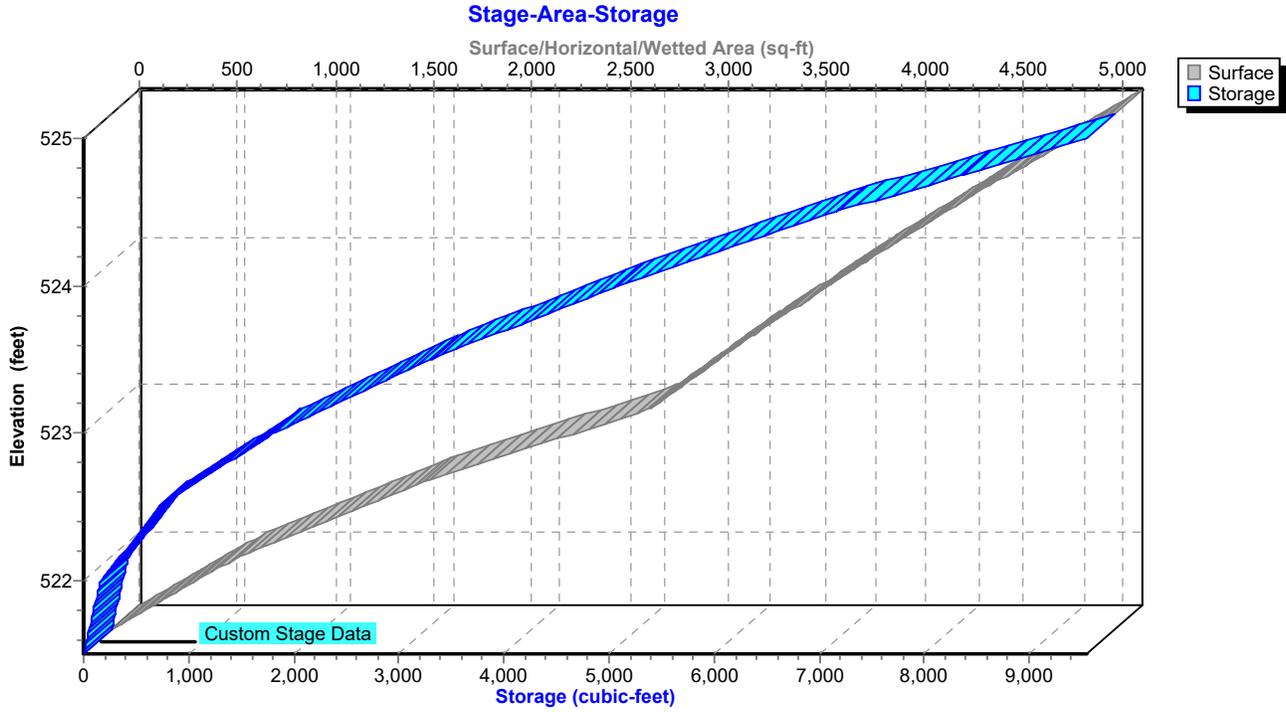
Pond 1-P: Stormwater Facility



Pond 1-P: Stormwater Facility



Pond 1-P: Stormwater Facility



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-26 Type IA 24-hr 2-year Rainfall=2.50"

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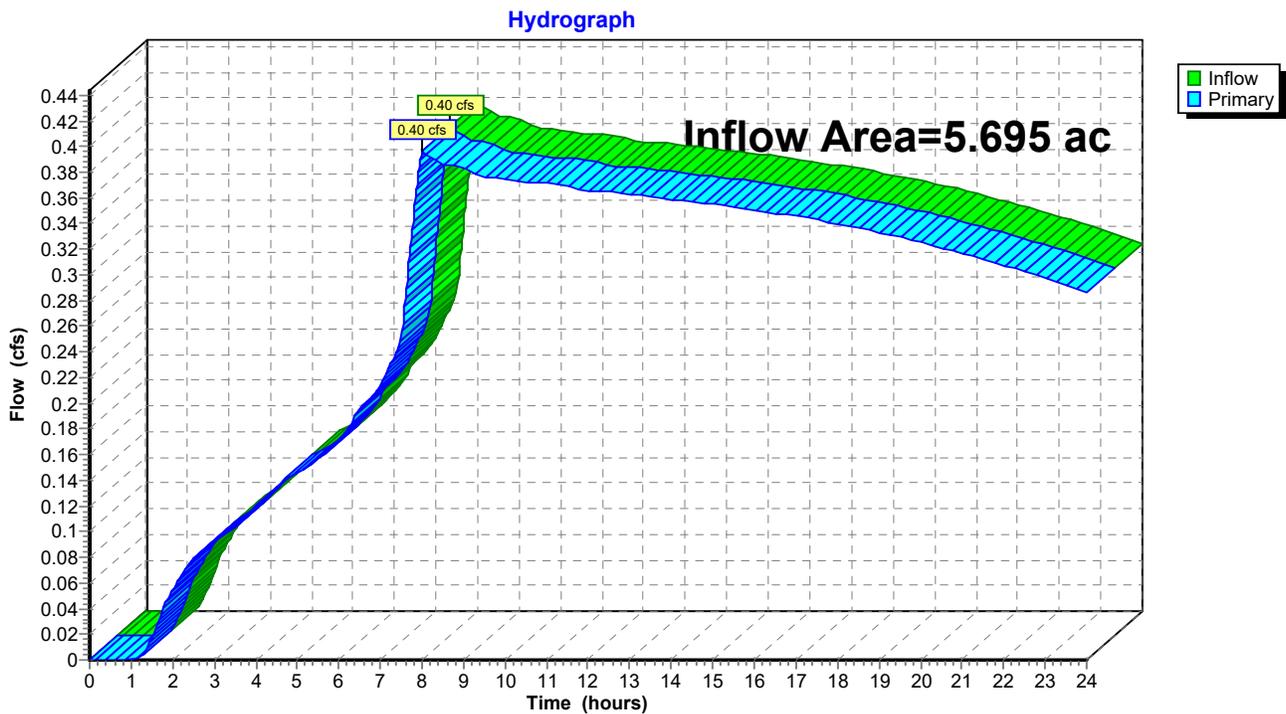
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Summary for Link TOTAL: POST DEVELOPED RELEASE RATE

Inflow Area = 5.695 ac, 32.48% Impervious, Inflow Depth > 1.13" for 2-year event
Inflow = 0.40 cfs @ 8.01 hrs, Volume= 0.537 af
Primary = 0.40 cfs @ 8.01 hrs, Volume= 0.537 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link TOTAL: POST DEVELOPED RELEASE RATE



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1:	Runoff Area=14,778 sf 0.00% Impervious Runoff Depth>1.20" Tc=5.0 min CN=74/0 Runoff=0.08 cfs 0.034 af
Subcatchment2: LOT 1&12 IMP ROAD &	Runoff Area=53,136 sf 36.58% Impervious Runoff Depth>1.94" Tc=5.0 min CN=74/98 Runoff=0.54 cfs 0.197 af
Subcatchment3: LOTS 2,3,7-11 IMPR	Runoff Area=50,099 sf 49.33% Impervious Runoff Depth>2.19" Tc=5.0 min CN=74/98 Runoff=0.59 cfs 0.210 af
Subcatchment4: Lots 4-6	Runoff Area=7,500 sf 100.00% Impervious Runoff Depth>3.21" Tc=5.0 min CN=0/98 Runoff=0.14 cfs 0.046 af
Subcatchment5: ROADWAY&LOT	Runoff Area=5,316 sf 58.09% Impervious Runoff Depth>2.37" Tc=5.0 min CN=74/98 Runoff=0.07 cfs 0.024 af
SubcatchmentA: PARKER ROAD	Runoff Area=1,162 sf 100.00% Impervious Runoff Depth>3.21" Tc=5.0 min CN=0/98 Runoff=0.02 cfs 0.007 af
SubcatchmentB: BUFFER AREA	Runoff Area=19,707 sf 0.00% Impervious Runoff Depth>1.72" Tc=26.3 min CN=82/0 Runoff=0.13 cfs 0.065 af
SubcatchmentBP: Parker 1	Runoff Area=27,744 sf 68.34% Impervious Runoff Depth>2.58" Tc=5.0 min CN=74/98 Runoff=0.40 cfs 0.137 af
SubcatchmentC: ONSITE TRIBUTARYTO	Runoff Area=9,328 sf 0.00% Impervious Runoff Depth>1.20" Tc=5.0 min CN=74/0 Runoff=0.05 cfs 0.021 af
SubcatchmentD: PARKER ROAD BYPASS	Runoff Area=3,887 sf 64.60% Impervious Runoff Depth>2.50" Tc=5.0 min CN=74/98 Runoff=0.05 cfs 0.019 af
SubcatchmentZ: OFFSITE	Runoff Area=55,422 sf 5.77% Impervious Runoff Depth>1.61" Tc=20.8 min CN=79/98 Runoff=0.36 cfs 0.170 af
Reach 1-0: MH 1-0 TO POND	Avg. Flow Depth=0.21' Max Vel=9.25 fps Inflow=1.13 cfs 0.393 af 12.0" Round Pipe n=0.013 L=146.9' S=0.1025 '/' Capacity=11.41 cfs Outflow=1.13 cfs 0.393 af
Reach 1-1: MH 1-1 TO MH 1-2	Avg. Flow Depth=0.21' Max Vel=9.64 fps Inflow=1.13 cfs 0.393 af 12.0" Round Pipe n=0.013 L=185.3' S=0.1150 '/' Capacity=12.08 cfs Outflow=1.13 cfs 0.393 af
Reach 1-2: MH 1-2 to mh 1-1	Avg. Flow Depth=0.16' Max Vel=6.33 fps Inflow=0.54 cfs 0.183 af 12.0" Round Pipe n=0.013 L=143.9' S=0.0650 '/' Capacity=9.08 cfs Outflow=0.54 cfs 0.183 af
Reach 2-0: CI 2-0 TO POND	Avg. Flow Depth=0.25' Max Vel=6.37 fps Inflow=0.98 cfs 0.398 af 12.0" Round Pipe n=0.013 L=46.1' S=0.0399 '/' Capacity=7.12 cfs Outflow=0.98 cfs 0.398 af
Reach 2-1: MH 2-1 TO CB 2-0	Avg. Flow Depth=0.24' Max Vel=6.51 fps Inflow=0.92 cfs 0.374 af 12.0" Round Pipe n=0.013 L=127.6' S=0.0450 '/' Capacity=7.56 cfs Outflow=0.92 cfs 0.374 af

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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Reach 2-2: MH 2-2 TO MH 2-1 Avg. Flow Depth=0.22' Max Vel=7.21 fps Inflow=0.92 cfs 0.374 af
12.0" Round Pipe n=0.013 L=27.8' S=0.0601 '/' Capacity=8.73 cfs Outflow=0.92 cfs 0.374 af

Pond 1-P: Stormwater Facility Peak Elev=524.44' Storage=6,902 cf Inflow=2.18 cfs 0.825 af
Outflow=0.78 cfs 0.714 af

Link TOTAL: POST DEVELOPED RELEASE RATE Inflow=0.90 cfs 0.819 af
Primary=0.90 cfs 0.819 af

Total Runoff Area = 5.695 ac Runoff Volume = 0.930 af Average Runoff Depth = 1.96"
67.52% Pervious = 3.845 ac 32.48% Impervious = 1.850 ac

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-2 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Subcatchment 1:

Runoff = 0.08 cfs @ 8.00 hrs, Volume= 0.034 af, Depth> 1.20"
 Routed to Pond 1-P : Stormwater Facility

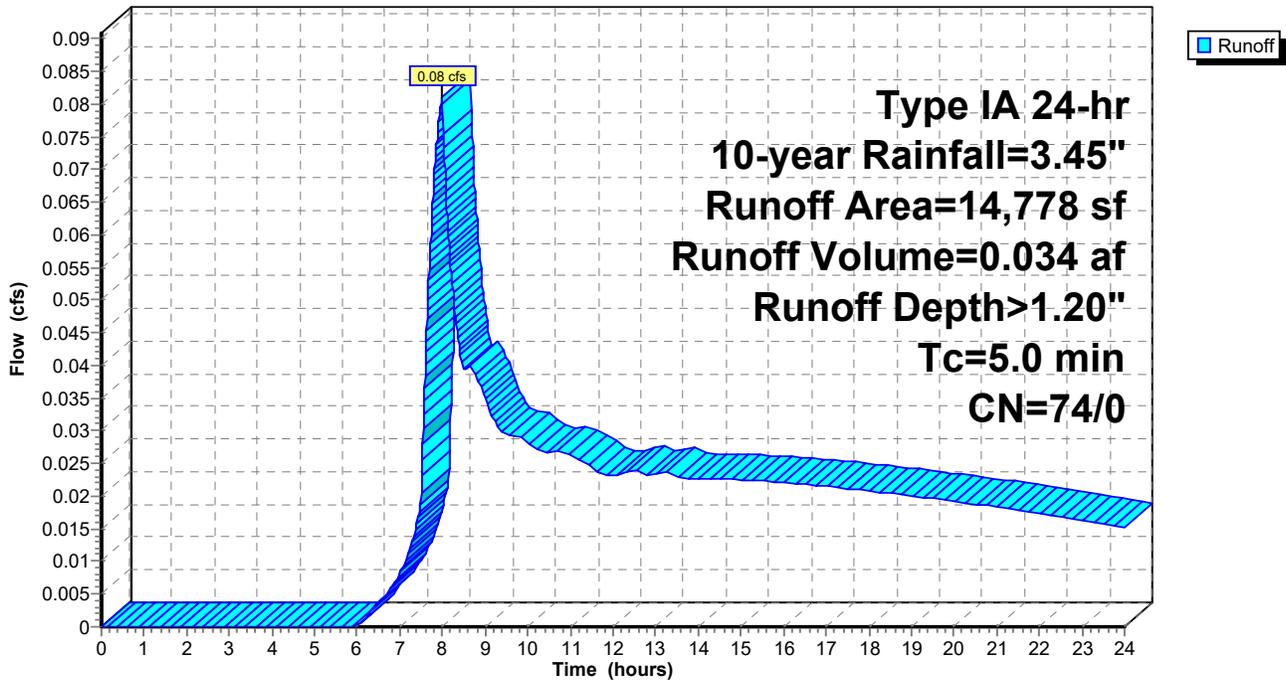
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

Area (sf)	CN	Description
* 14,778	74	
14,778	74	100.00% Pervious Area

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

Subcatchment 1:

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Subcatchment 2: LOT 1&12 IMP ROAD & LOT PERV

Runoff = 0.54 cfs @ 7.94 hrs, Volume= 0.197 af, Depth> 1.94"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

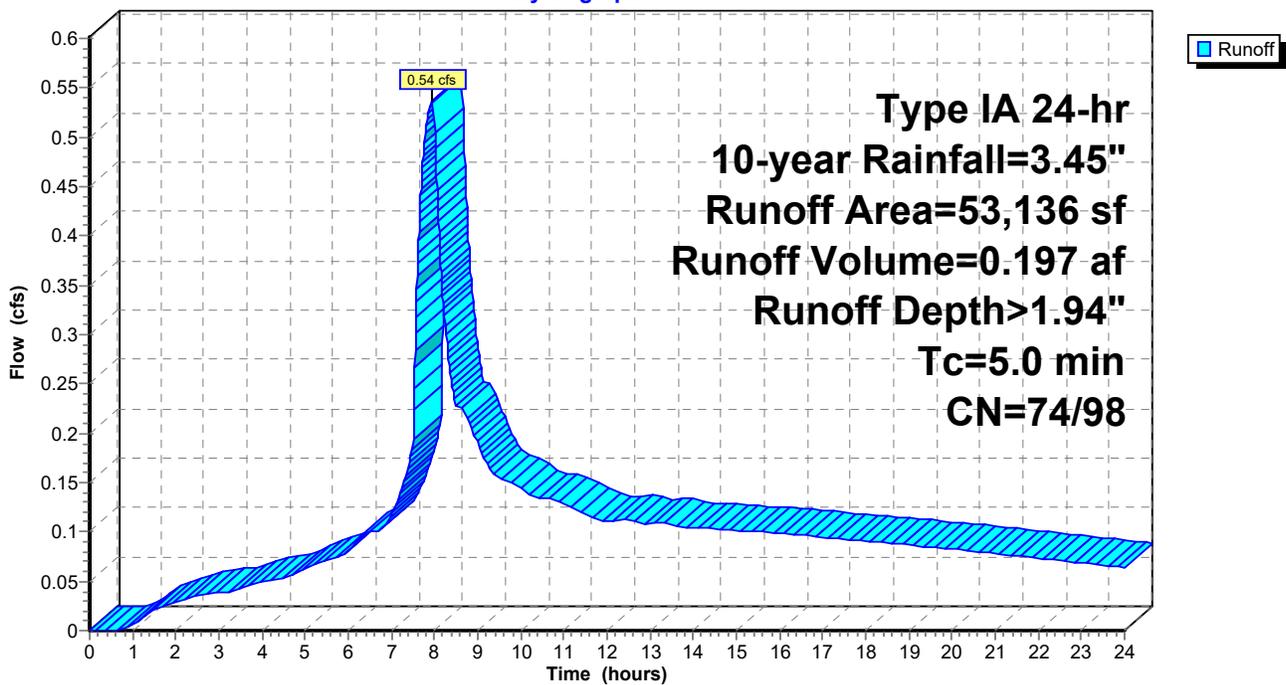
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

	Area (sf)	CN	Description
*	19,437	98	
*	33,699	74	
	53,136	83	Weighted Average
	33,699	74	63.42% Pervious Area
	19,437	98	36.58% Impervious Area

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

Subcatchment 2: LOT 1&12 IMP ROAD & LOT PERV

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-2 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Subcatchment 3: LOTS 2,3,7-11 IMPR ROAD & PERV LOTS

Runoff = 0.59 cfs @ 7.92 hrs, Volume= 0.210 af, Depth> 2.19"
 Routed to Reach 1-1 : MH 1-1 TO MH 1-2

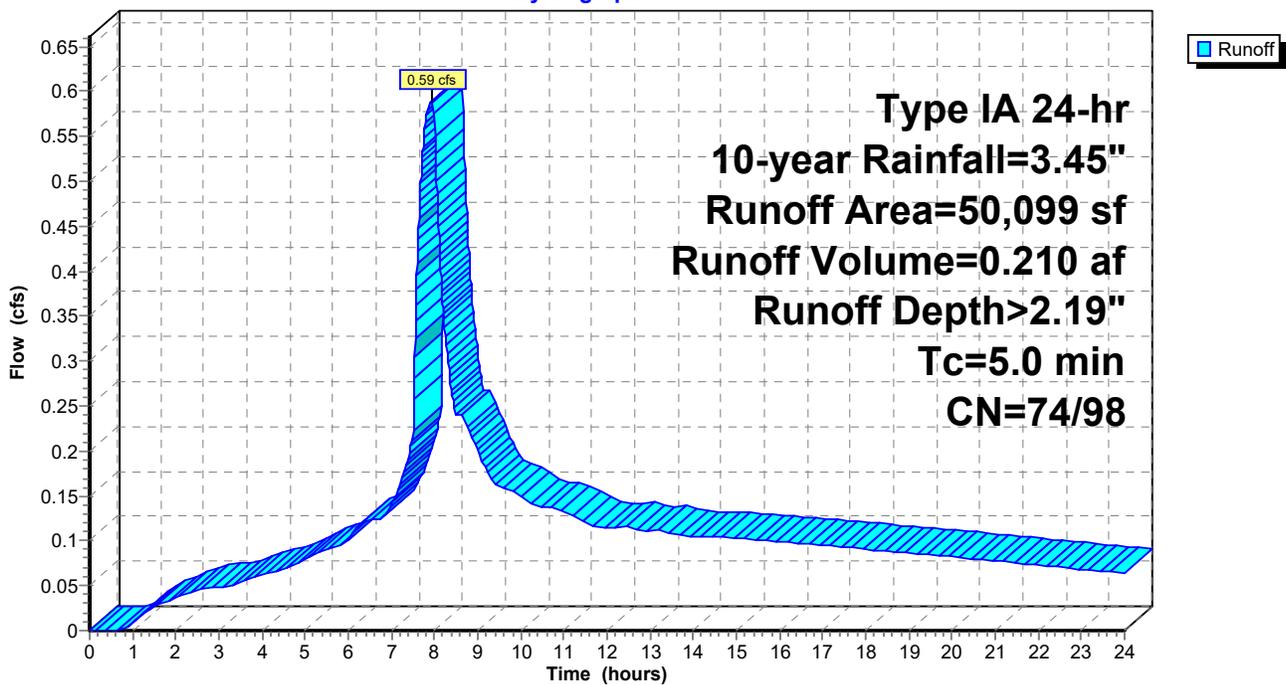
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

	Area (sf)	CN	Description
*	25,385	74	
*	24,714	98	
	50,099	86	Weighted Average
	25,385	74	50.67% Pervious Area
	24,714	98	49.33% Impervious Area

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

Subcatchment 3: LOTS 2,3,7-11 IMPR ROAD & PERV LOTS

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Subcatchment 4: Lots 4-6

Runoff = 0.14 cfs @ 7.88 hrs, Volume= 0.046 af, Depth> 3.21"
 Routed to Reach 1-2 : MH 1-2 to mh 1-1

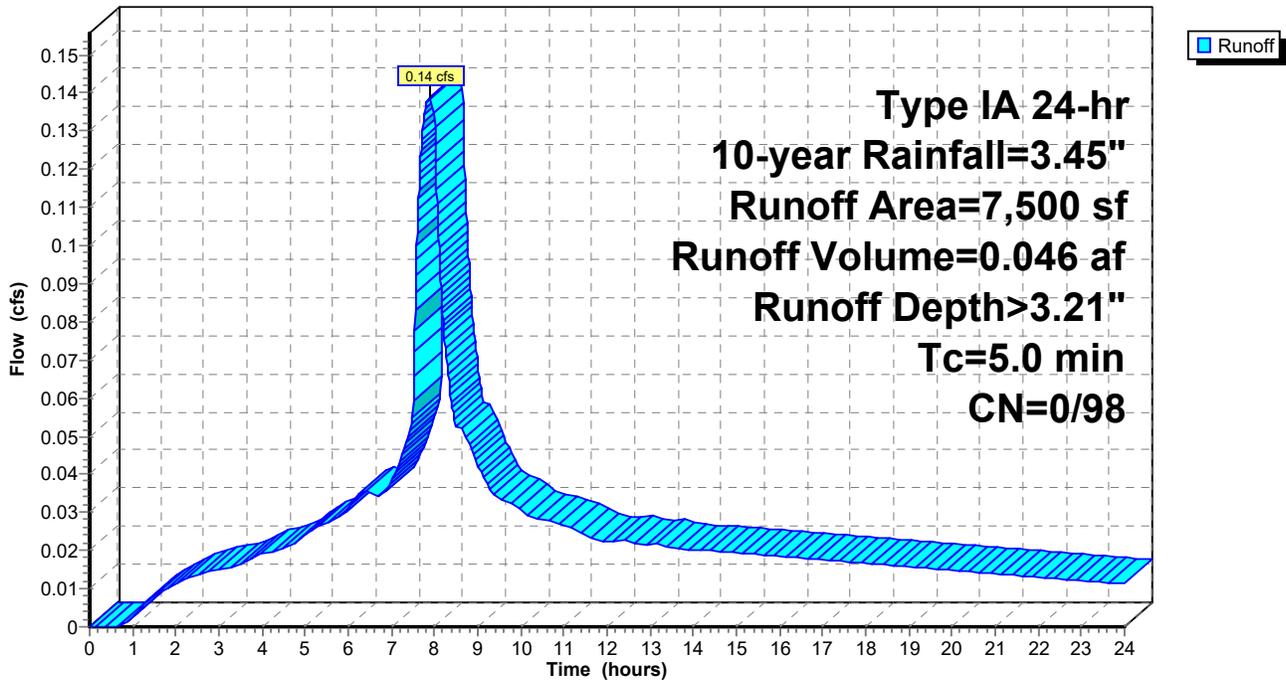
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

Area (sf)	CN	Description
* 7,500	98	
7,500	98	100.00% Impervious Area

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

Subcatchment 4: Lots 4-6

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Subcatchment 5: ROADWAY & LOT PERVIOUS

Runoff = 0.07 cfs @ 7.91 hrs, Volume= 0.024 af, Depth> 2.37"
 Routed to Reach 2-0 : CI 2-0 TO POND

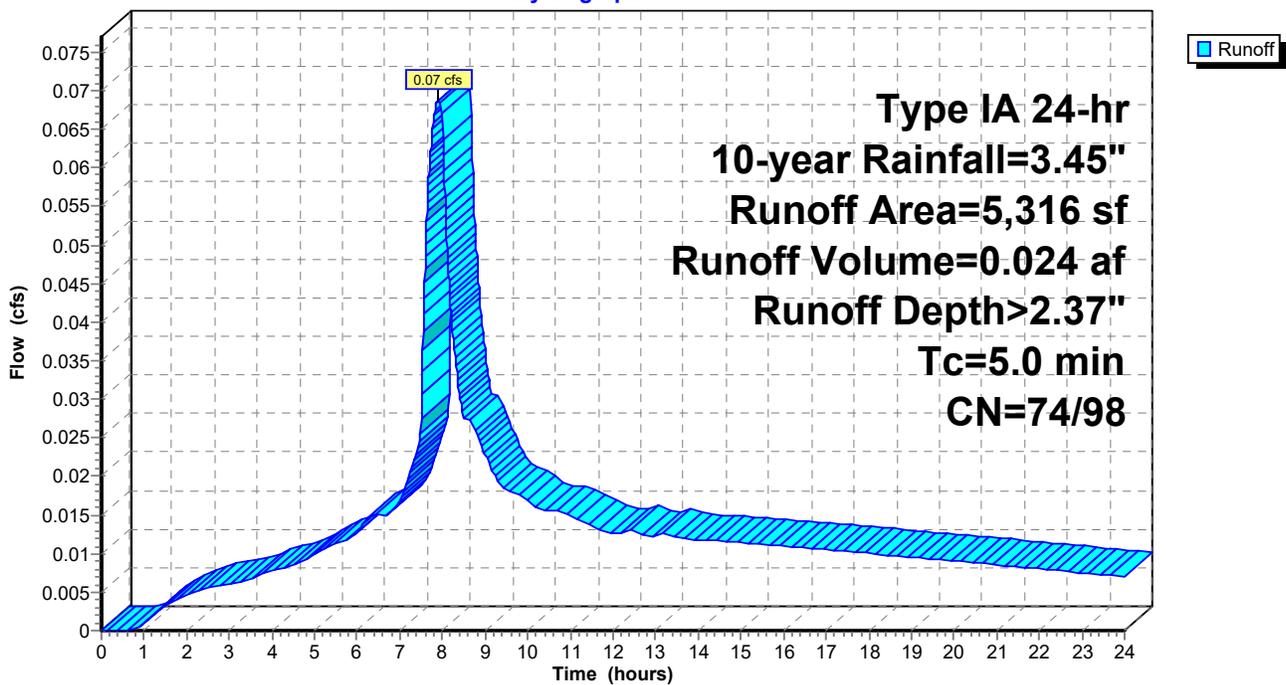
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

	Area (sf)	CN	Description
*	3,088	98	
*	2,228	74	
	5,316	88	Weighted Average
	2,228	74	41.91% Pervious Area
	3,088	98	58.09% Impervious Area

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

Subcatchment 5: ROADWAY & LOT PERVIOUS

Hydrograph



Summary for Subcatchment A: PARKER ROAD

Runoff = 0.02 cfs @ 7.88 hrs, Volume= 0.007 af, Depth> 3.21"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

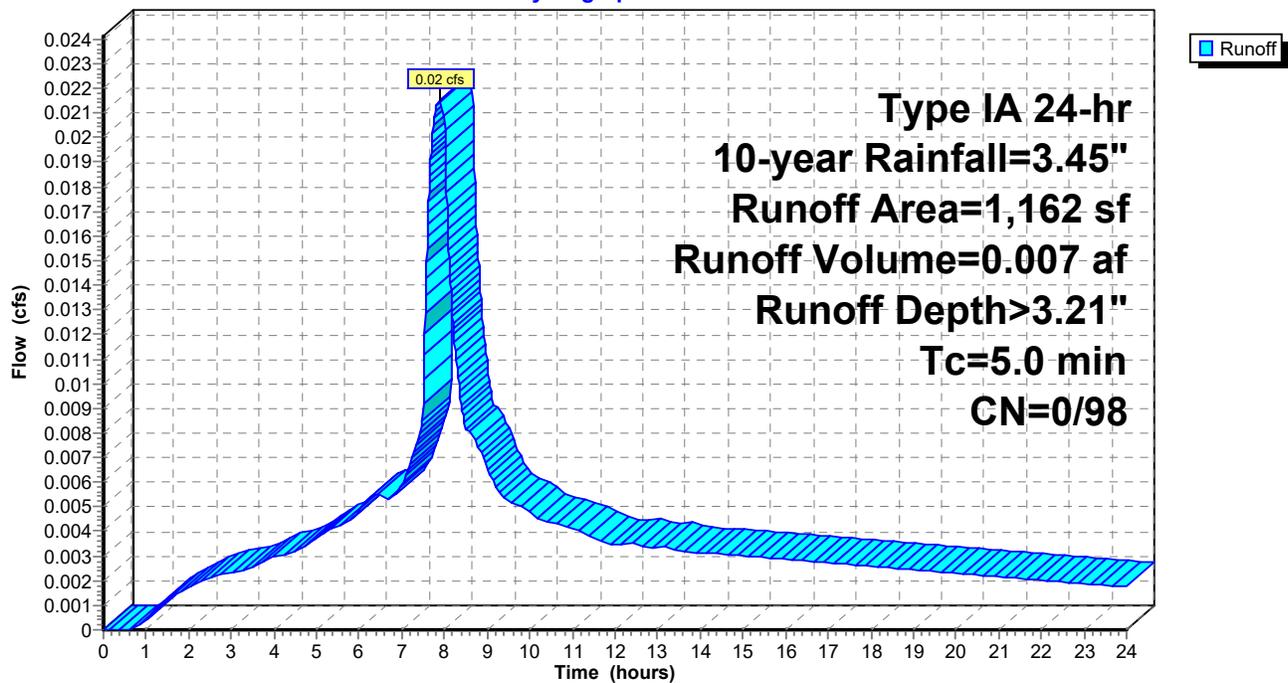
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

Area (sf)	CN	Description
* 1,162	98	
1,162	98	100.00% Impervious Area

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

Subcatchment A: PARKER ROAD

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-2 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Subcatchment B: BUFFER AREA

Runoff = 0.13 cfs @ 8.01 hrs, Volume= 0.065 af, Depth> 1.72"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

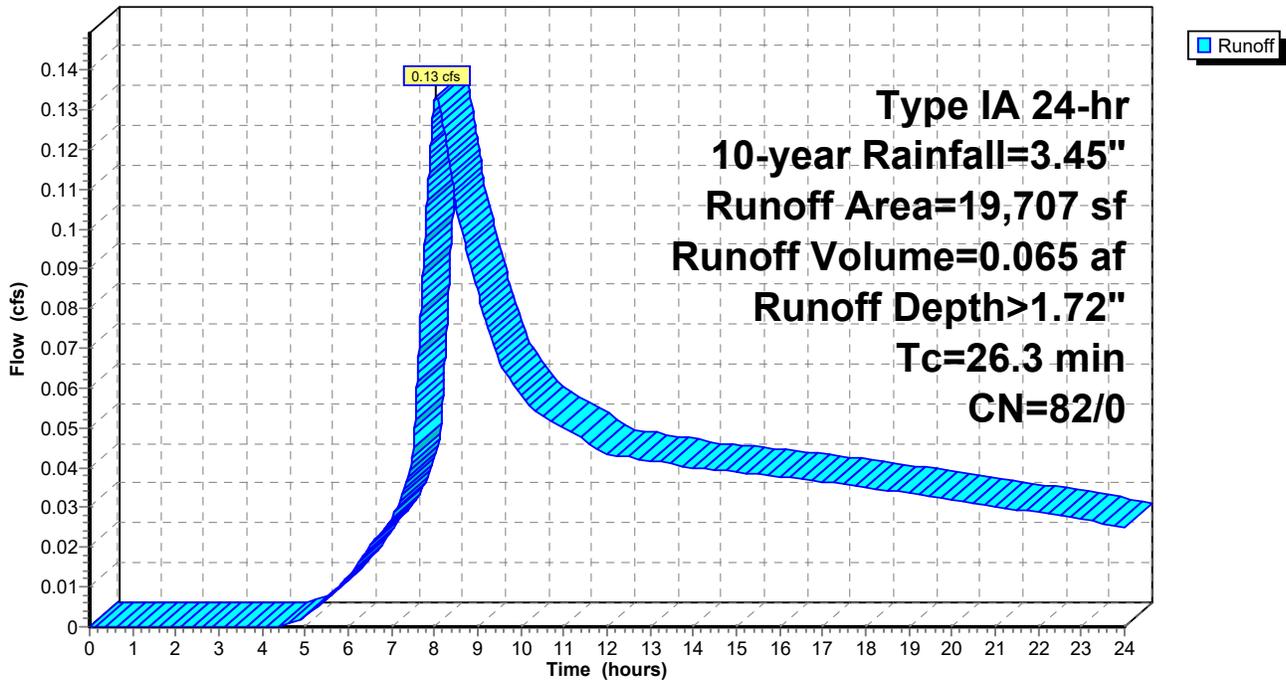
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

Area (sf)	CN	Description
* 19,707	82	
19,707	82	100.00% Pervious Area

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

Subcatchment B: BUFFER AREA

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-2 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Subcatchment BP: Parker 1

Runoff = 0.40 cfs @ 7.90 hrs, Volume= 0.137 af, Depth> 2.58"
 Routed to Reach 1-2 : MH 1-2 to mh 1-1

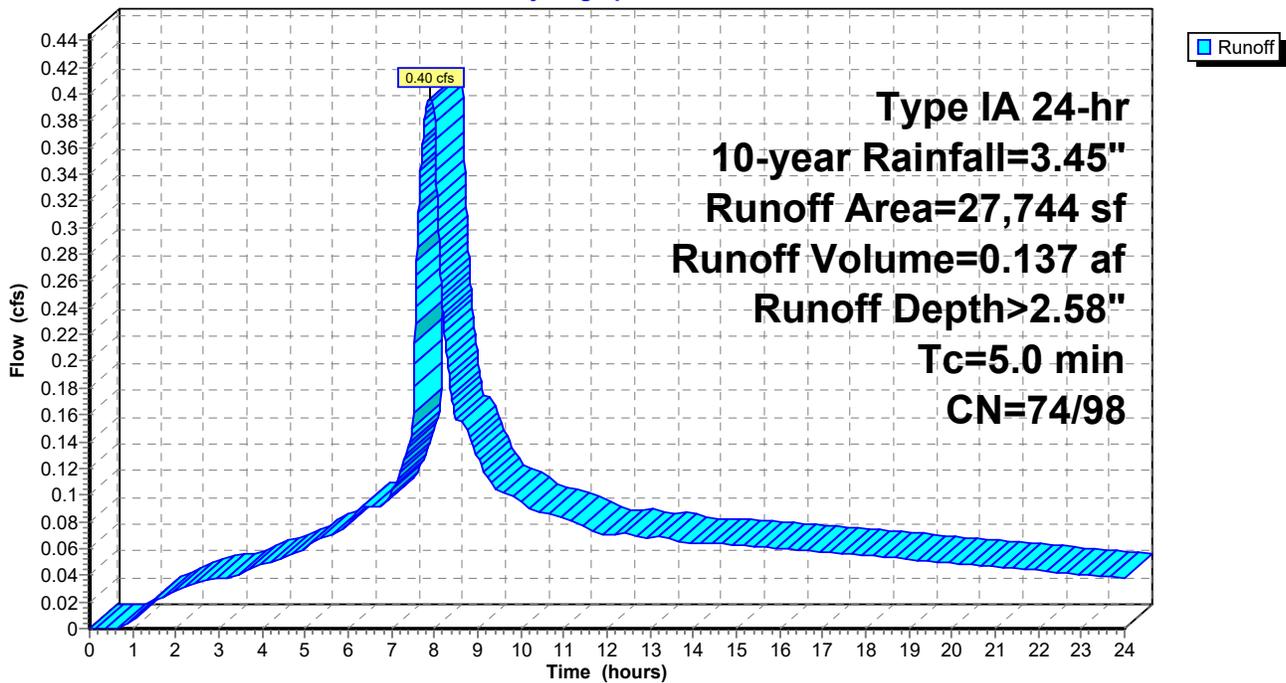
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

	Area (sf)	CN	Description
*	18,960	98	
*	8,784	74	
	27,744	90	Weighted Average
	8,784	74	31.66% Pervious Area
	18,960	98	68.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 10

Subcatchment BP: Parker 1

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Subcatchment C: ONSITE TRIBUTARY TO BUFFER AREA

Runoff = 0.05 cfs @ 8.00 hrs, Volume= 0.021 af, Depth> 1.20"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

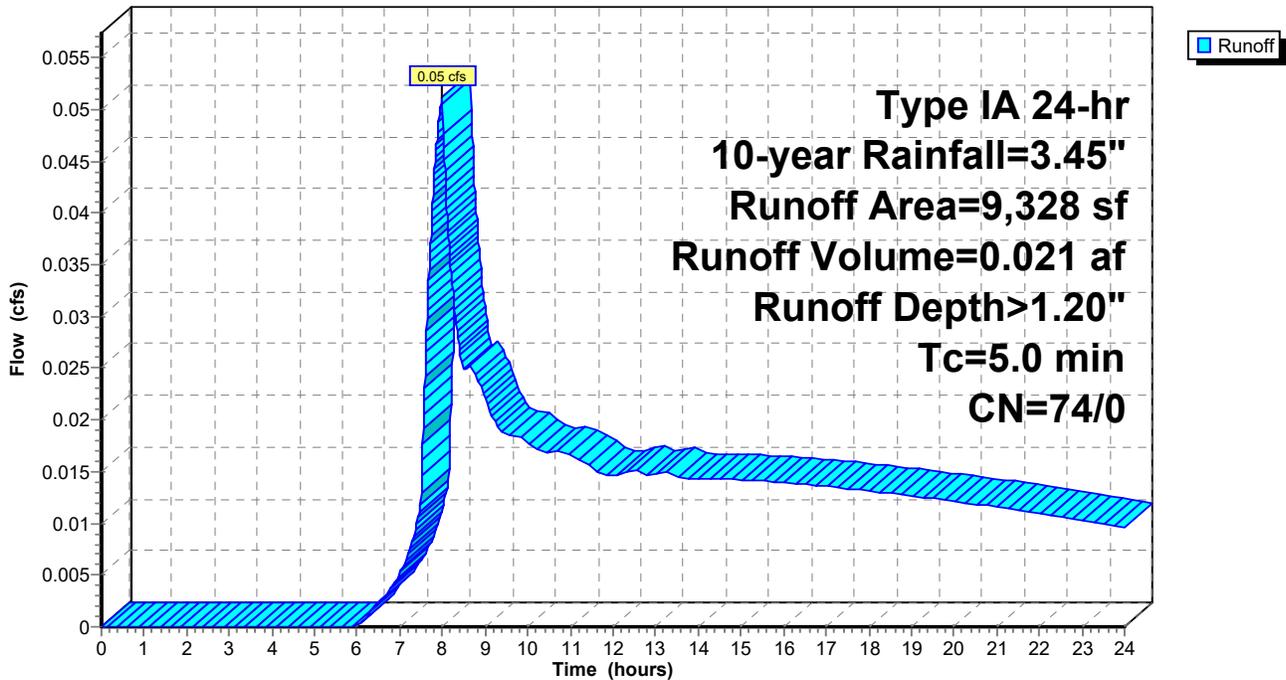
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

Area (sf)	CN	Description
* 9,328	74	
9,328	74	100.00% Pervious Area

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

Subcatchment C: ONSITE TRIBUTARY TO BUFFER AREA

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Subcatchment D: PARKER ROAD BYPASS

Runoff = 0.05 cfs @ 7.90 hrs, Volume= 0.019 af, Depth> 2.50"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

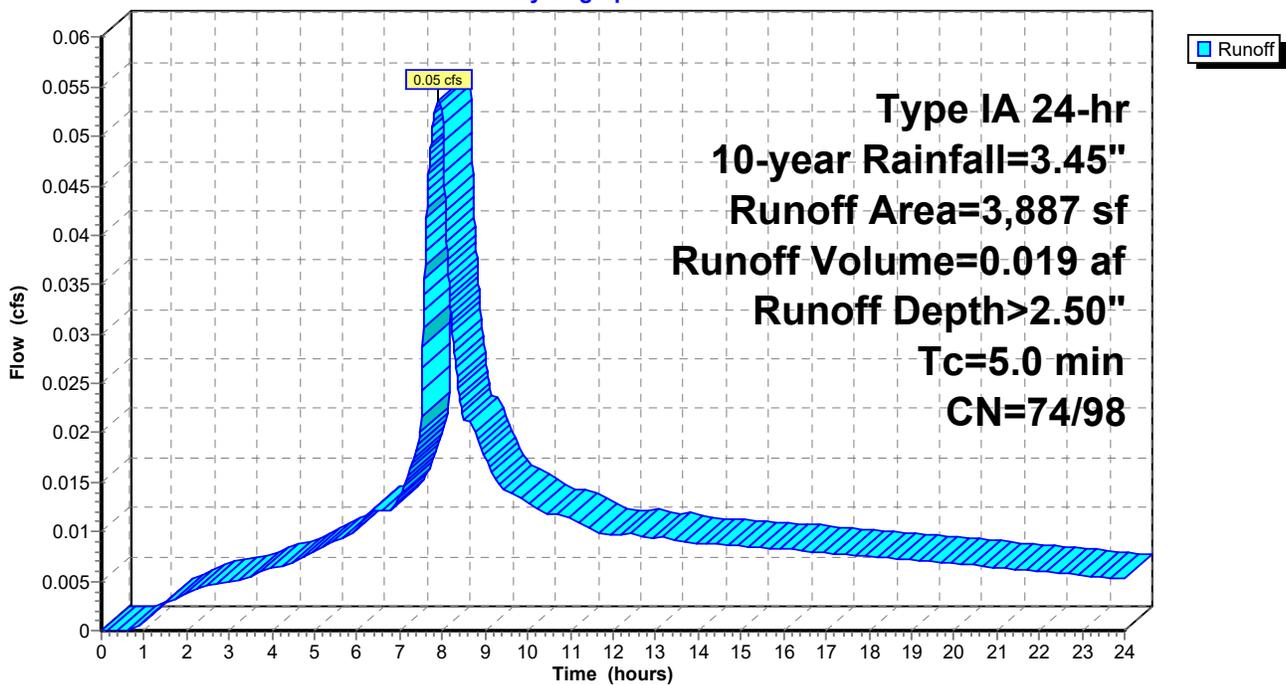
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

	Area (sf)	CN	Description
*	2,511	98	
*	1,376	74	
	3,887	90	Weighted Average
	1,376	74	35.40% Pervious Area
	2,511	98	64.60% Impervious Area

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

Subcatchment D: PARKER ROAD BYPASS

Hydrograph



Summary for Subcatchment Z: OFFSITE

Runoff = 0.36 cfs @ 8.01 hrs, Volume= 0.170 af, Depth> 1.61"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

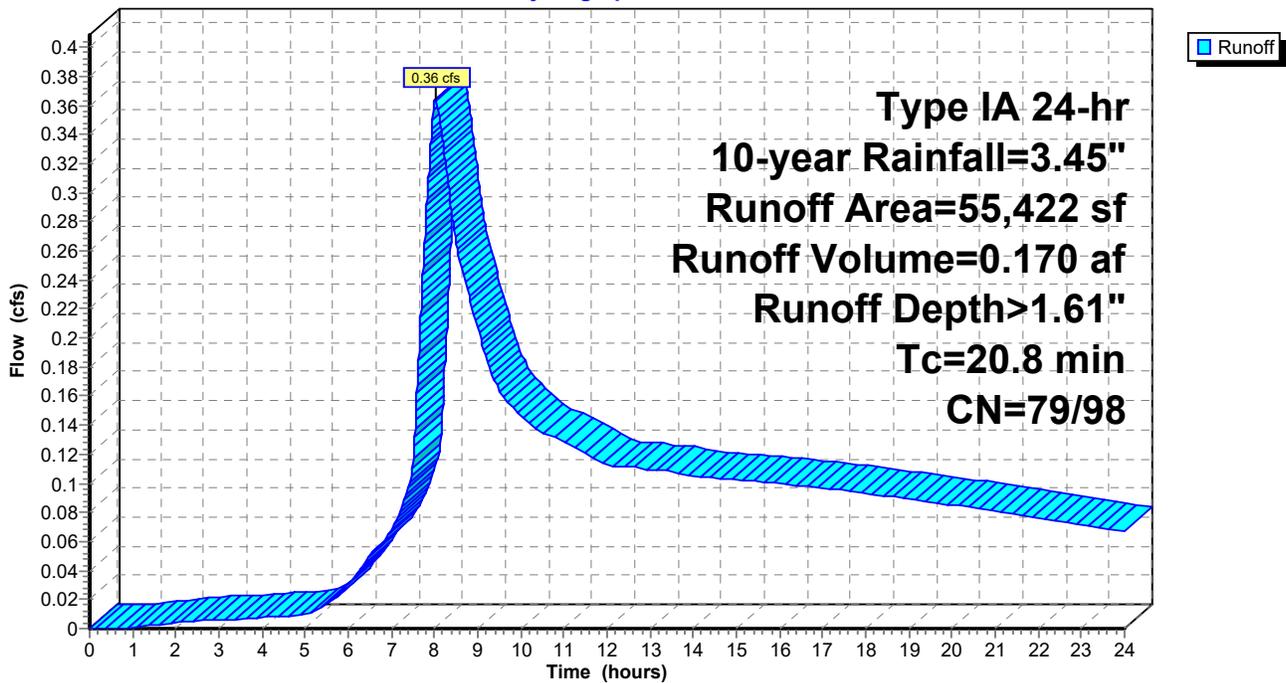
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10-year Rainfall=3.45"

	Area (sf)	CN	Description
*	3,198	98	
*	52,224	79	
	55,422	80	Weighted Average
	52,224	79	94.23% Pervious Area
	3,198	98	5.77% Impervious Area

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

Subcatchment Z: OFFSITE

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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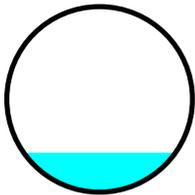
Summary for Reach 1-0: MH 1-0 TO POND

Inflow Area = 1.959 ac, 59.96% Impervious, Inflow Depth > 2.41" for 10-year event
Inflow = 1.13 cfs @ 7.91 hrs, Volume= 0.393 af
Outflow = 1.13 cfs @ 7.92 hrs, Volume= 0.393 af, Atten= 0%, Lag= 0.2 min
Routed to Pond 1-P : Stormwater Facility

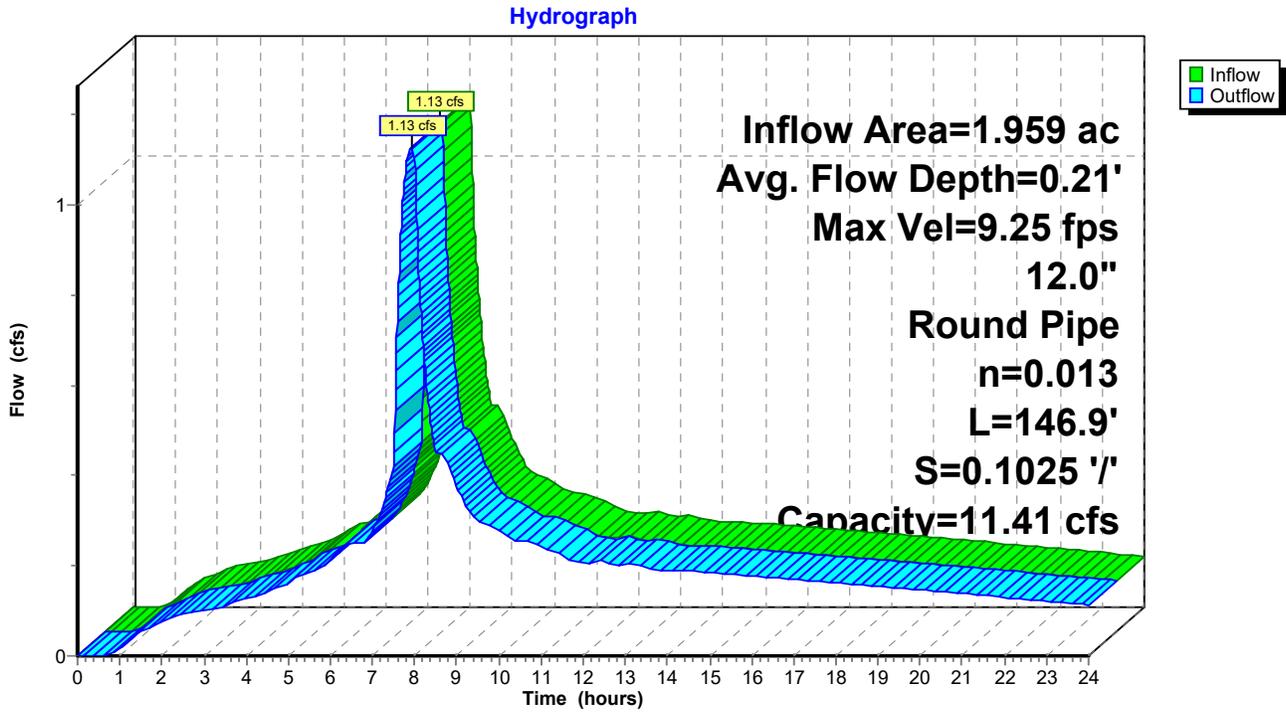
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.25 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 5.34 fps, Avg. Travel Time= 0.5 min

Peak Storage= 18 cf @ 7.92 hrs
Average Depth at Peak Storage= 0.21' , Surface Width= 0.82'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 11.41 cfs

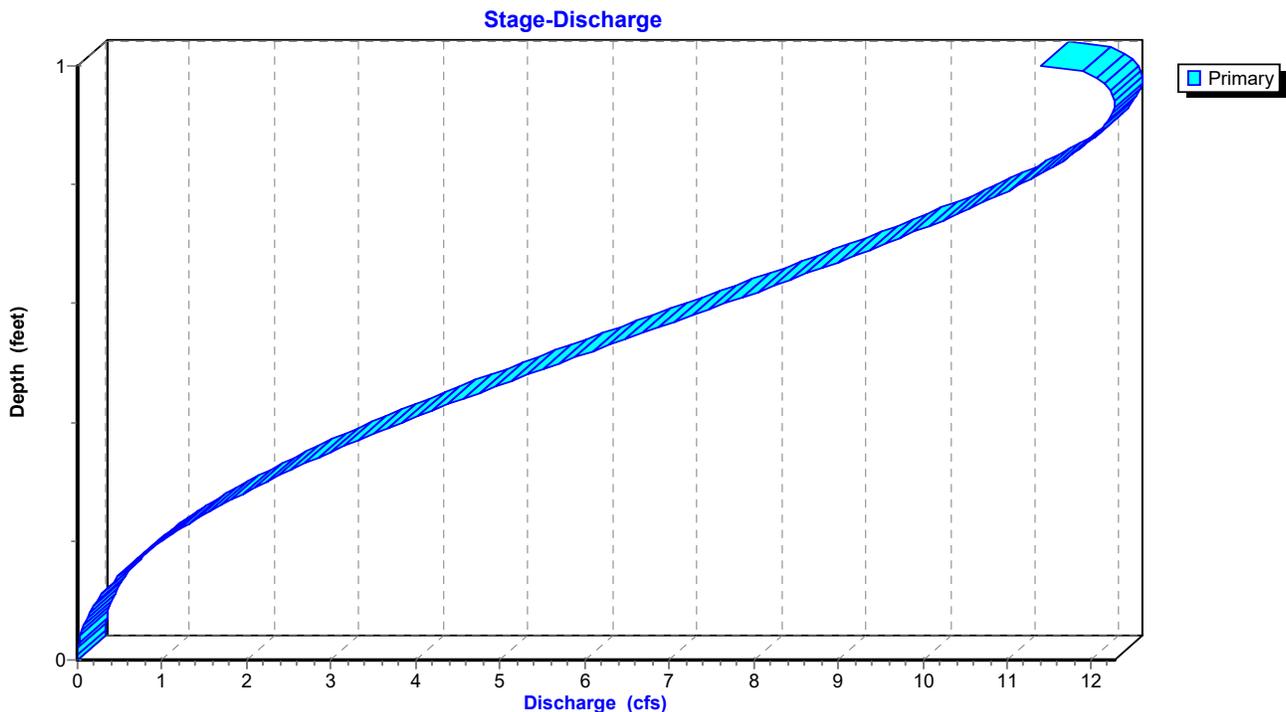
12.0" Round Pipe
n= 0.013
Length= 146.9' Slope= 0.1025 '/'
Inlet Invert= 537.38', Outlet Invert= 522.32'



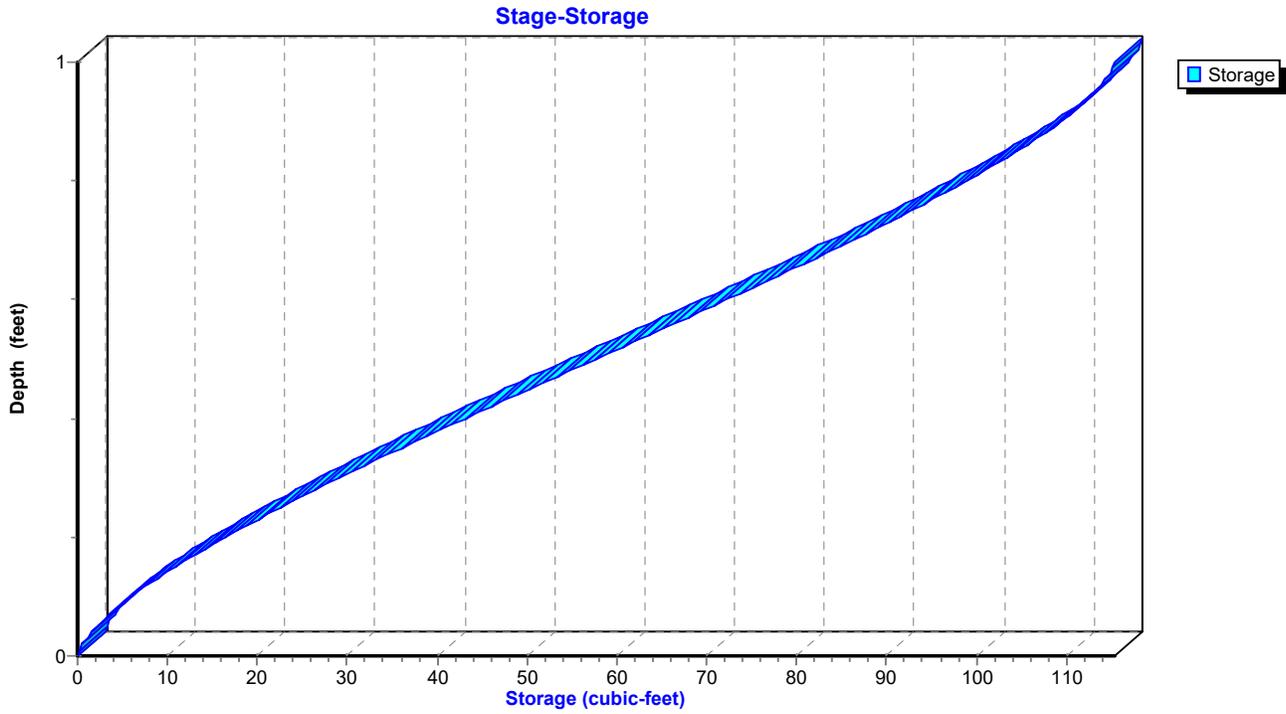
Reach 1-0: MH 1-0 TO POND



Reach 1-0: MH 1-0 TO POND



Reach 1-0: MH 1-0 TO POND



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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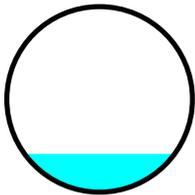
Summary for Reach 1-1: MH 1-1 TO MH 1-2

Inflow Area = 1.959 ac, 59.96% Impervious, Inflow Depth > 2.41" for 10-year event
Inflow = 1.13 cfs @ 7.91 hrs, Volume= 0.393 af
Outflow = 1.13 cfs @ 7.91 hrs, Volume= 0.393 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 1-0 : MH 1-0 TO POND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.64 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 5.56 fps, Avg. Travel Time= 0.6 min

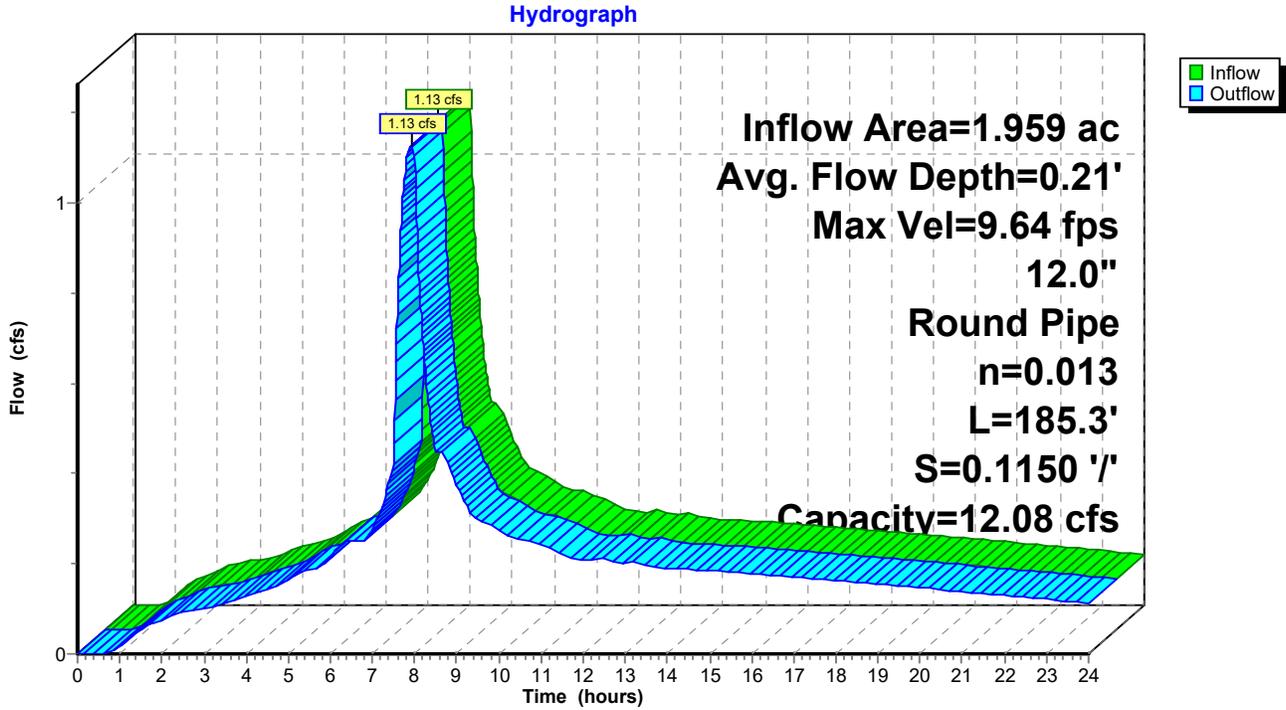
Peak Storage= 22 cf @ 7.91 hrs
Average Depth at Peak Storage= 0.21' , Surface Width= 0.81'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 12.08 cfs

12.0" Round Pipe
n= 0.013
Length= 185.3' Slope= 0.1150 '/'
Inlet Invert= 558.89', Outlet Invert= 537.58'

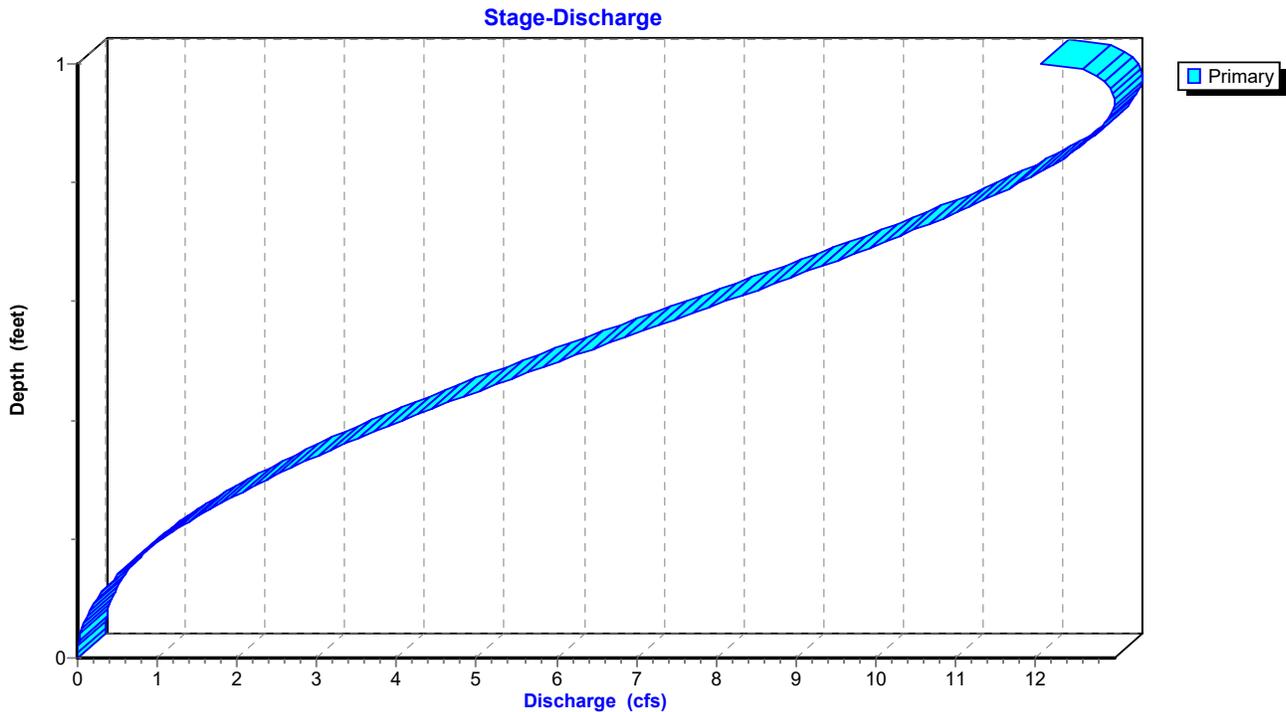


Reach 1-1: MH 1-1 TO MH 1-2

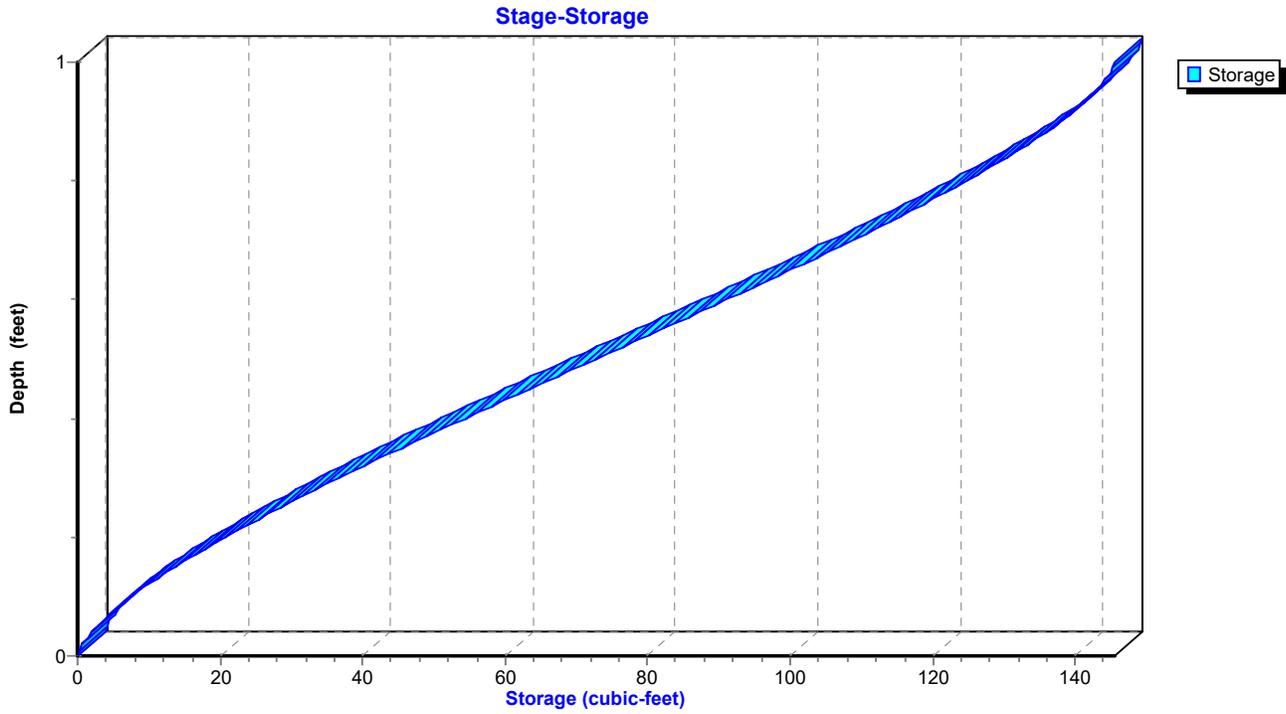
Reach 1-1: MH 1-1 TO MH 1-2



Reach 1-1: MH 1-1 TO MH 1-2



Reach 1-1: MH 1-1 TO MH 1-2



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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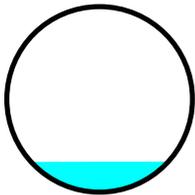
Summary for Reach 1-2: MH 1-2 to mh 1-1

Inflow Area = 0.809 ac, 75.08% Impervious, Inflow Depth > 2.71" for 10-year event
Inflow = 0.54 cfs @ 7.89 hrs, Volume= 0.183 af
Outflow = 0.54 cfs @ 7.90 hrs, Volume= 0.183 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 1-1 : MH 1-1 TO MH 1-2

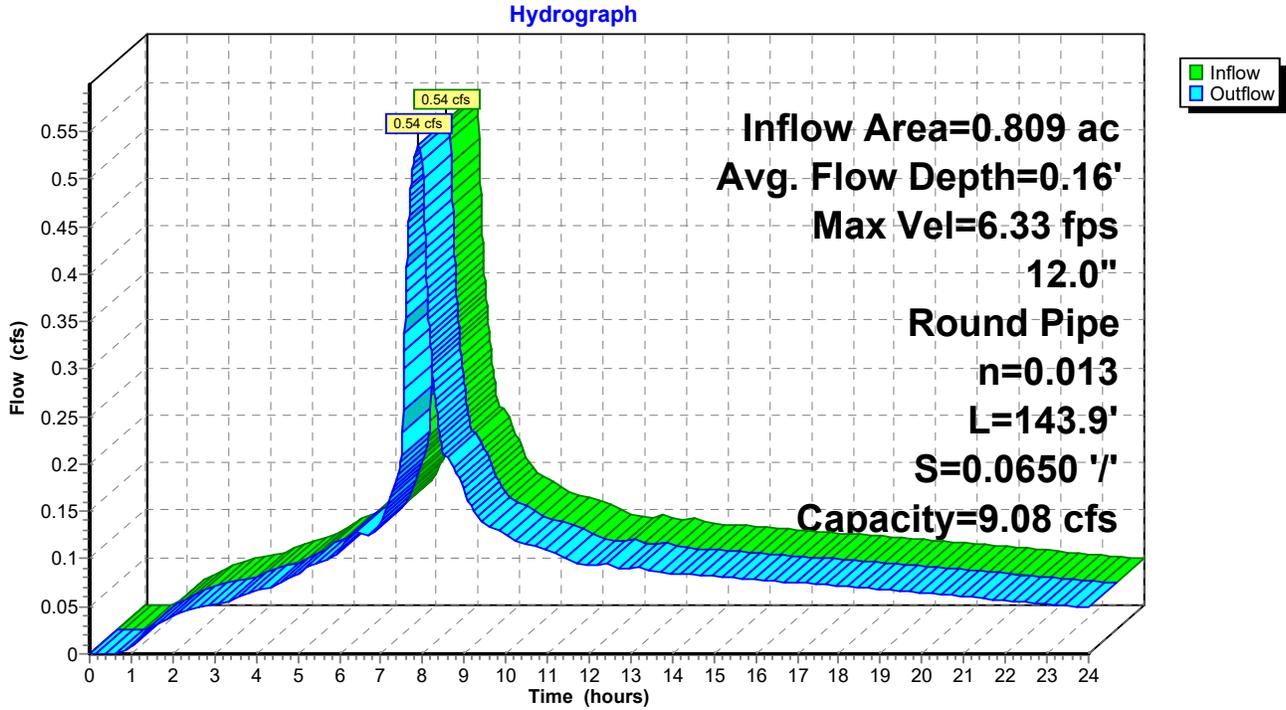
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.33 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.61 fps, Avg. Travel Time= 0.7 min

Peak Storage= 12 cf @ 7.90 hrs
Average Depth at Peak Storage= 0.16' , Surface Width= 0.74'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.08 cfs

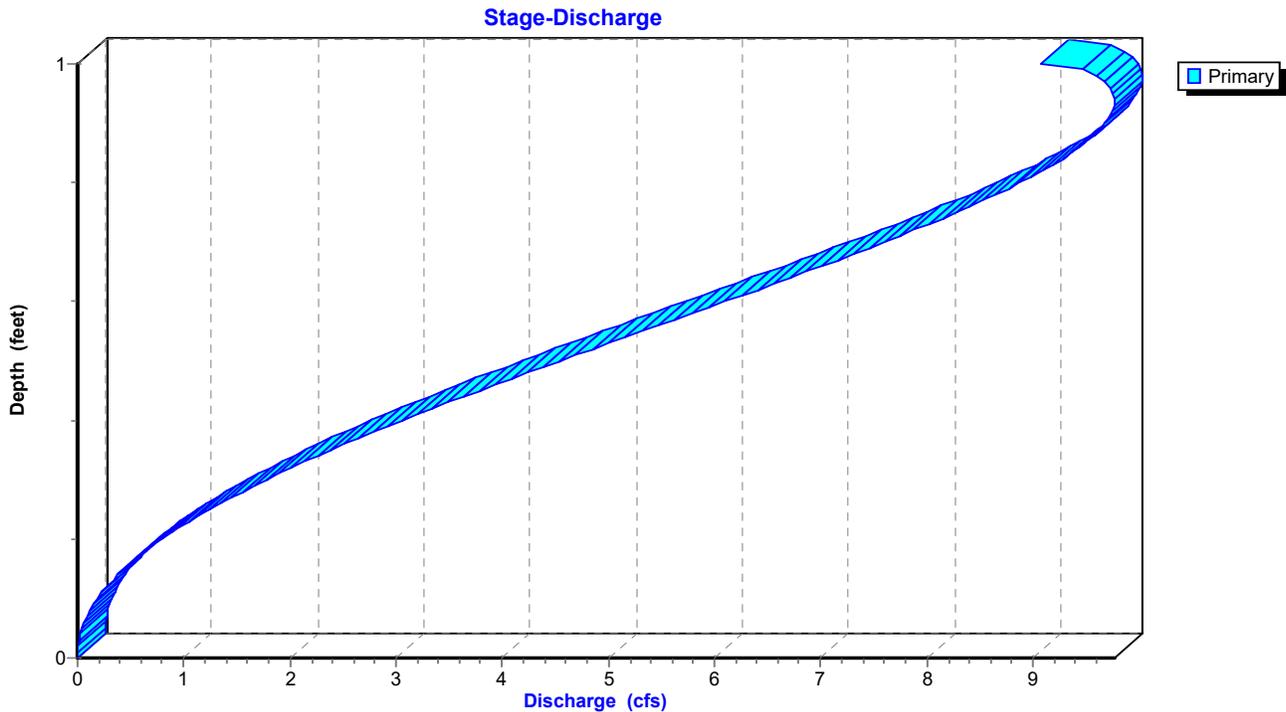
12.0" Round Pipe
n= 0.013
Length= 143.9' Slope= 0.0650 '/'
Inlet Invert= 568.44', Outlet Invert= 559.09'



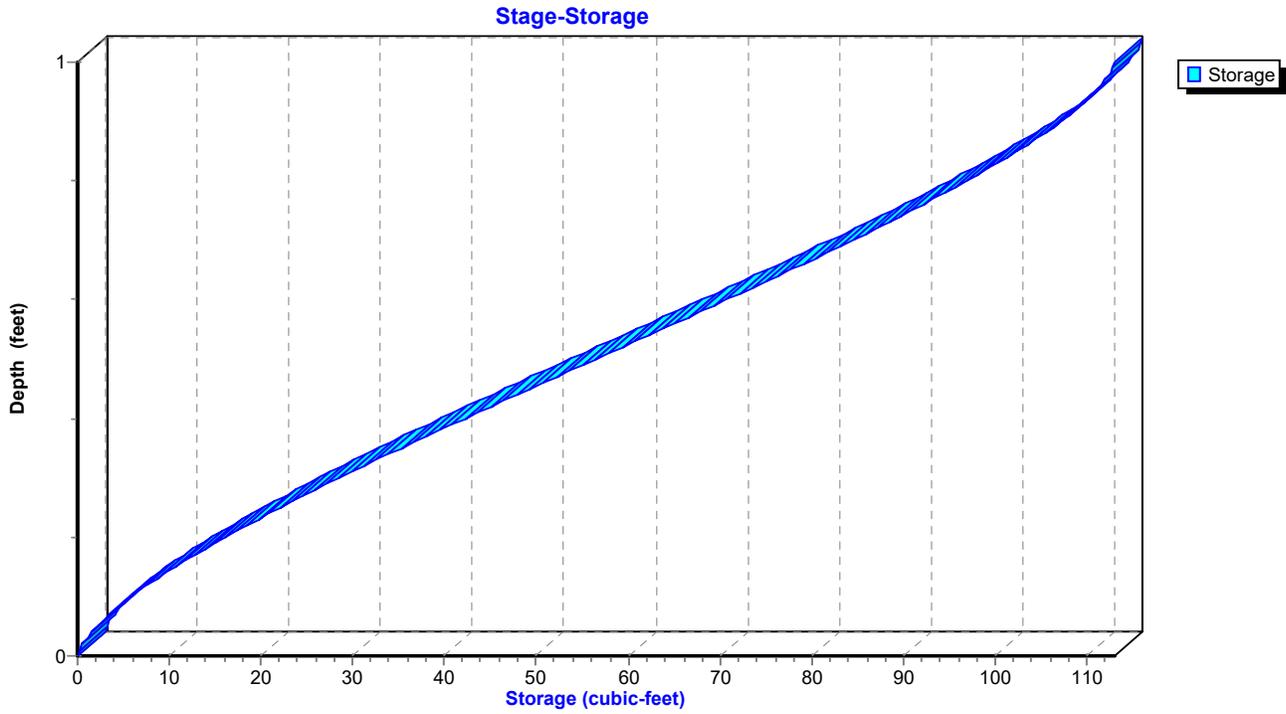
Reach 1-2: MH 1-2 to mh 1-1



Reach 1-2: MH 1-2 to mh 1-1



Reach 1-2: MH 1-2 to mh 1-1



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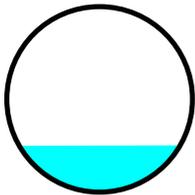
Summary for Reach 2-0: CI 2-0 TO POND

Inflow Area = 2.641 ac, 23.37% Impervious, Inflow Depth > 1.81" for 10-year event
Inflow = 0.98 cfs @ 8.00 hrs, Volume= 0.398 af
Outflow = 0.98 cfs @ 8.00 hrs, Volume= 0.398 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 1-P : Stormwater Facility

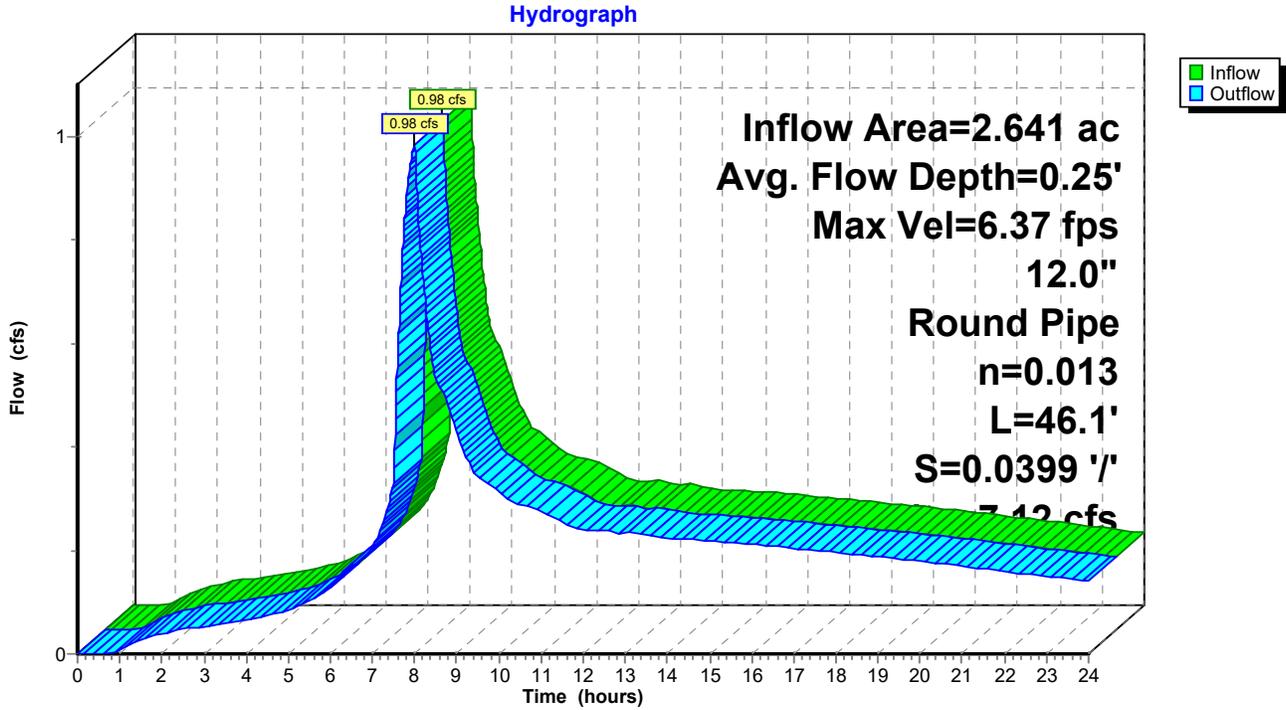
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.37 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 3.81 fps, Avg. Travel Time= 0.2 min

Peak Storage= 7 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.25' , Surface Width= 0.87'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.12 cfs

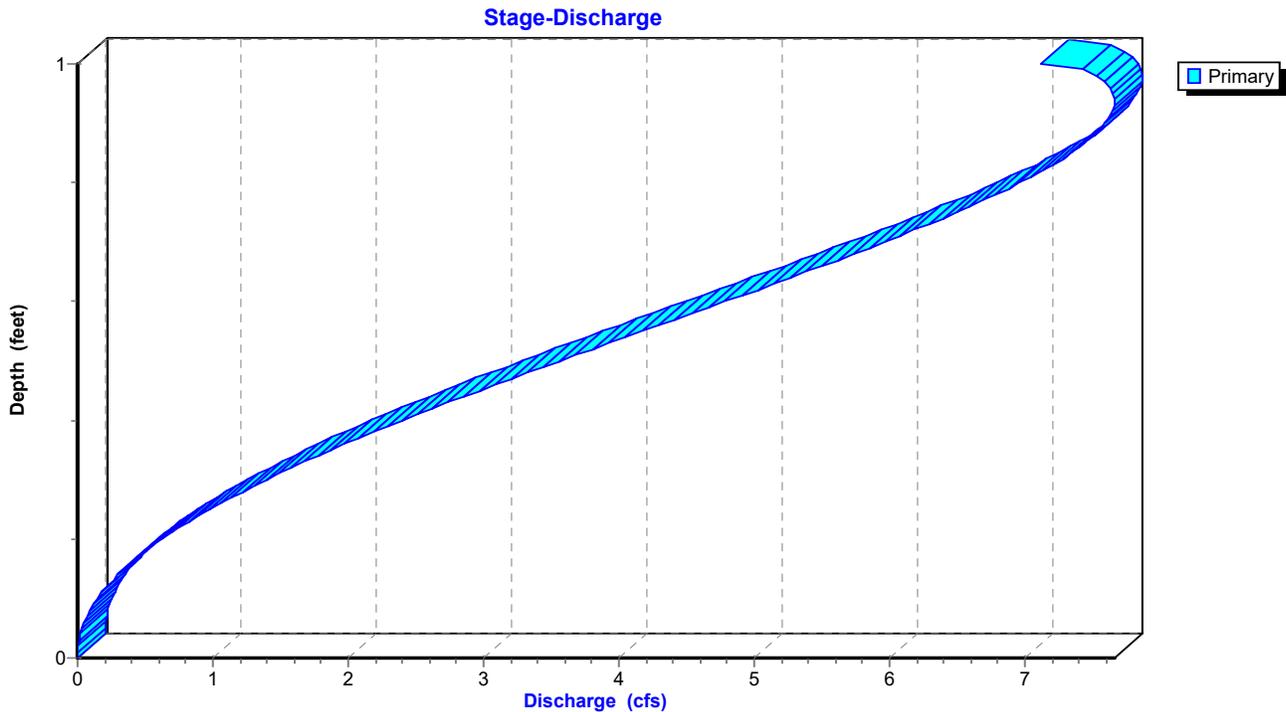
12.0" Round Pipe
n= 0.013
Length= 46.1' Slope= 0.0399 '/'
Inlet Invert= 523.83', Outlet Invert= 521.99'



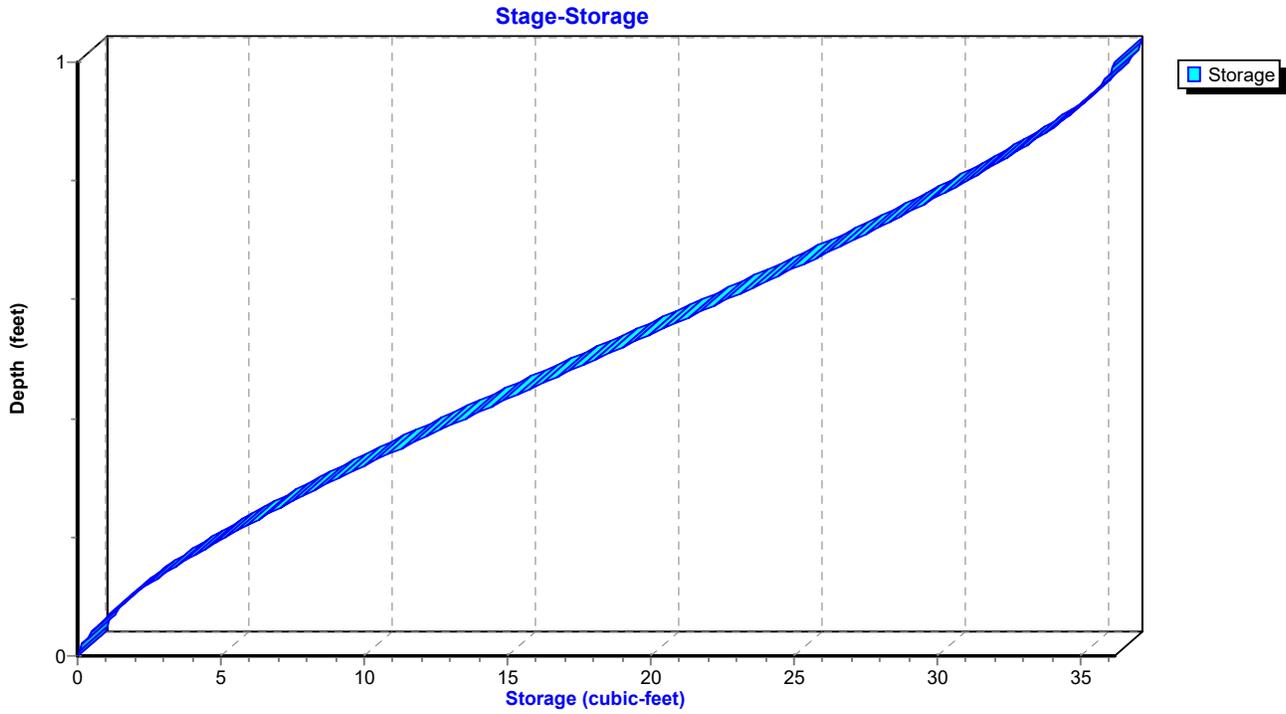
Reach 2-0: CI 2-0 TO POND



Reach 2-0: CI 2-0 TO POND



Reach 2-0: CI 2-0 TO POND



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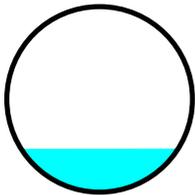
Summary for Reach 2-1: MH 2-1 TO CB 2-0

Inflow Area = 2.519 ac, 21.69% Impervious, Inflow Depth > 1.78" for 10-year event
Inflow = 0.92 cfs @ 8.00 hrs, Volume= 0.374 af
Outflow = 0.92 cfs @ 8.00 hrs, Volume= 0.374 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 2-0 : CI 2-0 TO POND

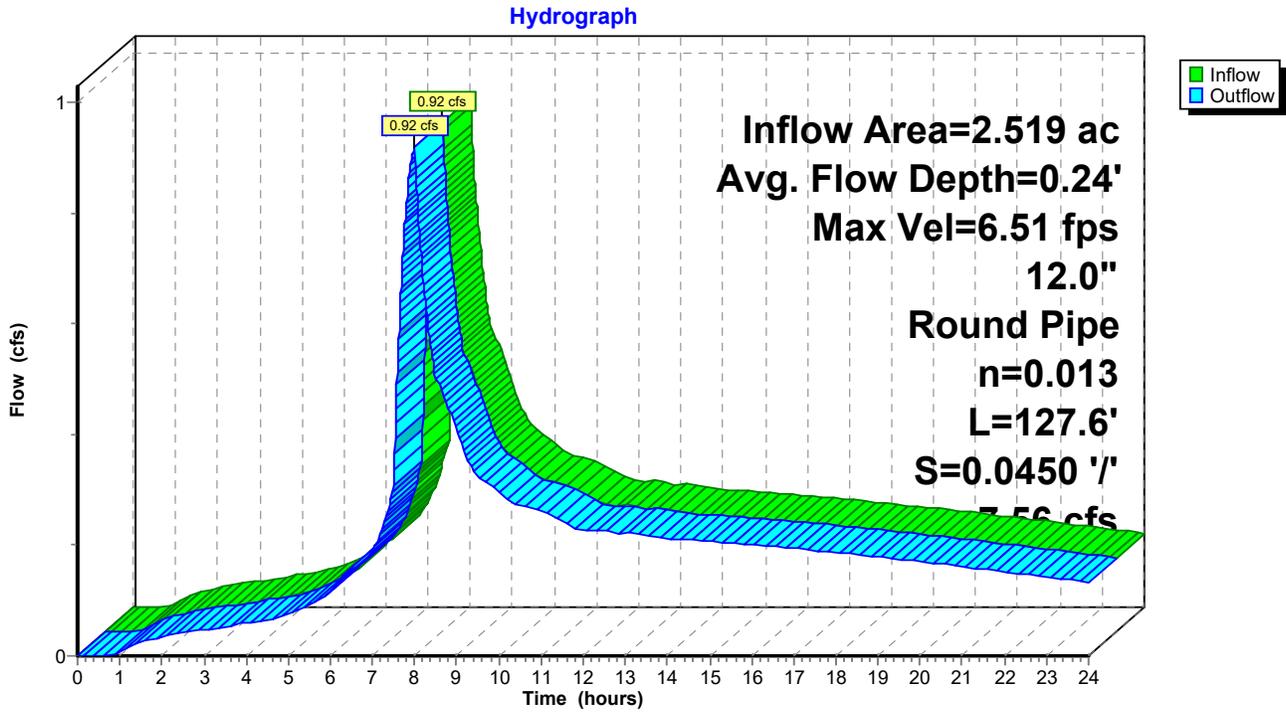
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.51 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.90 fps, Avg. Travel Time= 0.5 min

Peak Storage= 18 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.24' , Surface Width= 0.85'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.56 cfs

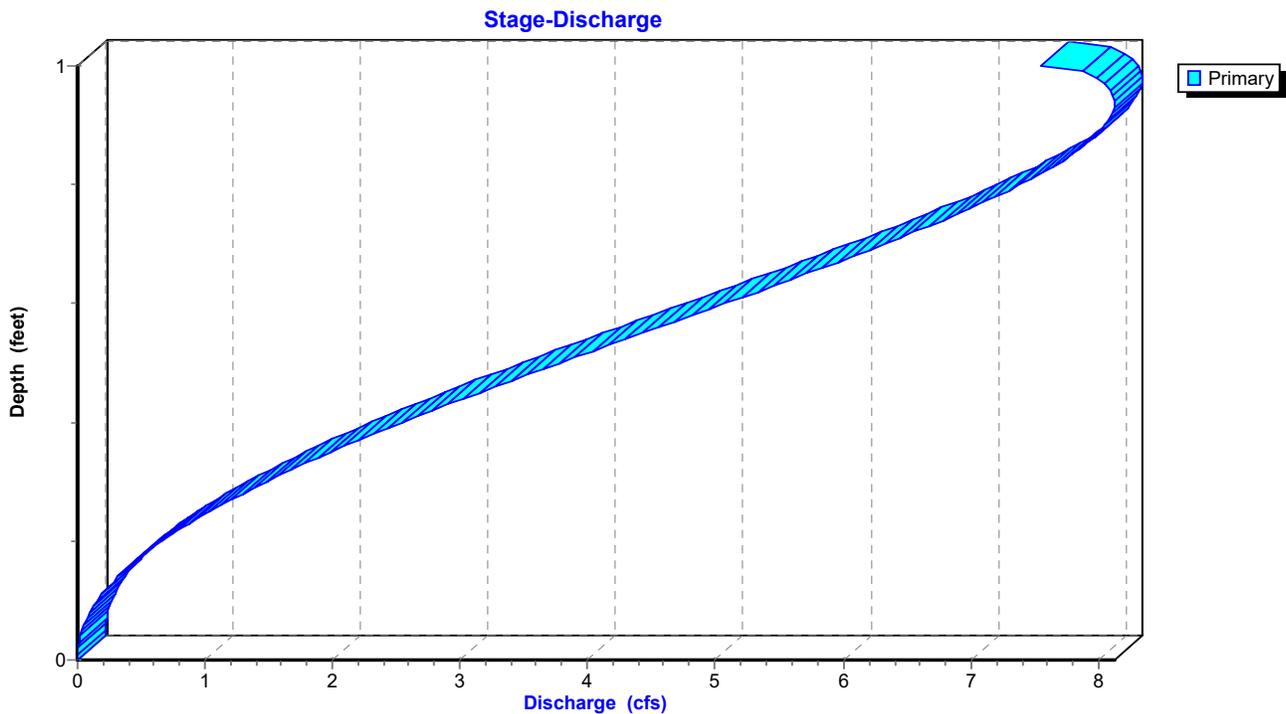
12.0" Round Pipe
n= 0.013
Length= 127.6' Slope= 0.0450 '/'
Inlet Invert= 529.57', Outlet Invert= 523.83'



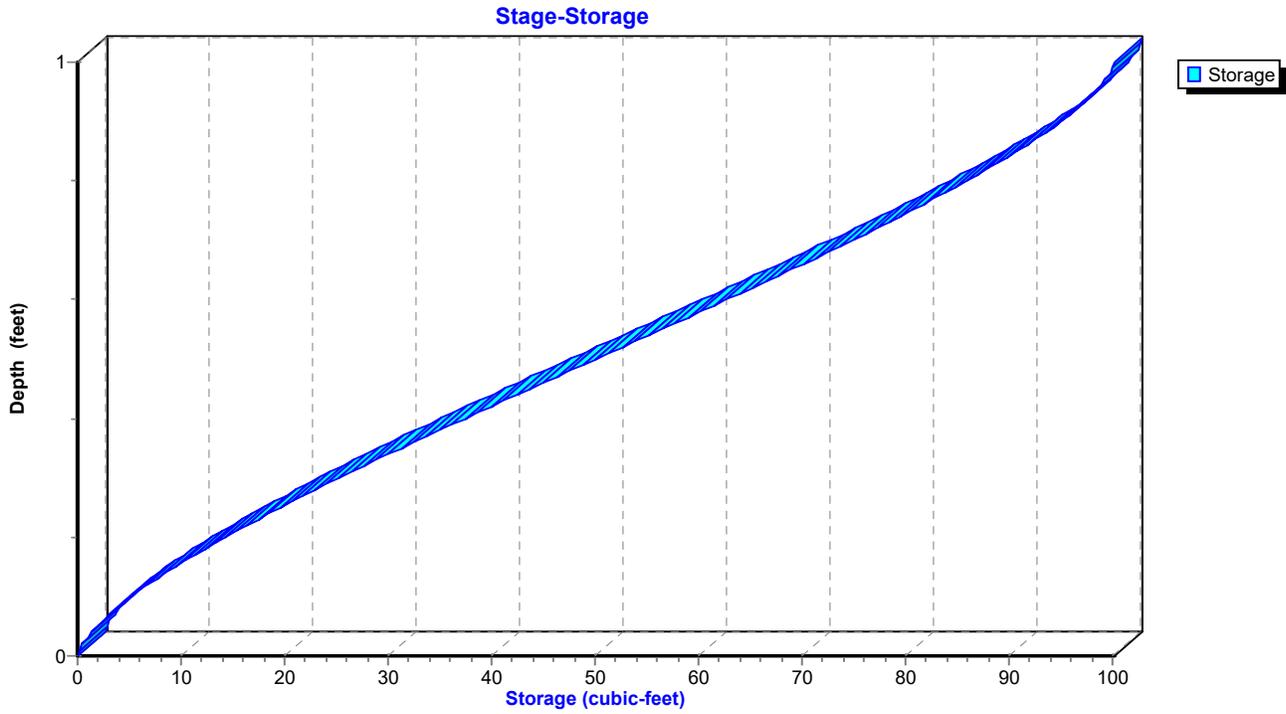
Reach 2-1: MH 2-1 TO CB 2-0



Reach 2-1: MH 2-1 TO CB 2-0



Reach 2-1: MH 2-1 TO CB 2-0



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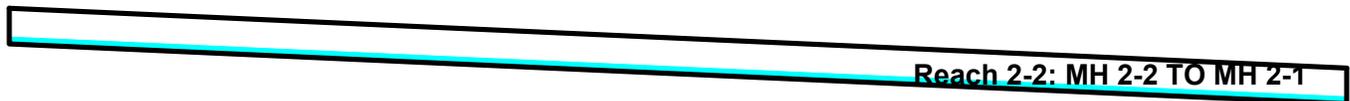
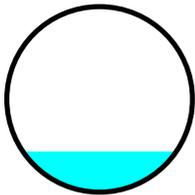
Summary for Reach 2-2: MH 2-2 TO MH 2-1

Inflow Area = 2.519 ac, 21.69% Impervious, Inflow Depth > 1.78" for 10-year event
Inflow = 0.92 cfs @ 8.00 hrs, Volume= 0.374 af
Outflow = 0.92 cfs @ 8.00 hrs, Volume= 0.374 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2-1 : MH 2-1 TO CB 2-0

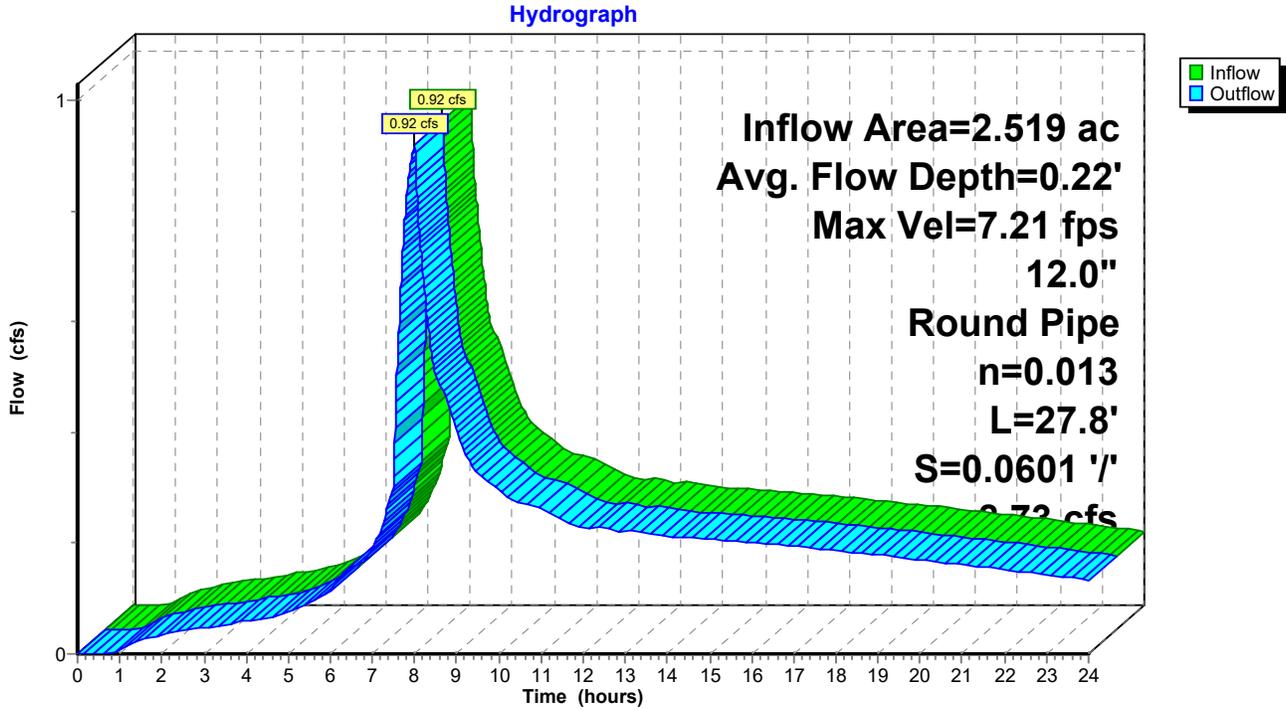
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.21 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.31 fps, Avg. Travel Time= 0.1 min

Peak Storage= 4 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.22' , Surface Width= 0.83'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.73 cfs

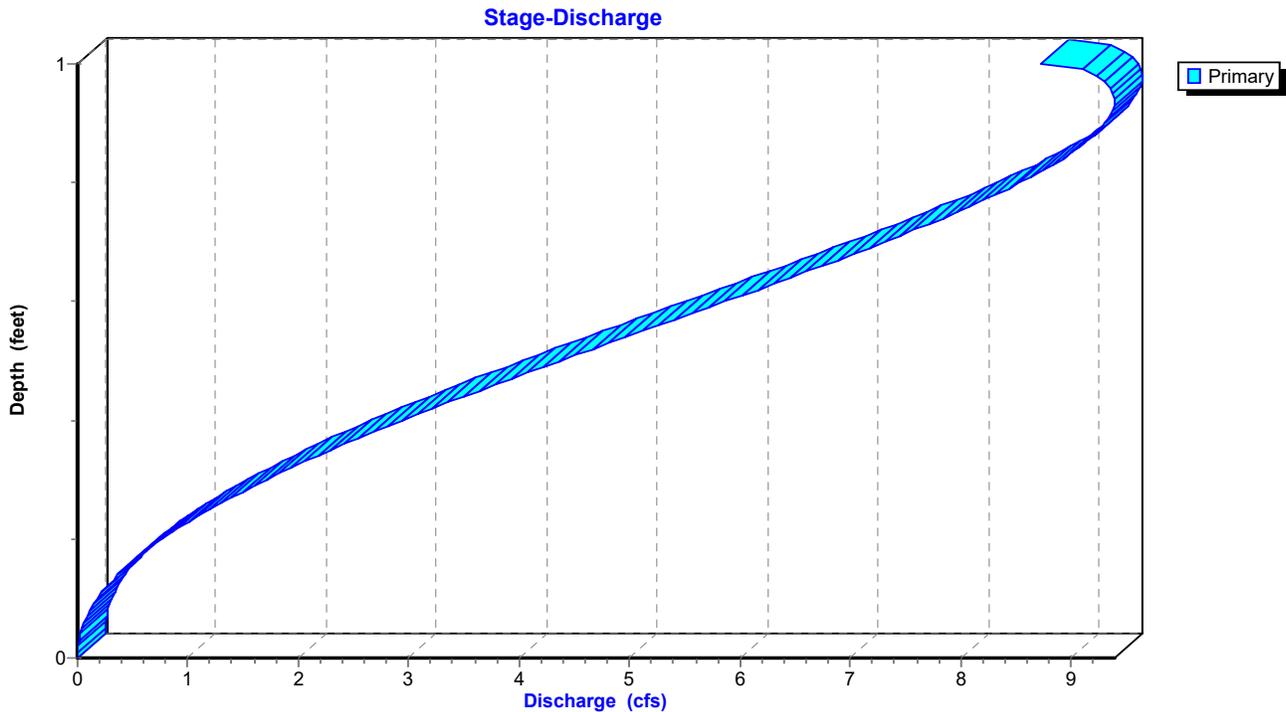
12.0" Round Pipe
n= 0.013
Length= 27.8' Slope= 0.0601 '/'
Inlet Invert= 531.44', Outlet Invert= 529.77'



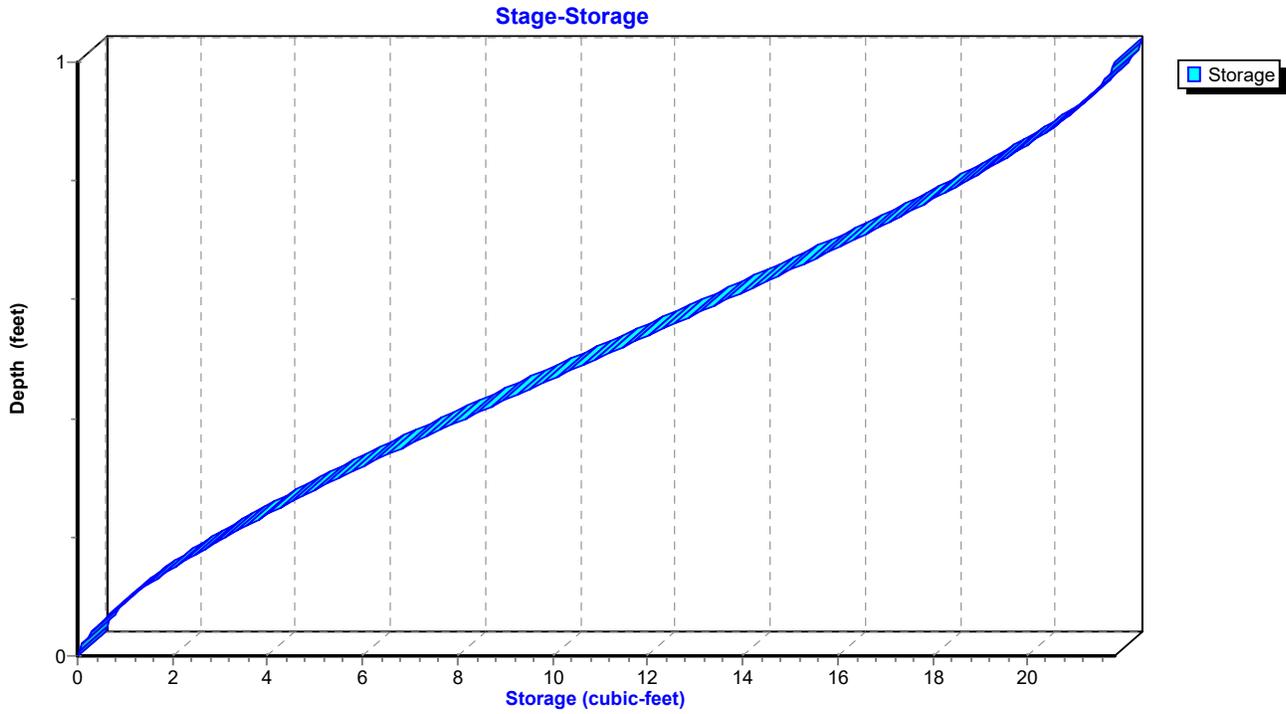
Reach 2-2: MH 2-2 TO MH 2-1



Reach 2-2: MH 2-2 TO MH 2-1



Reach 2-2: MH 2-2 TO MH 2-1



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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Summary for Pond 1-P: Stormwater Facility

Inflow Area = 4.939 ac, 36.28% Impervious, Inflow Depth > 2.00" for 10-year event
 Inflow = 2.18 cfs @ 7.97 hrs, Volume= 0.825 af
 Outflow = 0.78 cfs @ 9.12 hrs, Volume= 0.714 af, Atten= 64%, Lag= 69.3 min
 Primary = 0.78 cfs @ 9.12 hrs, Volume= 0.714 af

Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 524.44' @ 9.12 hrs Surf.Area= 4,375 sf Storage= 6,902 cf

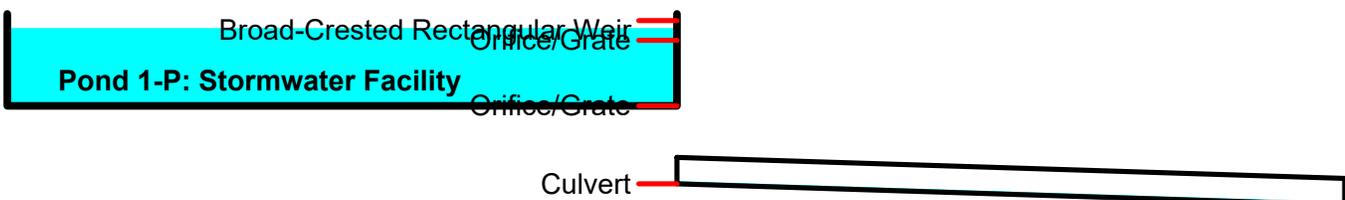
Plug-Flow detention time= 167.7 min calculated for 0.713 af (86% of inflow)
 Center-of-Mass det. time= 79.4 min (817.2 - 737.8)

Volume	Invert	Avail.Storage	Storage Description
#1	521.50'	9,545 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
521.50	5	0	0
522.00	652	164	164
522.50	1,588	560	724
523.00	2,740	1,082	1,806
523.50	3,268	1,502	3,308
524.00	3,837	1,776	5,085
524.50	4,450	2,072	7,156
525.00	5,106	2,389	9,545

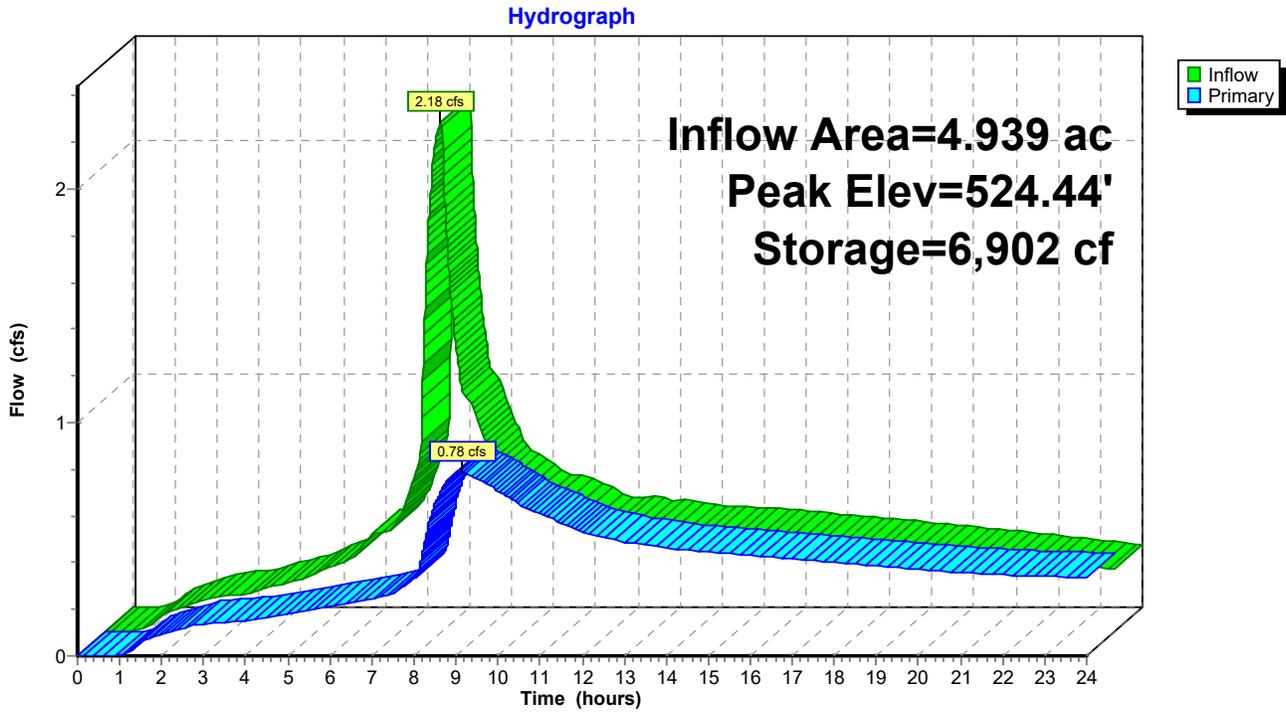
Device	Routing	Invert	Outlet Devices
#1	Primary	518.53'	12.0" Round Culvert L= 40.2' Ke= 0.500 Inlet / Outlet Invert= 518.53' / 517.73' S= 0.0199 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	521.50'	2.9" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	524.00'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	524.75'	2.0' long Broad-Crested Rectangular Weir Head (feet) 0.49 0.98 1.48 1.97 2.46 2.49 Coef. (English) 2.84 3.13 3.26 3.30 3.31 3.31

Primary OutFlow Max=0.78 cfs @ 9.12 hrs HW=524.44' TW=0.00' (Dynamic Tailwater)

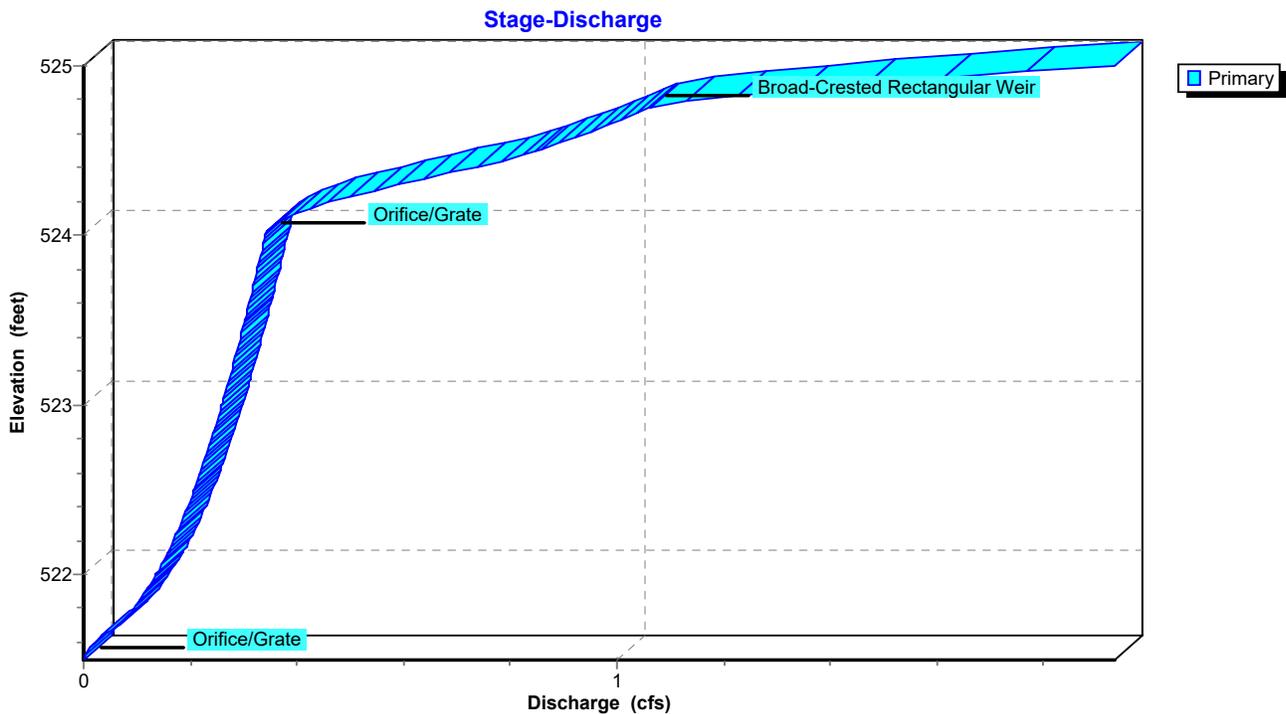
- 1=Culvert (Passes 0.78 cfs of 8.79 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.37 cfs @ 8.08 fps)
- 3=Orifice/Grate (Orifice Controls 0.41 cfs @ 2.25 fps)
- 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)



Pond 1-P: Stormwater Facility



Pond 1-P: Stormwater Facility



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

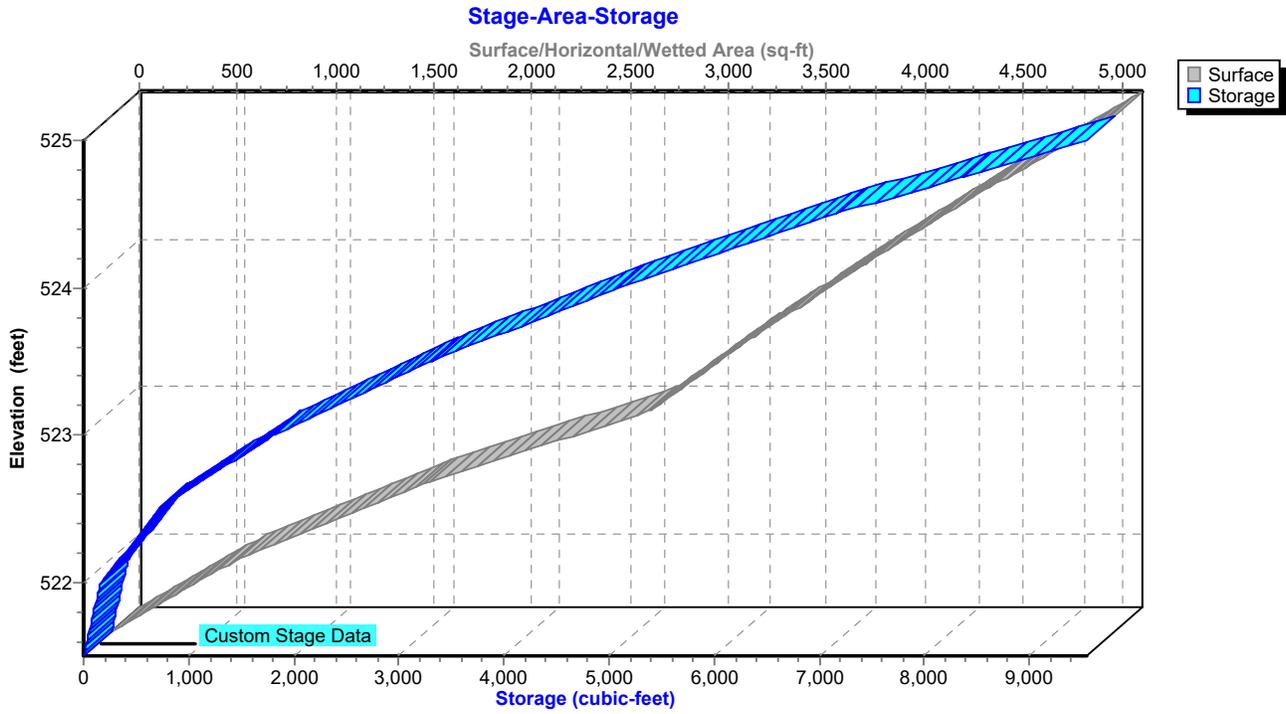
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Pond 1-P: Stormwater Facility



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 10-year Rainfall=3.45"

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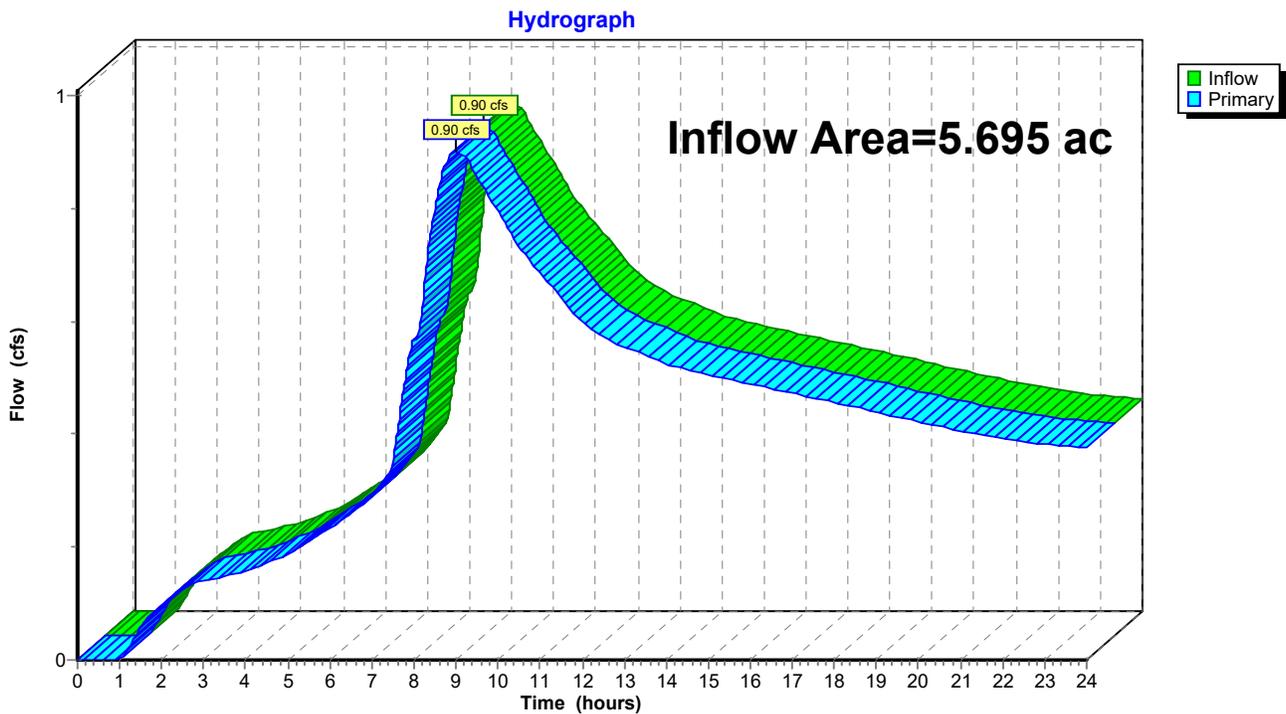
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Summary for Link TOTAL: POST DEVELOPED RELEASE RATE

Inflow Area = 5.695 ac, 32.48% Impervious, Inflow Depth > 1.72" for 10-year event
Inflow = 0.90 cfs @ 9.01 hrs, Volume= 0.819 af
Primary = 0.90 cfs @ 9.01 hrs, Volume= 0.819 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link TOTAL: POST DEVELOPED RELEASE RATE



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points
 Runoff by SBUH method, Split Pervious/Imperv.
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1:	Runoff Area=14,778 sf 0.00% Impervious Runoff Depth>1.52" Tc=5.0 min CN=74/0 Runoff=0.11 cfs 0.043 af
Subcatchment2: LOT 1&12 IMP ROAD &	Runoff Area=53,136 sf 36.58% Impervious Runoff Depth>2.30" Tc=5.0 min CN=74/98 Runoff=0.65 cfs 0.234 af
Subcatchment3: LOTS 2,3,7-11 IMPR	Runoff Area=50,099 sf 49.33% Impervious Runoff Depth>2.57" Tc=5.0 min CN=74/98 Runoff=0.70 cfs 0.247 af
Subcatchment4: Lots 4-6	Runoff Area=7,500 sf 100.00% Impervious Runoff Depth>3.66" Tc=5.0 min CN=0/98 Runoff=0.16 cfs 0.053 af
Subcatchment5: ROADWAY&LOT	Runoff Area=5,316 sf 58.09% Impervious Runoff Depth>2.76" Tc=5.0 min CN=74/98 Runoff=0.08 cfs 0.028 af
SubcatchmentA: PARKER ROAD	Runoff Area=1,162 sf 100.00% Impervious Runoff Depth>3.66" Tc=5.0 min CN=0/98 Runoff=0.02 cfs 0.008 af
SubcatchmentB: BUFFER AREA	Runoff Area=19,707 sf 0.00% Impervious Runoff Depth>2.09" Tc=26.3 min CN=82/0 Runoff=0.17 cfs 0.079 af
SubcatchmentBP: Parker 1	Runoff Area=27,744 sf 68.34% Impervious Runoff Depth>2.98" Tc=5.0 min CN=74/98 Runoff=0.46 cfs 0.158 af
SubcatchmentC: ONSITE TRIBUTARYTO	Runoff Area=9,328 sf 0.00% Impervious Runoff Depth>1.52" Tc=5.0 min CN=74/0 Runoff=0.07 cfs 0.027 af
SubcatchmentD: PARKER ROAD BYPASS	Runoff Area=3,887 sf 64.60% Impervious Runoff Depth>2.90" Tc=5.0 min CN=74/98 Runoff=0.06 cfs 0.022 af
SubcatchmentZ: OFFSITE	Runoff Area=55,422 sf 5.77% Impervious Runoff Depth>1.96" Tc=20.8 min CN=79/98 Runoff=0.46 cfs 0.208 af
Reach 1-0: MH 1-0 TO POND	Avg. Flow Depth=0.23' Max Vel=9.69 fps Inflow=1.32 cfs 0.457 af 12.0" Round Pipe n=0.013 L=146.9' S=0.1025 '/' Capacity=11.41 cfs Outflow=1.32 cfs 0.457 af
Reach 1-1: MH 1-1 TO MH 1-2	Avg. Flow Depth=0.22' Max Vel=10.09 fps Inflow=1.32 cfs 0.457 af 12.0" Round Pipe n=0.013 L=185.3' S=0.1150 '/' Capacity=12.08 cfs Outflow=1.32 cfs 0.457 af
Reach 1-2: MH 1-2 to mh 1-1	Avg. Flow Depth=0.18' Max Vel=6.61 fps Inflow=0.62 cfs 0.211 af 12.0" Round Pipe n=0.013 L=143.9' S=0.0650 '/' Capacity=9.08 cfs Outflow=0.62 cfs 0.211 af
Reach 2-0: CI 2-0 TO POND	Avg. Flow Depth=0.28' Max Vel=6.75 fps Inflow=1.21 cfs 0.478 af 12.0" Round Pipe n=0.013 L=46.1' S=0.0399 '/' Capacity=7.12 cfs Outflow=1.21 cfs 0.478 af
Reach 2-1: MH 2-1 TO CB 2-0	Avg. Flow Depth=0.26' Max Vel=6.91 fps Inflow=1.13 cfs 0.450 af 12.0" Round Pipe n=0.013 L=127.6' S=0.0450 '/' Capacity=7.56 cfs Outflow=1.13 cfs 0.450 af

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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Reach 2-2: MH 2-2 TO MH 2-1 Avg. Flow Depth=0.24' Max Vel=7.66 fps Inflow=1.13 cfs 0.450 af
12.0" Round Pipe n=0.013 L=27.8' S=0.0601 '/' Capacity=8.73 cfs Outflow=1.13 cfs 0.450 af

Pond 1-P: Stormwater Facility Peak Elev=524.68' Storage=8,007 cf Inflow=2.62 cfs 0.978 af
Outflow=1.00 cfs 0.857 af

Link TOTAL: POST DEVELOPED RELEASE RATE Inflow=1.17 cfs 0.984 af
Primary=1.17 cfs 0.984 af

Total Runoff Area = 5.695 ac Runoff Volume = 1.106 af Average Runoff Depth = 2.33"
67.52% Pervious = 3.845 ac 32.48% Impervious = 1.850 ac

Summary for Subcatchment 1:

Runoff = 0.11 cfs @ 8.00 hrs, Volume= 0.043 af, Depth> 1.52"
 Routed to Pond 1-P : Stormwater Facility

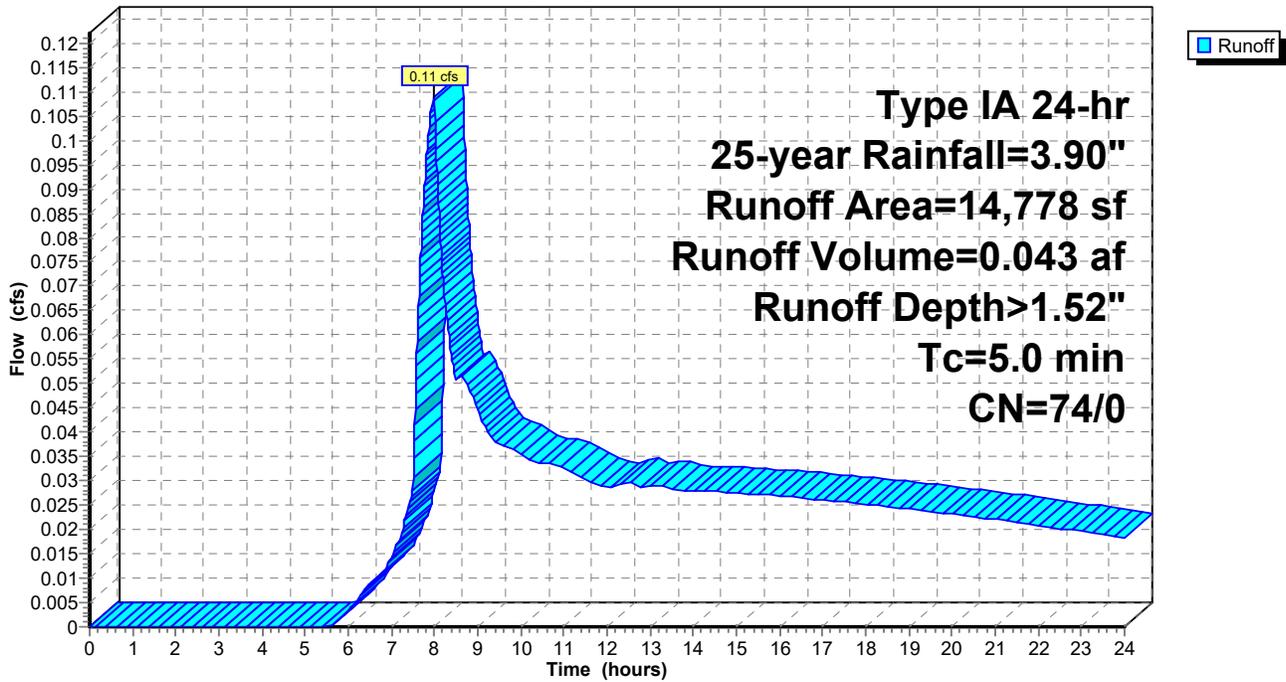
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

Area (sf)	CN	Description
* 14,778	74	
14,778	74	100.00% Pervious Area

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

Subcatchment 1:

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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Summary for Subcatchment 2: LOT 1&12 IMP ROAD & LOT PERV

Runoff = 0.65 cfs @ 7.93 hrs, Volume= 0.234 af, Depth> 2.30"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

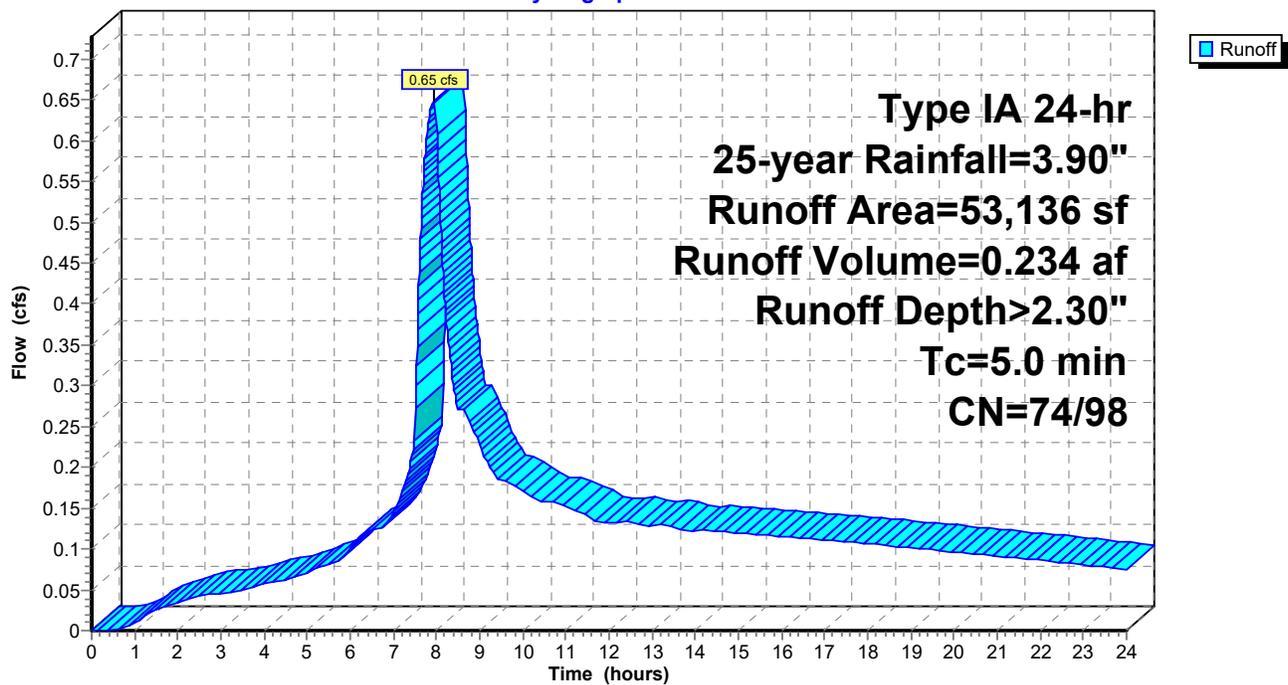
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

	Area (sf)	CN	Description
*	19,437	98	
*	33,699	74	
	53,136	83	Weighted Average
	33,699	74	63.42% Pervious Area
	19,437	98	36.58% Impervious Area

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

Subcatchment 2: LOT 1&12 IMP ROAD & LOT PERV

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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Summary for Subcatchment 3: LOTS 2,3,7-11 IMPR ROAD & PERV LOTS

Runoff = 0.70 cfs @ 7.92 hrs, Volume= 0.247 af, Depth> 2.57"
 Routed to Reach 1-1 : MH 1-1 TO MH 1-2

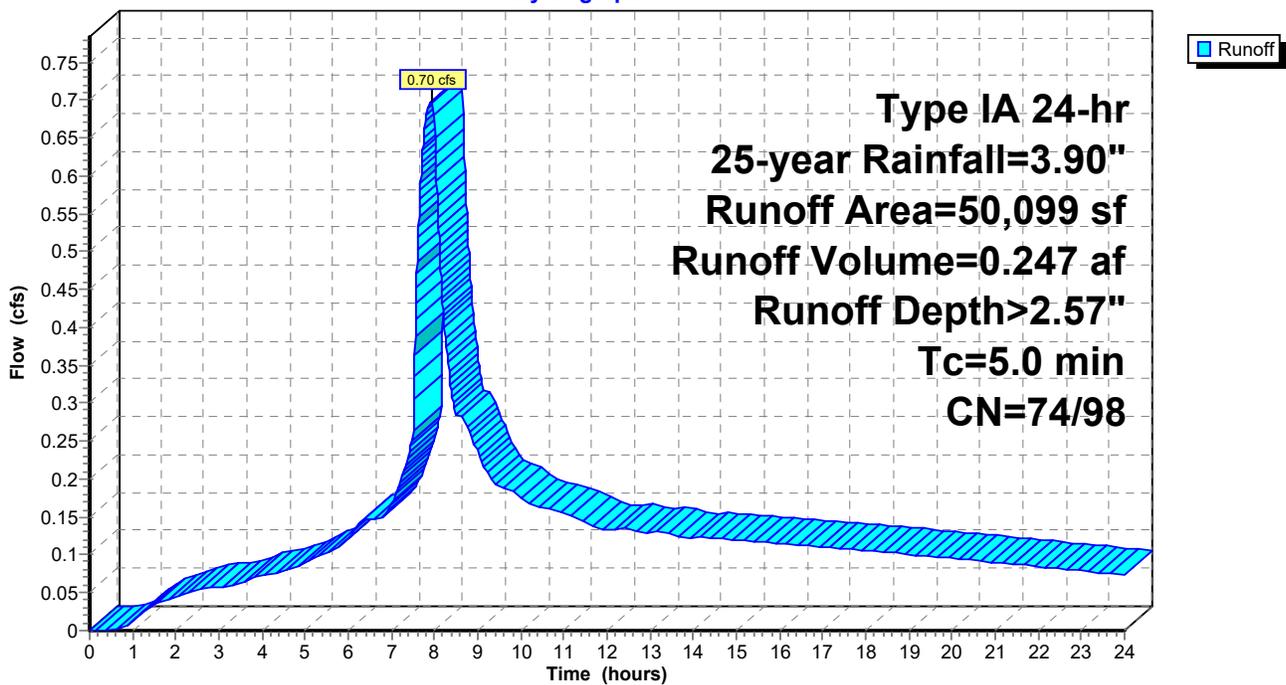
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

	Area (sf)	CN	Description
*	25,385	74	
*	24,714	98	
	50,099	86	Weighted Average
	25,385	74	50.67% Pervious Area
	24,714	98	49.33% Impervious Area

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

Subcatchment 3: LOTS 2,3,7-11 IMPR ROAD & PERV LOTS

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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Summary for Subcatchment 4: Lots 4-6

Runoff = 0.16 cfs @ 7.88 hrs, Volume= 0.053 af, Depth> 3.66"
 Routed to Reach 1-2 : MH 1-2 to mh 1-1

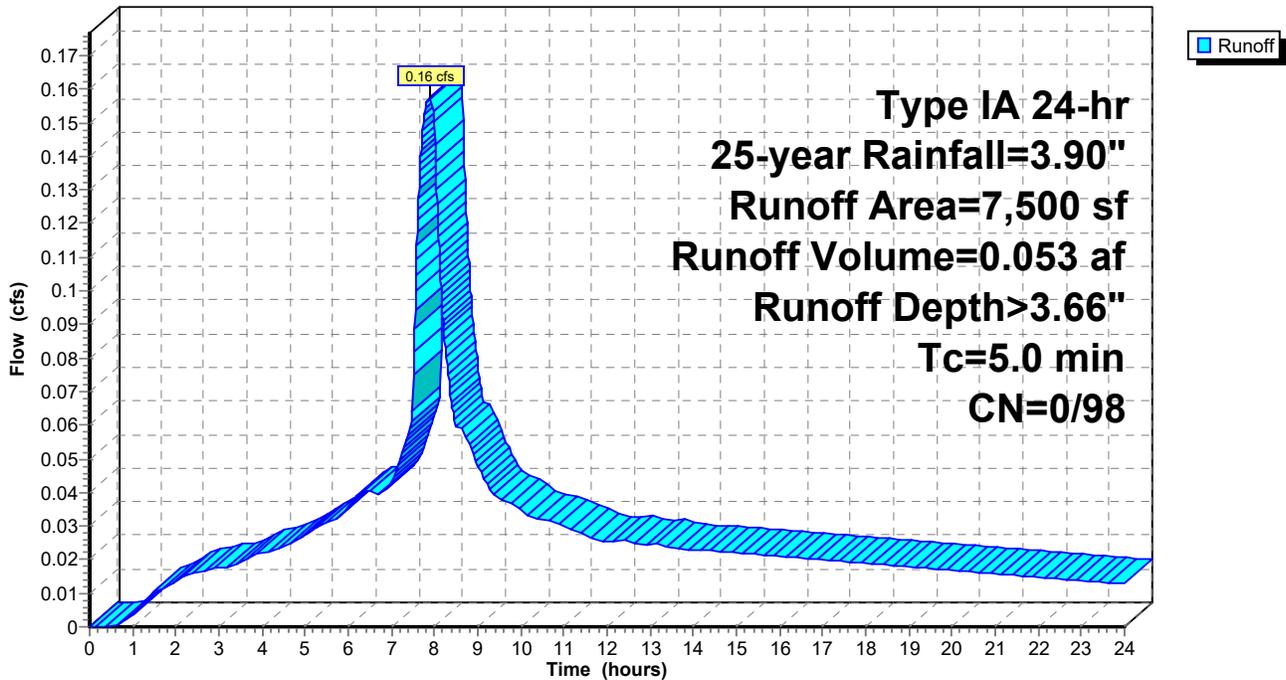
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

Area (sf)	CN	Description
* 7,500	98	
7,500	98	100.00% Impervious Area

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

Subcatchment 4: Lots 4-6

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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Summary for Subcatchment 5: ROADWAY & LOT PERVIOUS

Runoff = 0.08 cfs @ 7.91 hrs, Volume= 0.028 af, Depth> 2.76"
 Routed to Reach 2-0 : CI 2-0 TO POND

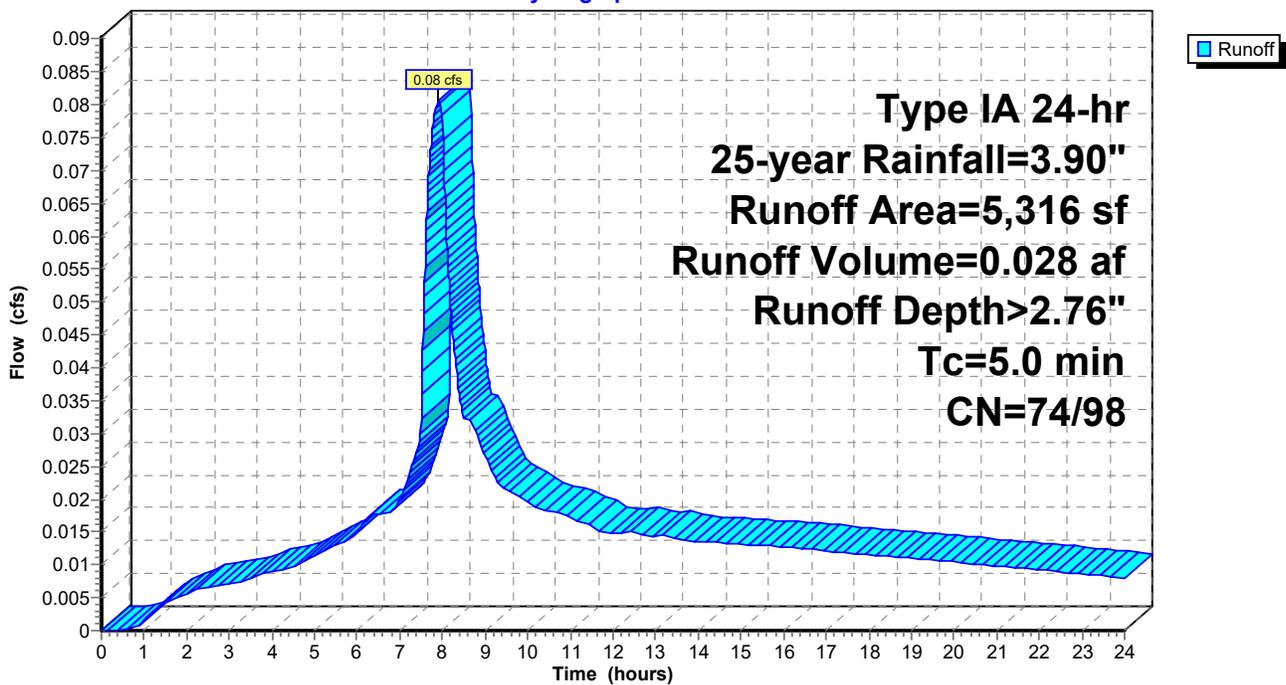
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

	Area (sf)	CN	Description
*	3,088	98	
*	2,228	74	
	5,316	88	Weighted Average
	2,228	74	41.91% Pervious Area
	3,088	98	58.09% Impervious Area

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

Subcatchment 5: ROADWAY & LOT PERVIOUS

Hydrograph



Summary for Subcatchment A: PARKER ROAD

Runoff = 0.02 cfs @ 7.88 hrs, Volume= 0.008 af, Depth> 3.66"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

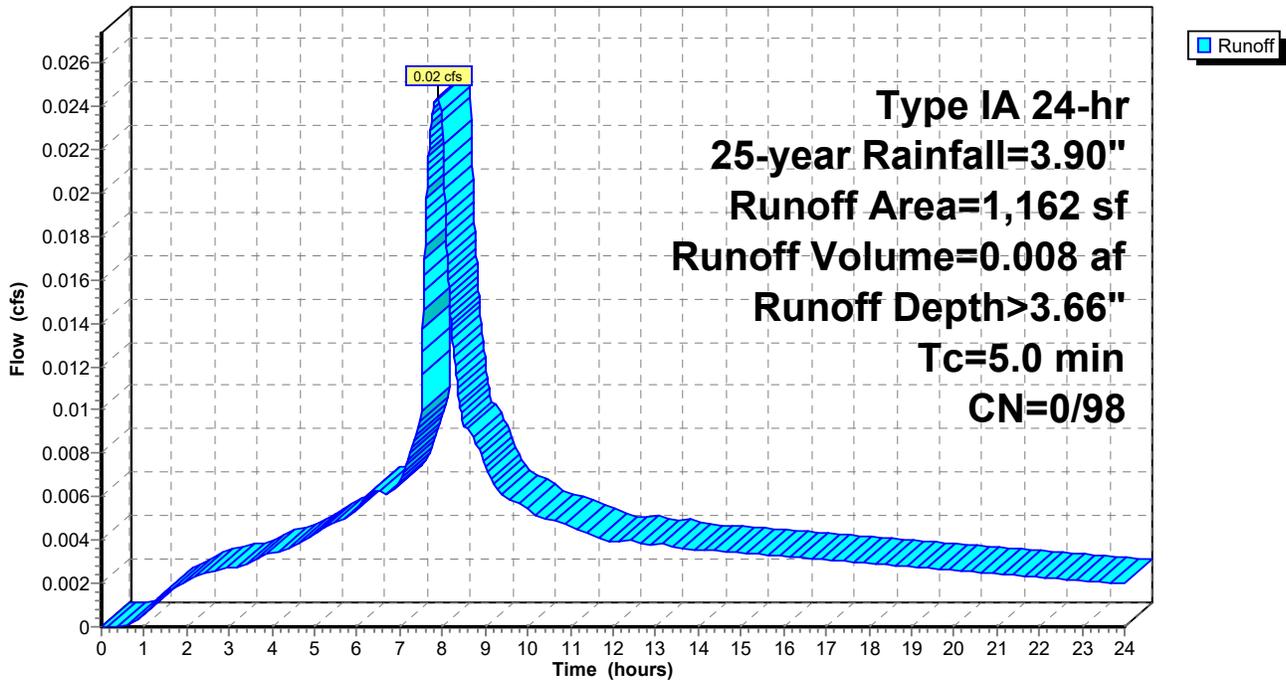
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

Area (sf)	CN	Description
* 1,162	98	
1,162	98	100.00% Impervious Area

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

Subcatchment A: PARKER ROAD

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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Summary for Subcatchment B: BUFFER AREA

Runoff = 0.17 cfs @ 8.01 hrs, Volume= 0.079 af, Depth> 2.09"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

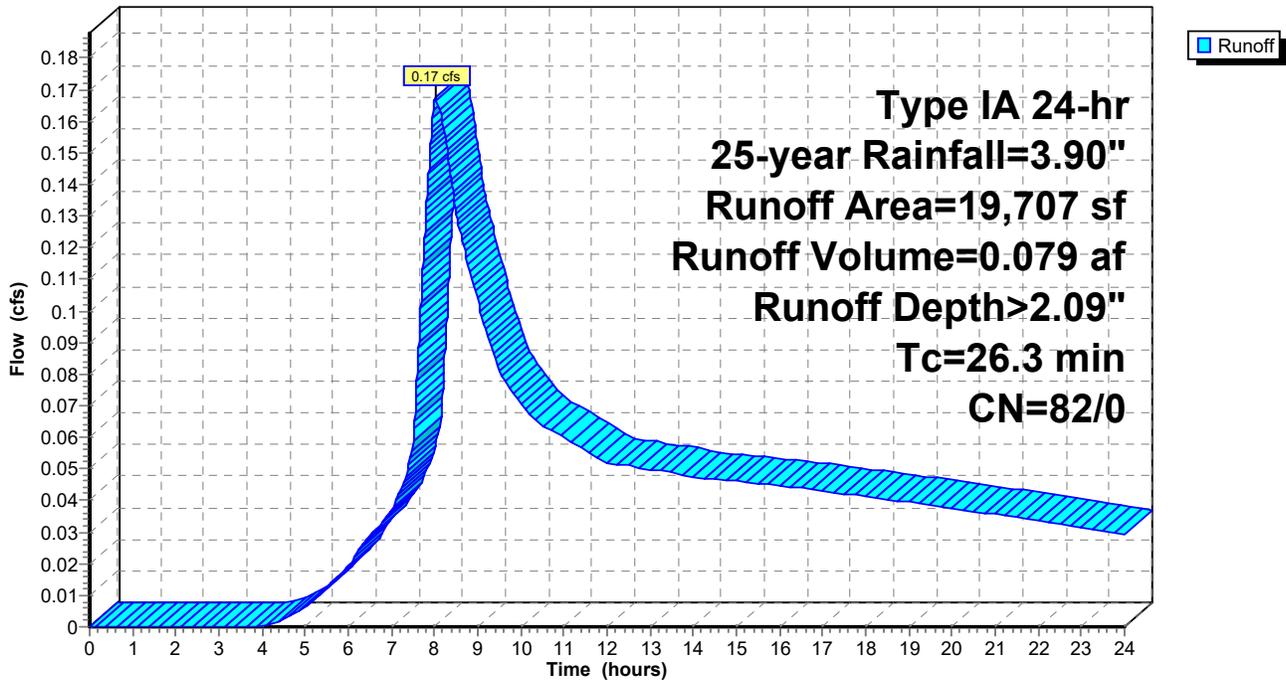
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

Area (sf)	CN	Description
* 19,707	82	
19,707	82	100.00% Pervious Area

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

Subcatchment B: BUFFER AREA

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-2 Type IA 24-hr 25-year Rainfall=3.90"

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Summary for Subcatchment BP: Parker 1

Runoff = 0.46 cfs @ 7.90 hrs, Volume= 0.158 af, Depth> 2.98"
 Routed to Reach 1-2 : MH 1-2 to mh 1-1

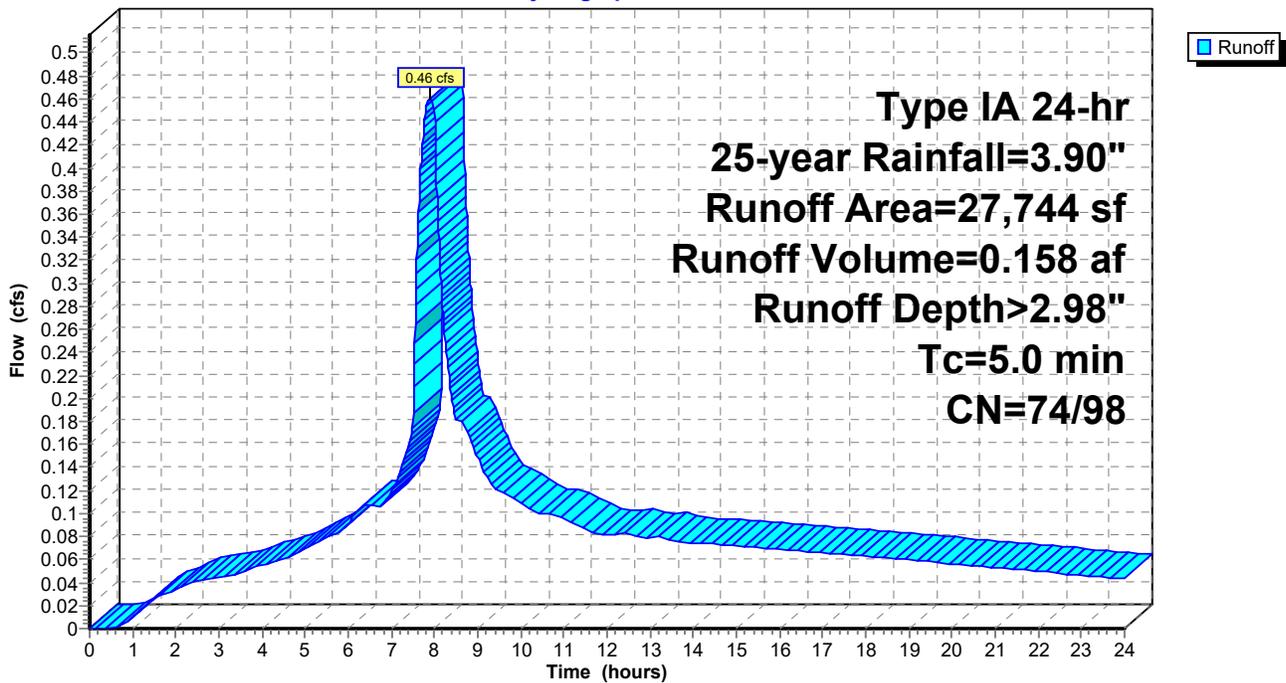
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

	Area (sf)	CN	Description
*	18,960	98	
*	8,784	74	
	27,744	90	Weighted Average
	8,784	74	31.66% Pervious Area
	18,960	98	68.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 10

Subcatchment BP: Parker 1

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-2 Type IA 24-hr 25-year Rainfall=3.90"

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Summary for Subcatchment C: ONSITE TRIBUTARY TO BUFFER AREA

Runoff = 0.07 cfs @ 8.00 hrs, Volume= 0.027 af, Depth> 1.52"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

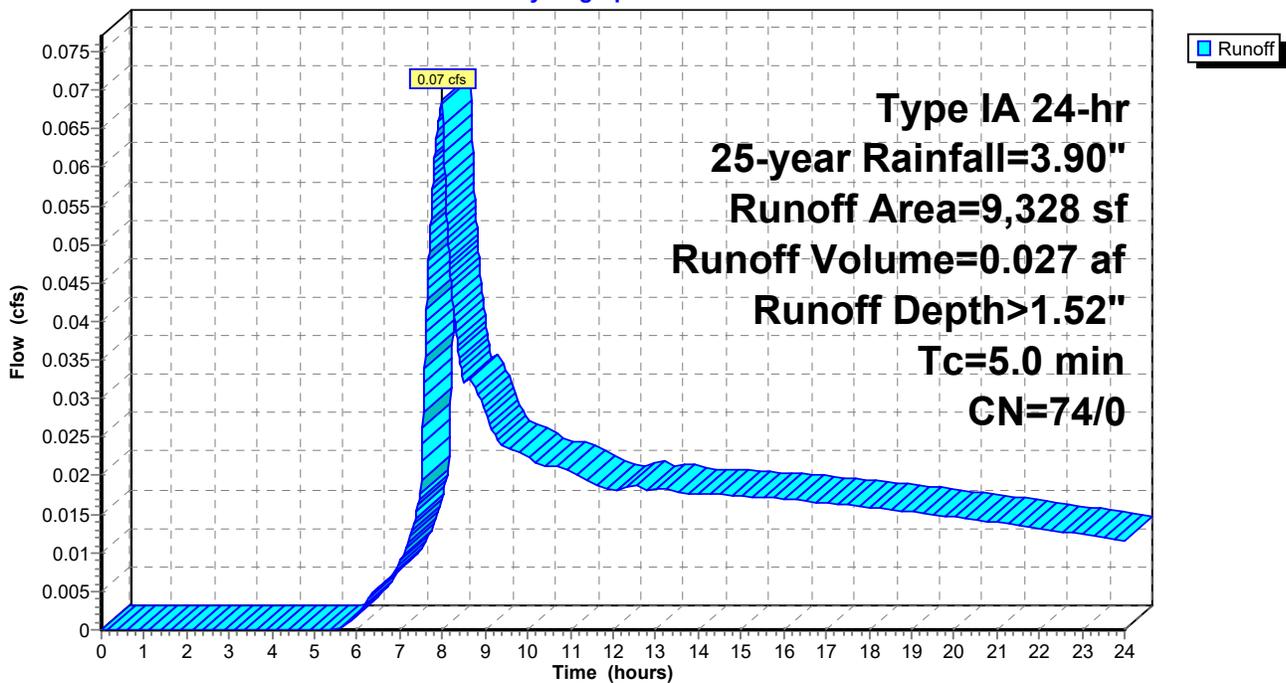
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

Area (sf)	CN	Description
* 9,328	74	
9,328	74	100.00% Pervious Area

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

Subcatchment C: ONSITE TRIBUTARY TO BUFFER AREA

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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Summary for Subcatchment D: PARKER ROAD BYPASS

Runoff = 0.06 cfs @ 7.90 hrs, Volume= 0.022 af, Depth> 2.90"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

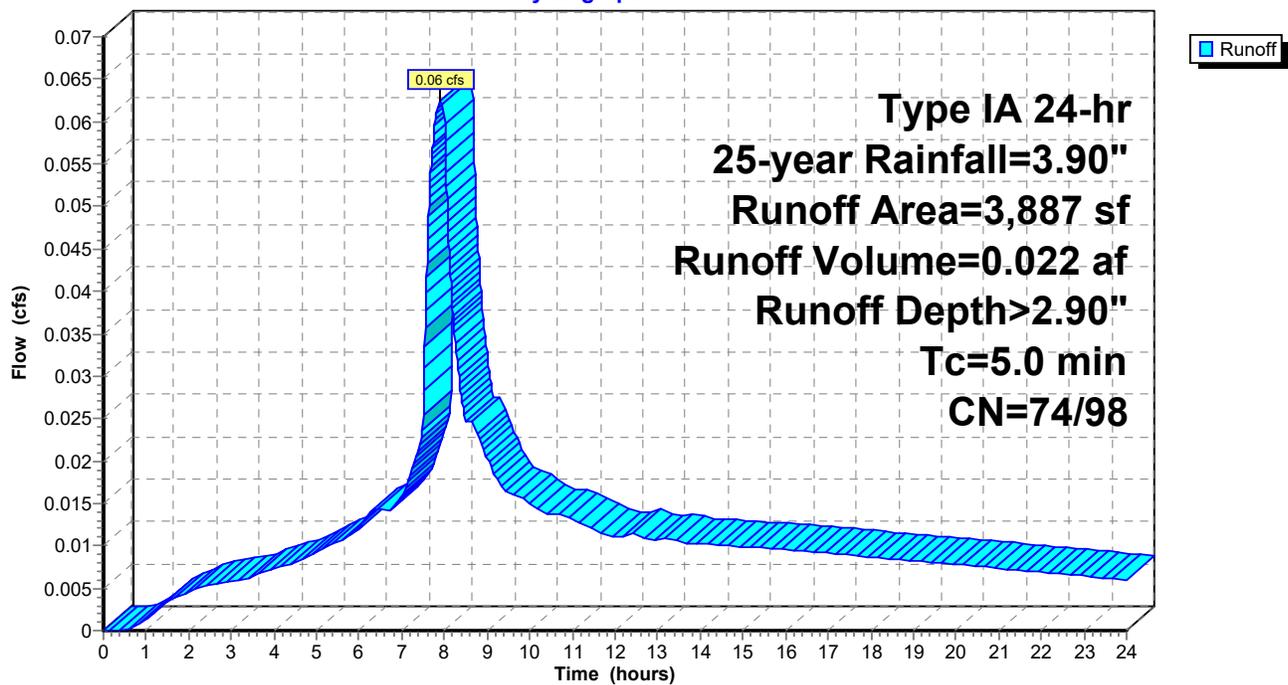
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

	Area (sf)	CN	Description
*	2,511	98	
*	1,376	74	
	3,887	90	Weighted Average
	1,376	74	35.40% Pervious Area
	2,511	98	64.60% Impervious Area

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

Subcatchment D: PARKER ROAD BYPASS

Hydrograph



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Summary for Subcatchment Z: OFFSITE

Runoff = 0.46 cfs @ 8.01 hrs, Volume= 0.208 af, Depth> 1.96"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

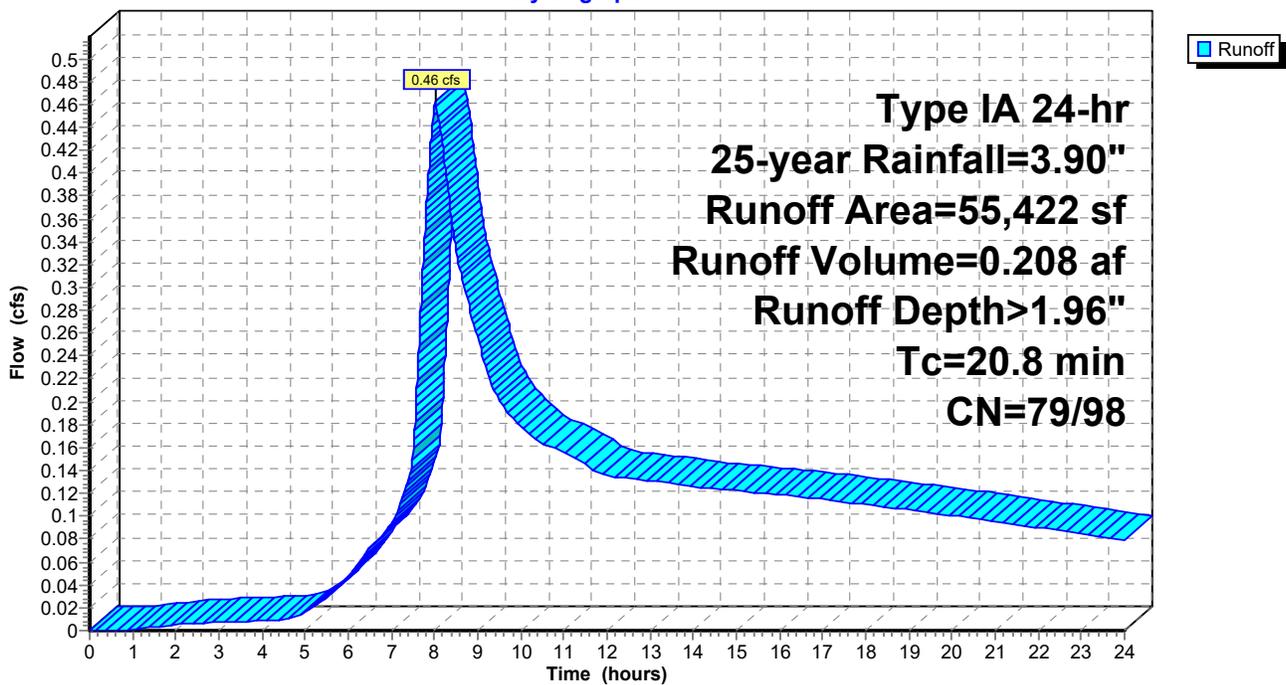
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 25-year Rainfall=3.90"

	Area (sf)	CN	Description
*	3,198	98	
*	52,224	79	
	55,422	80	Weighted Average
	52,224	79	94.23% Pervious Area
	3,198	98	5.77% Impervious Area

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

Subcatchment Z: OFFSITE

Hydrograph



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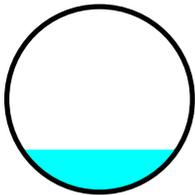
Summary for Reach 1-0: MH 1-0 TO POND

Inflow Area = 1.959 ac, 59.96% Impervious, Inflow Depth > 2.80" for 25-year event
Inflow = 1.32 cfs @ 7.91 hrs, Volume= 0.457 af
Outflow = 1.32 cfs @ 7.91 hrs, Volume= 0.457 af, Atten= 0%, Lag= 0.2 min
Routed to Pond 1-P : Stormwater Facility

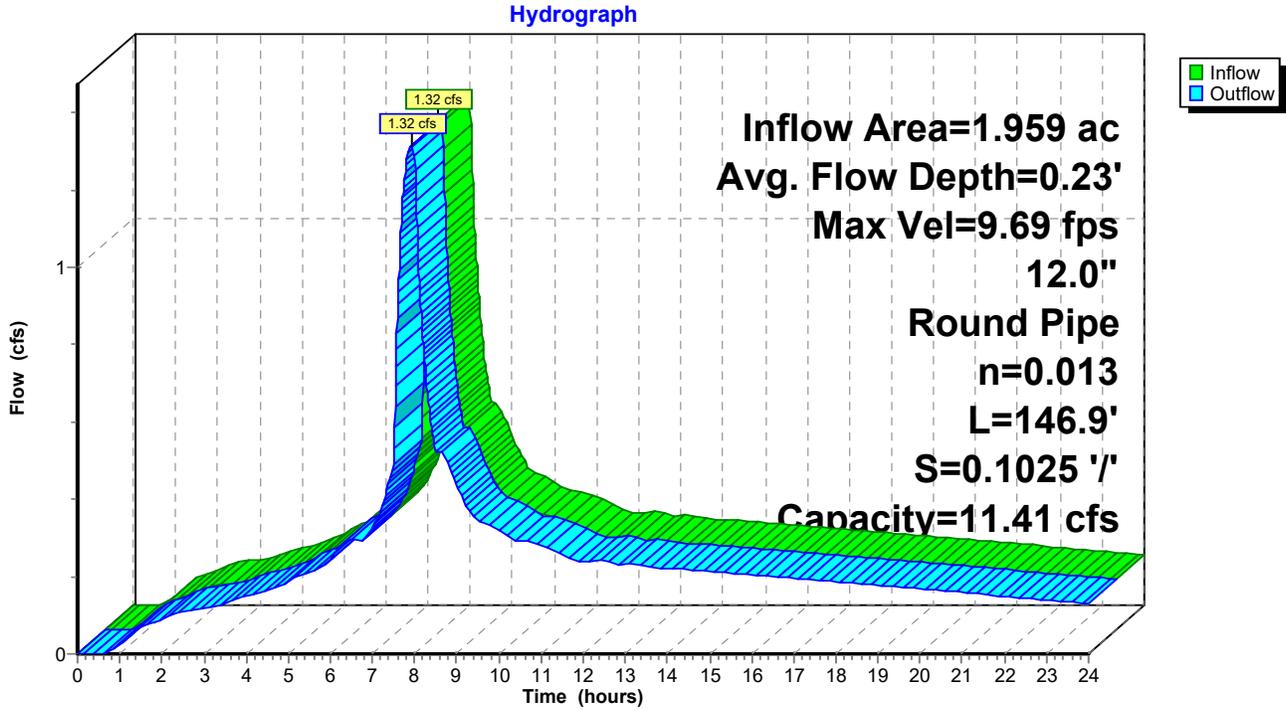
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.69 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 5.58 fps, Avg. Travel Time= 0.4 min

Peak Storage= 20 cf @ 7.91 hrs
Average Depth at Peak Storage= 0.23' , Surface Width= 0.84'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 11.41 cfs

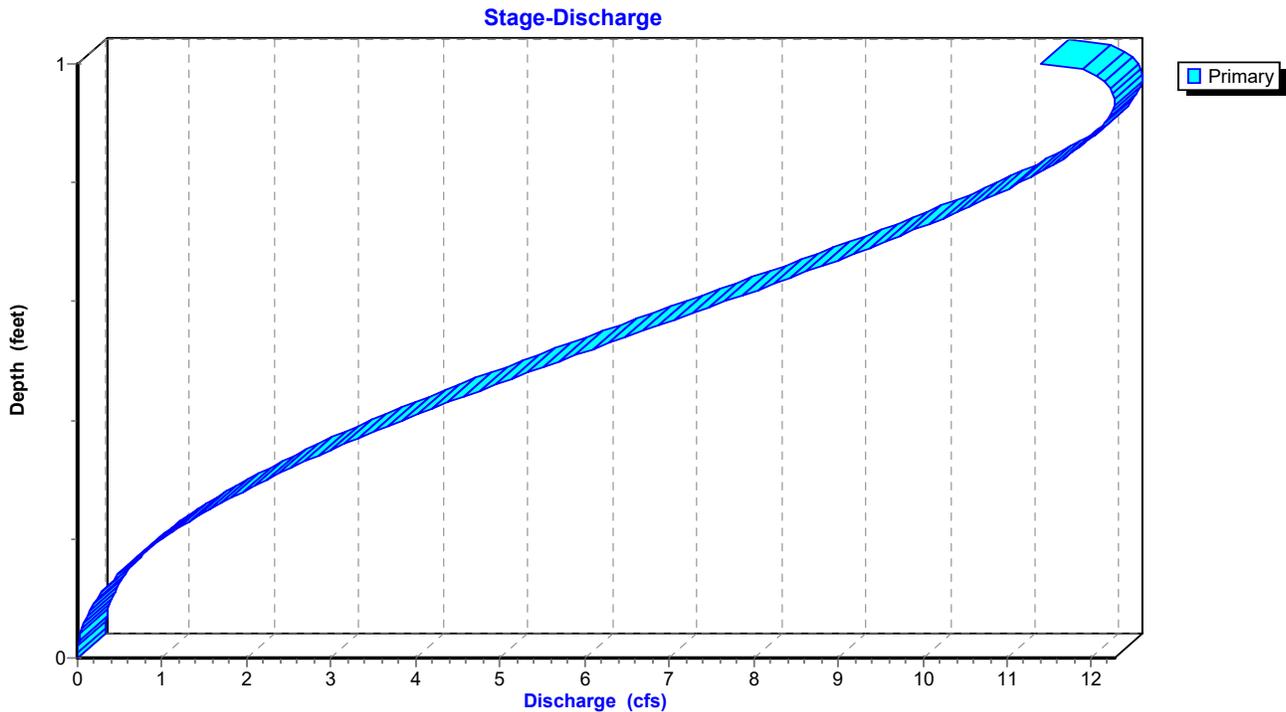
12.0" Round Pipe
n= 0.013
Length= 146.9' Slope= 0.1025 '/'
Inlet Invert= 537.38', Outlet Invert= 522.32'



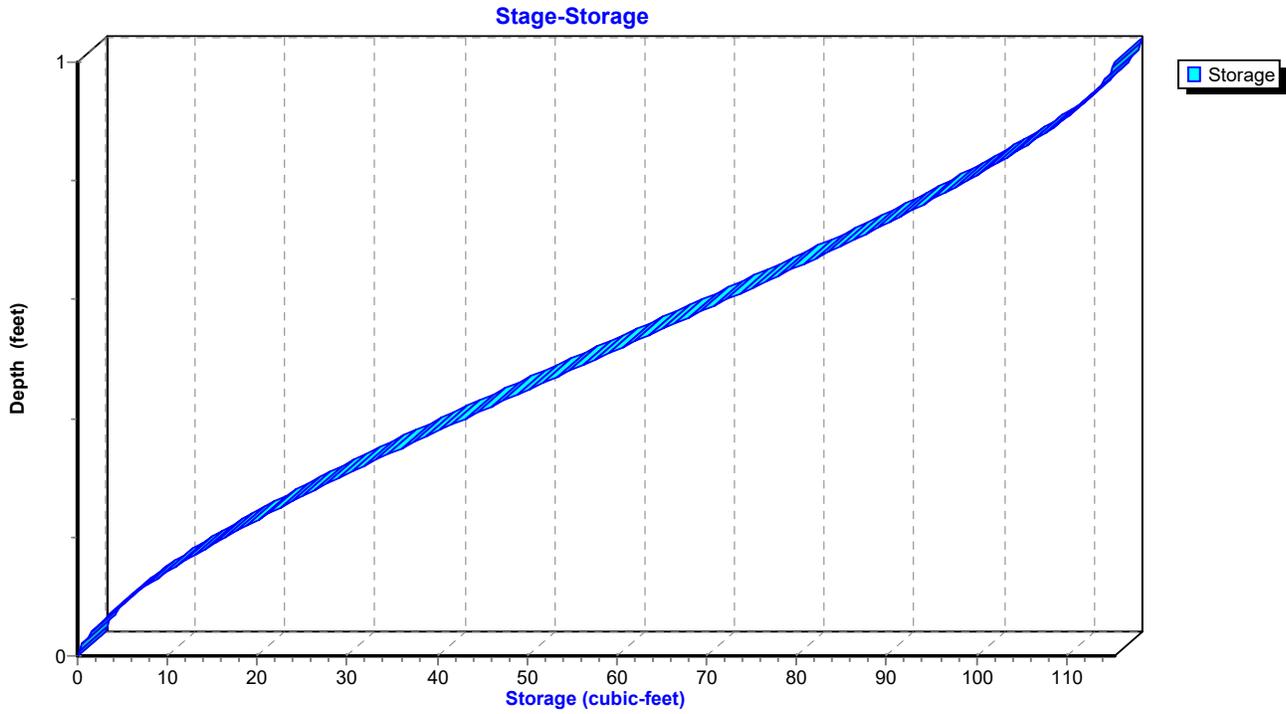
Reach 1-0: MH 1-0 TO POND



Reach 1-0: MH 1-0 TO POND



Reach 1-0: MH 1-0 TO POND



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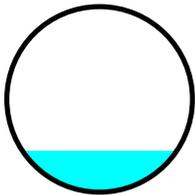
Summary for Reach 1-1: MH 1-1 TO MH 1-2

Inflow Area = 1.959 ac, 59.96% Impervious, Inflow Depth > 2.80" for 25-year event
Inflow = 1.32 cfs @ 7.91 hrs, Volume= 0.457 af
Outflow = 1.32 cfs @ 7.91 hrs, Volume= 0.457 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 1-0 : MH 1-0 TO POND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.09 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 5.81 fps, Avg. Travel Time= 0.5 min

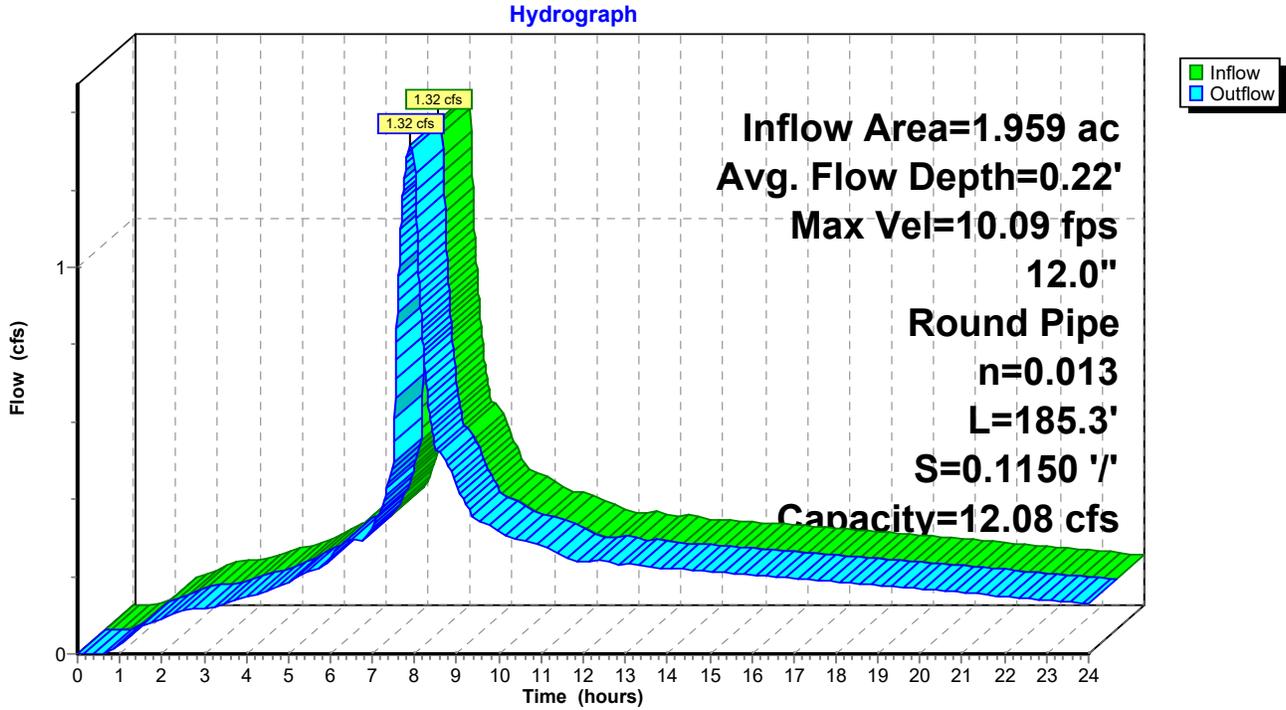
Peak Storage= 24 cf @ 7.91 hrs
Average Depth at Peak Storage= 0.22' , Surface Width= 0.83'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 12.08 cfs

12.0" Round Pipe
n= 0.013
Length= 185.3' Slope= 0.1150 '/'
Inlet Invert= 558.89', Outlet Invert= 537.58'

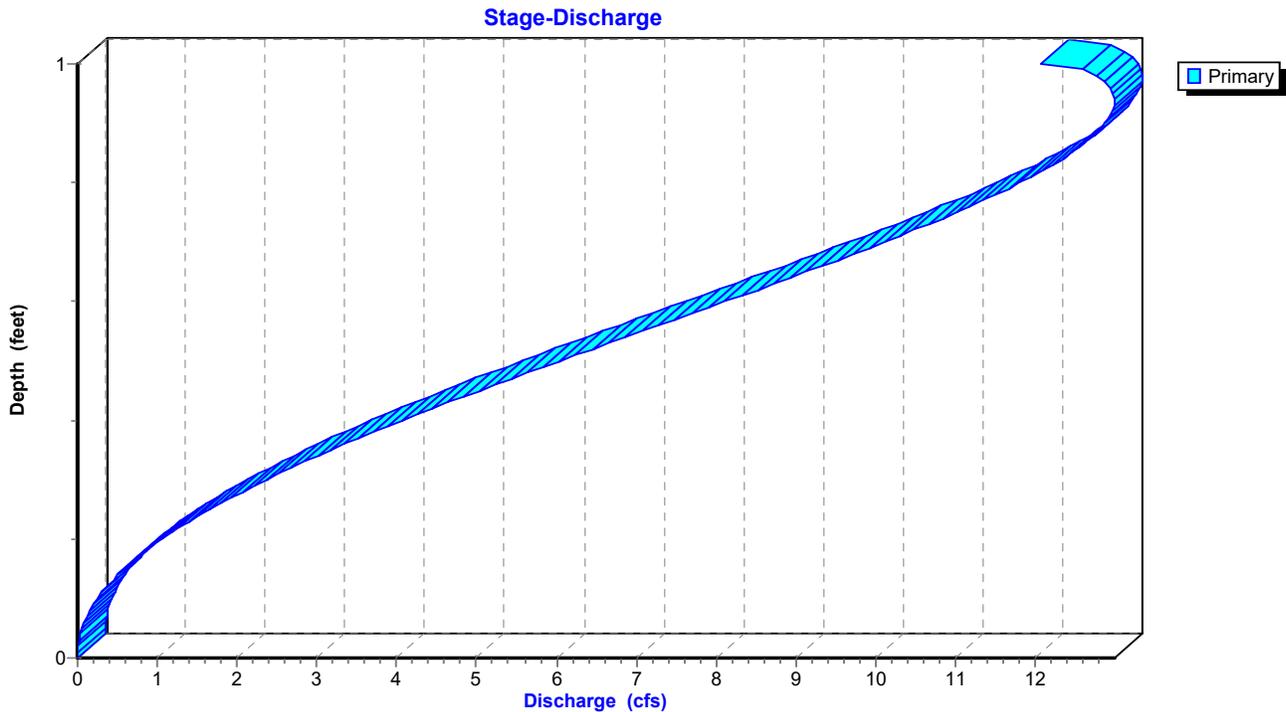


Reach 1-1: MH 1-1 TO MH 1-2

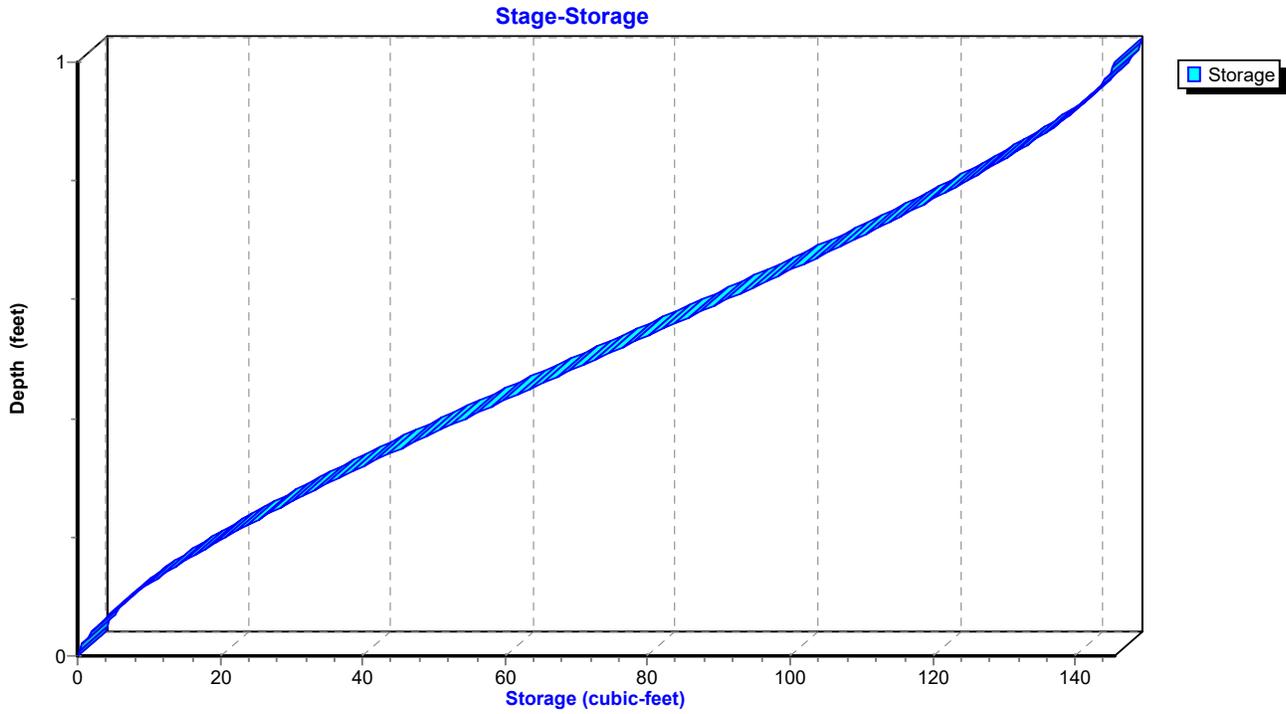
Reach 1-1: MH 1-1 TO MH 1-2



Reach 1-1: MH 1-1 TO MH 1-2



Reach 1-1: MH 1-1 TO MH 1-2



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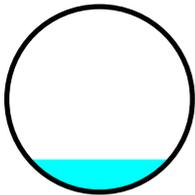
Summary for Reach 1-2: MH 1-2 to mh 1-1

Inflow Area = 0.809 ac, 75.08% Impervious, Inflow Depth > 3.13" for 25-year event
Inflow = 0.62 cfs @ 7.89 hrs, Volume= 0.211 af
Outflow = 0.62 cfs @ 7.90 hrs, Volume= 0.211 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 1-1 : MH 1-1 TO MH 1-2

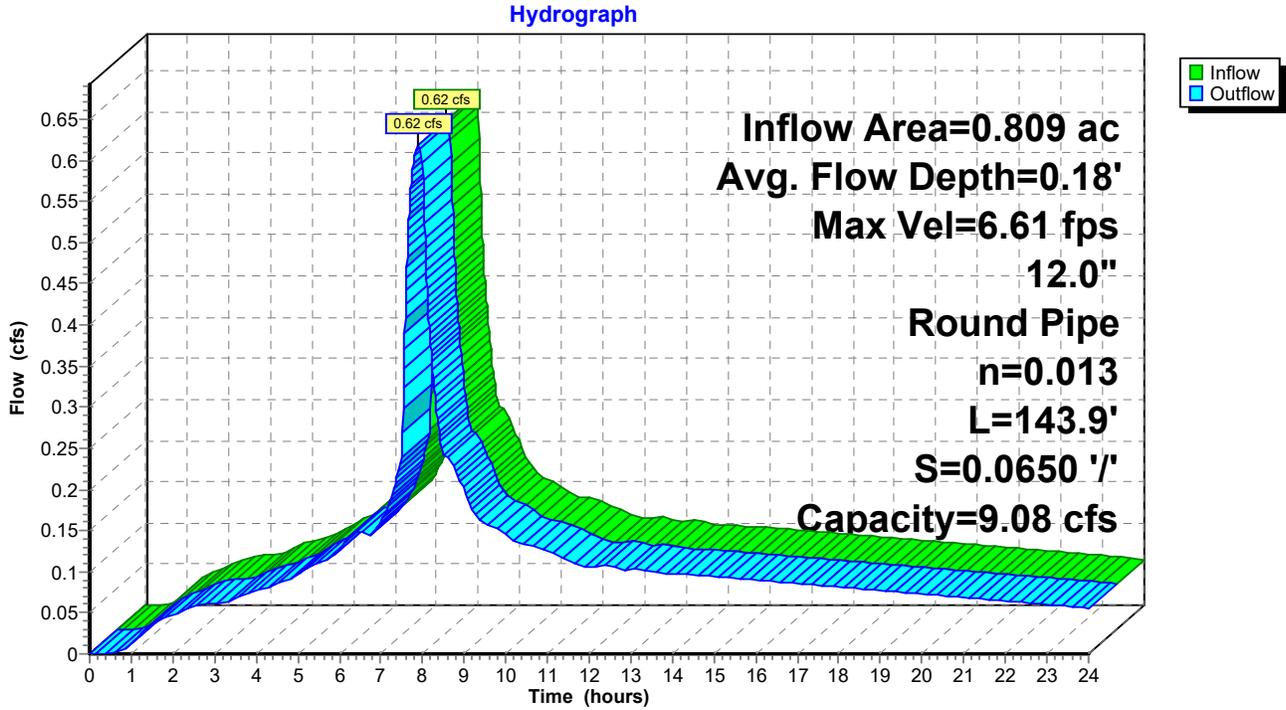
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.61 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 3.77 fps, Avg. Travel Time= 0.6 min

Peak Storage= 13 cf @ 7.90 hrs
Average Depth at Peak Storage= 0.18' , Surface Width= 0.76'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.08 cfs

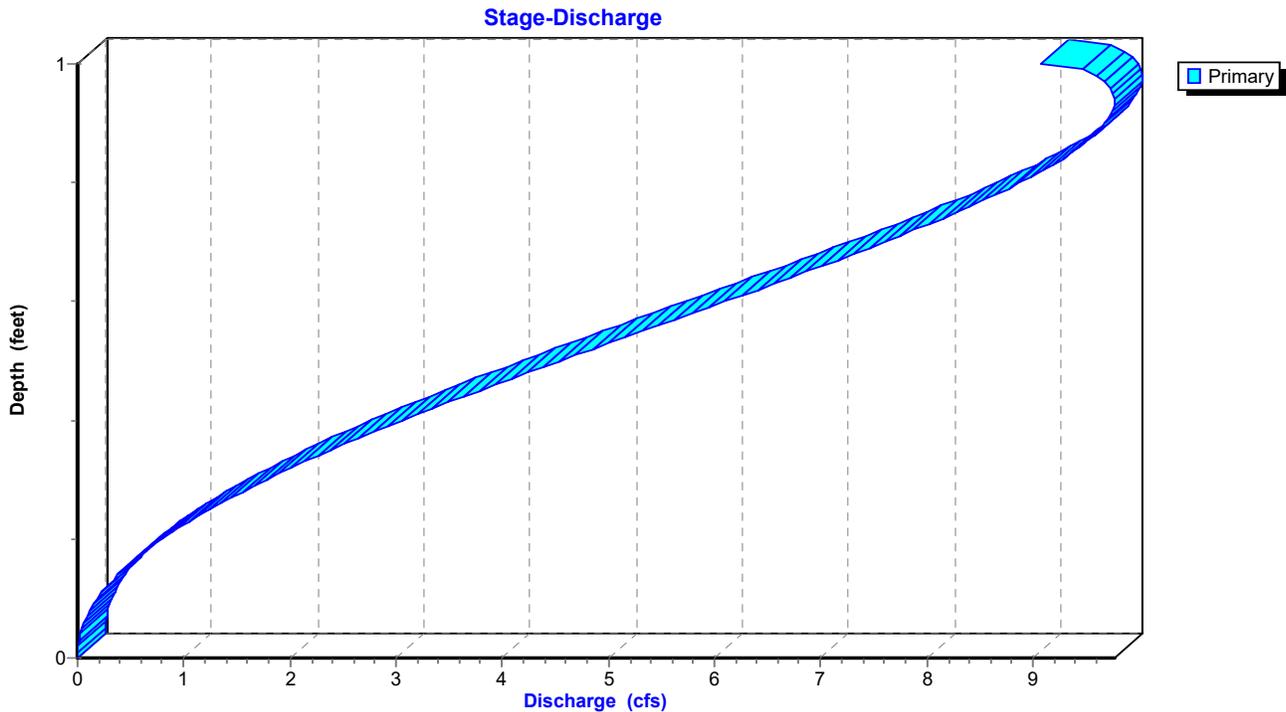
12.0" Round Pipe
n= 0.013
Length= 143.9' Slope= 0.0650 '/'
Inlet Invert= 568.44', Outlet Invert= 559.09'



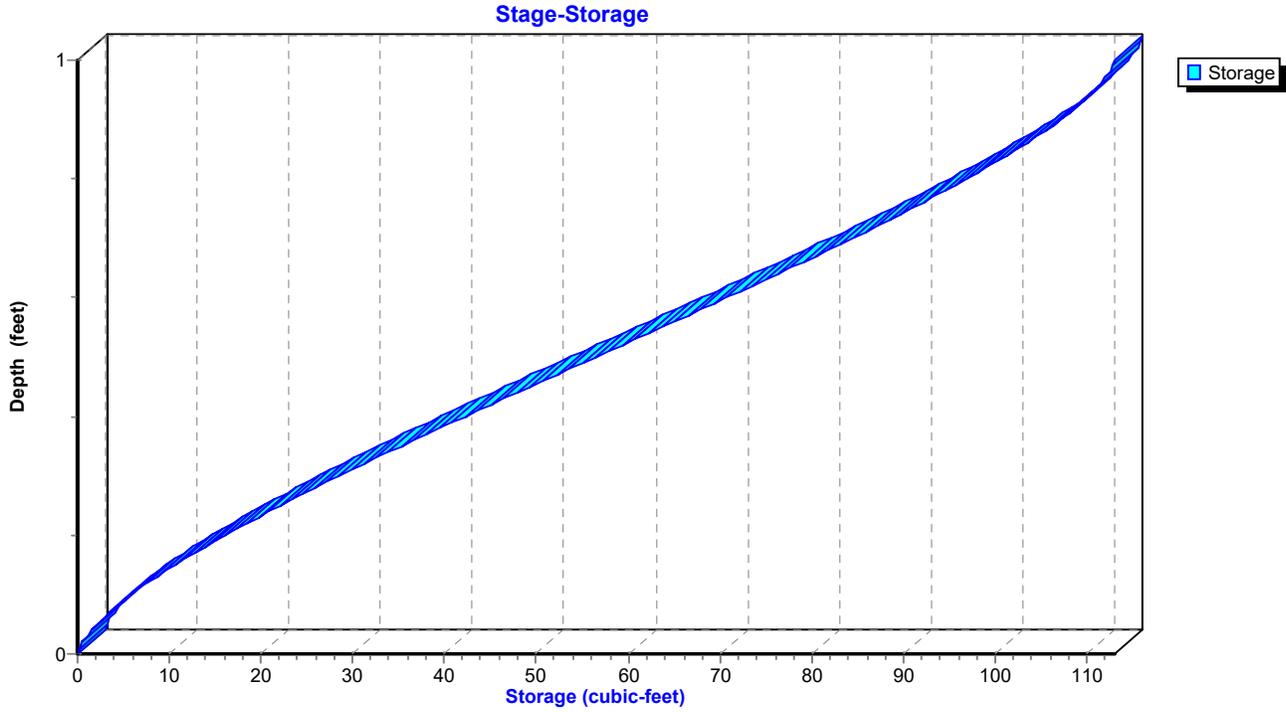
Reach 1-2: MH 1-2 to mh 1-1



Reach 1-2: MH 1-2 to mh 1-1



Reach 1-2: MH 1-2 to mh 1-1



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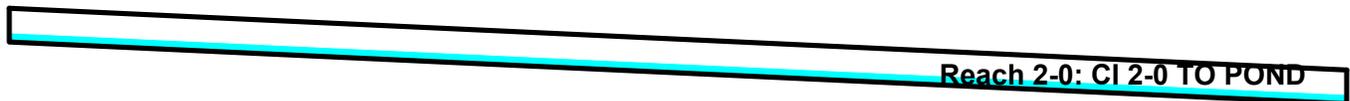
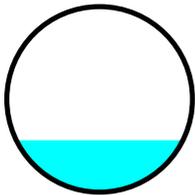
Summary for Reach 2-0: CI 2-0 TO POND

Inflow Area = 2.641 ac, 23.37% Impervious, Inflow Depth > 2.17" for 25-year event
Inflow = 1.21 cfs @ 8.00 hrs, Volume= 0.478 af
Outflow = 1.21 cfs @ 8.00 hrs, Volume= 0.478 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 1-P : Stormwater Facility

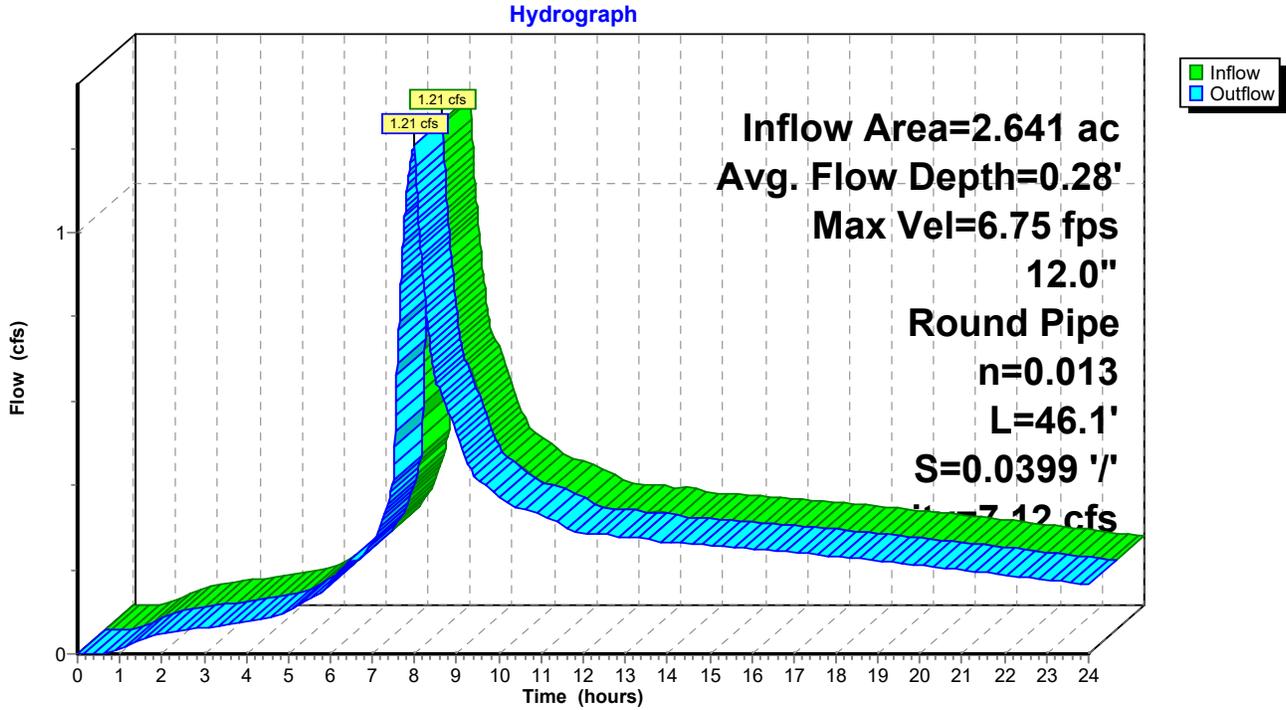
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.75 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.02 fps, Avg. Travel Time= 0.2 min

Peak Storage= 8 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.28' , Surface Width= 0.90'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.12 cfs

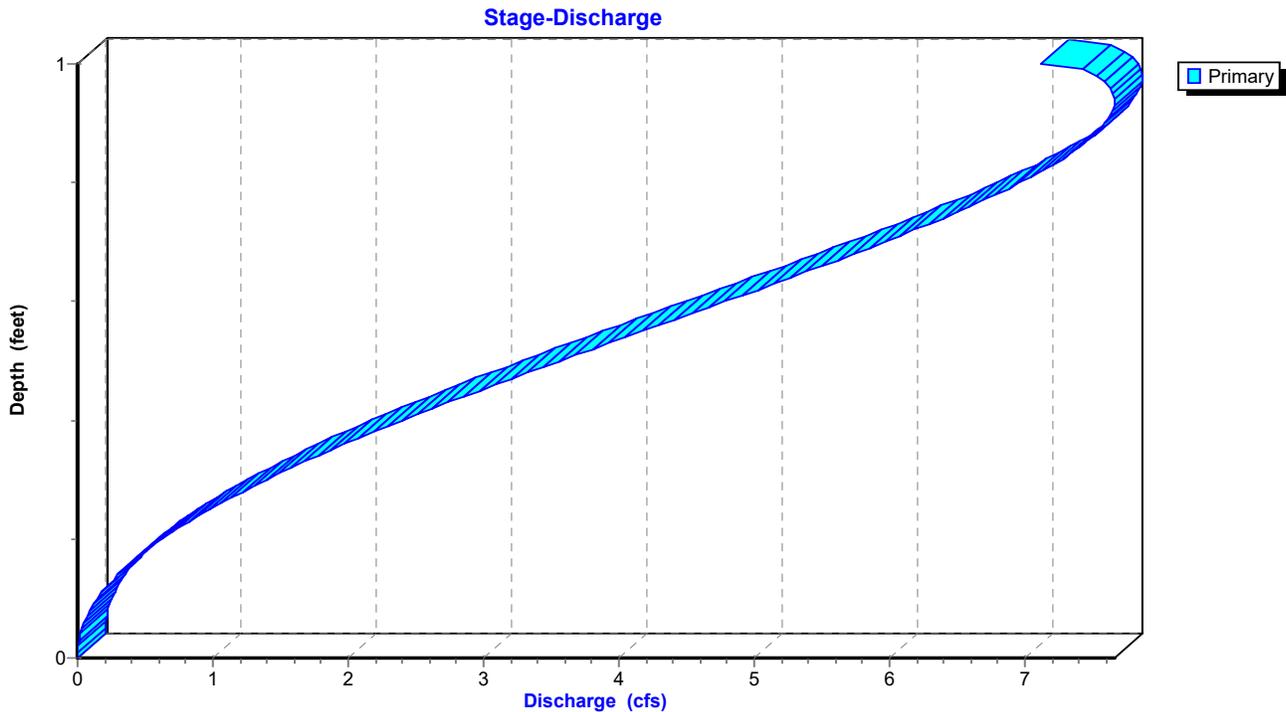
12.0" Round Pipe
n= 0.013
Length= 46.1' Slope= 0.0399 '/'
Inlet Invert= 523.83', Outlet Invert= 521.99'



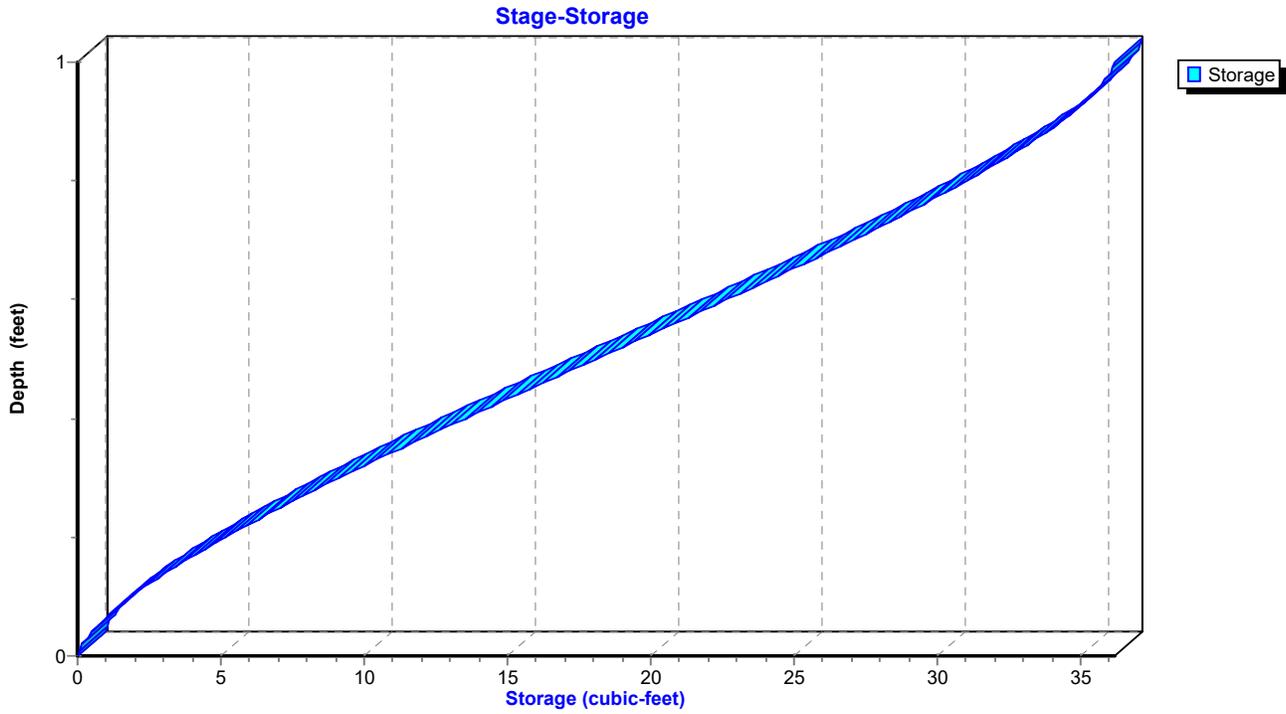
Reach 2-0: CI 2-0 TO POND



Reach 2-0: CI 2-0 TO POND



Reach 2-0: CI 2-0 TO POND



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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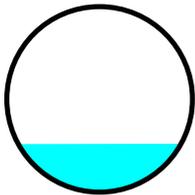
Summary for Reach 2-1: MH 2-1 TO CB 2-0

Inflow Area = 2.519 ac, 21.69% Impervious, Inflow Depth > 2.15" for 25-year event
Inflow = 1.13 cfs @ 8.00 hrs, Volume= 0.450 af
Outflow = 1.13 cfs @ 8.00 hrs, Volume= 0.450 af, Atten= 0%, Lag= 0.1 min
Routed to Reach 2-0 : CI 2-0 TO POND

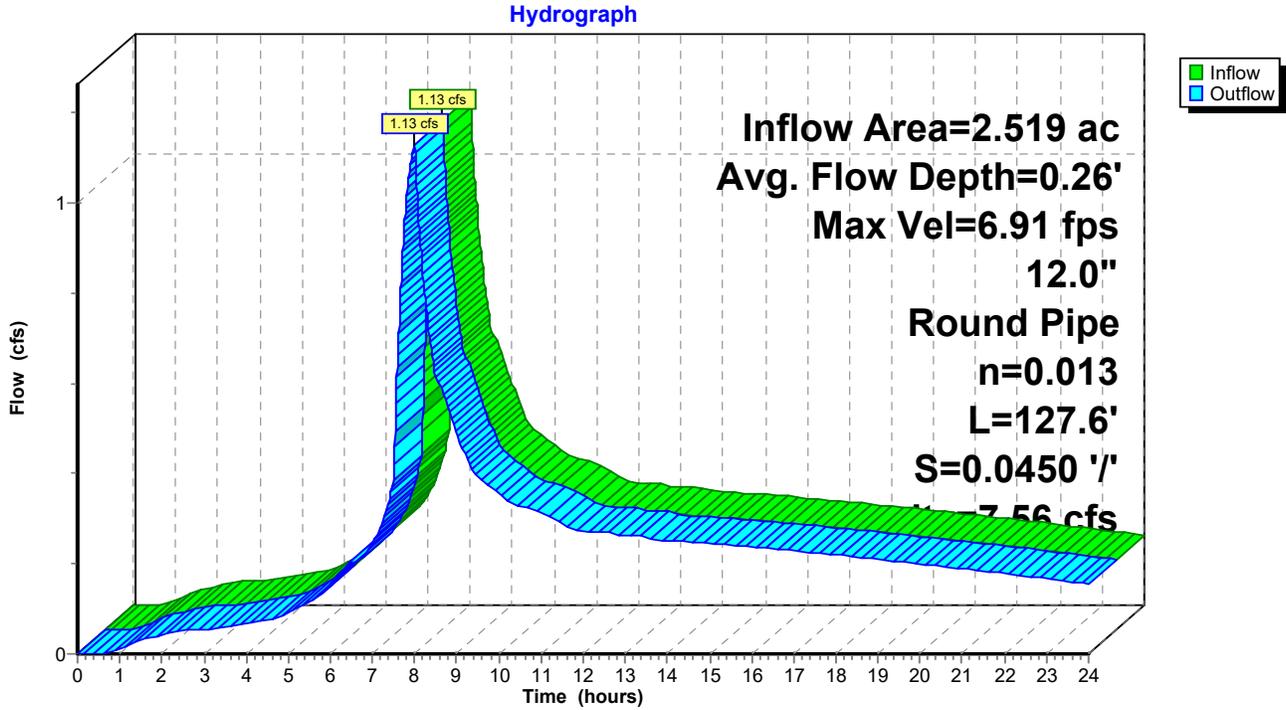
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.91 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 4.11 fps, Avg. Travel Time= 0.5 min

Peak Storage= 21 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.26' , Surface Width= 0.88'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.56 cfs

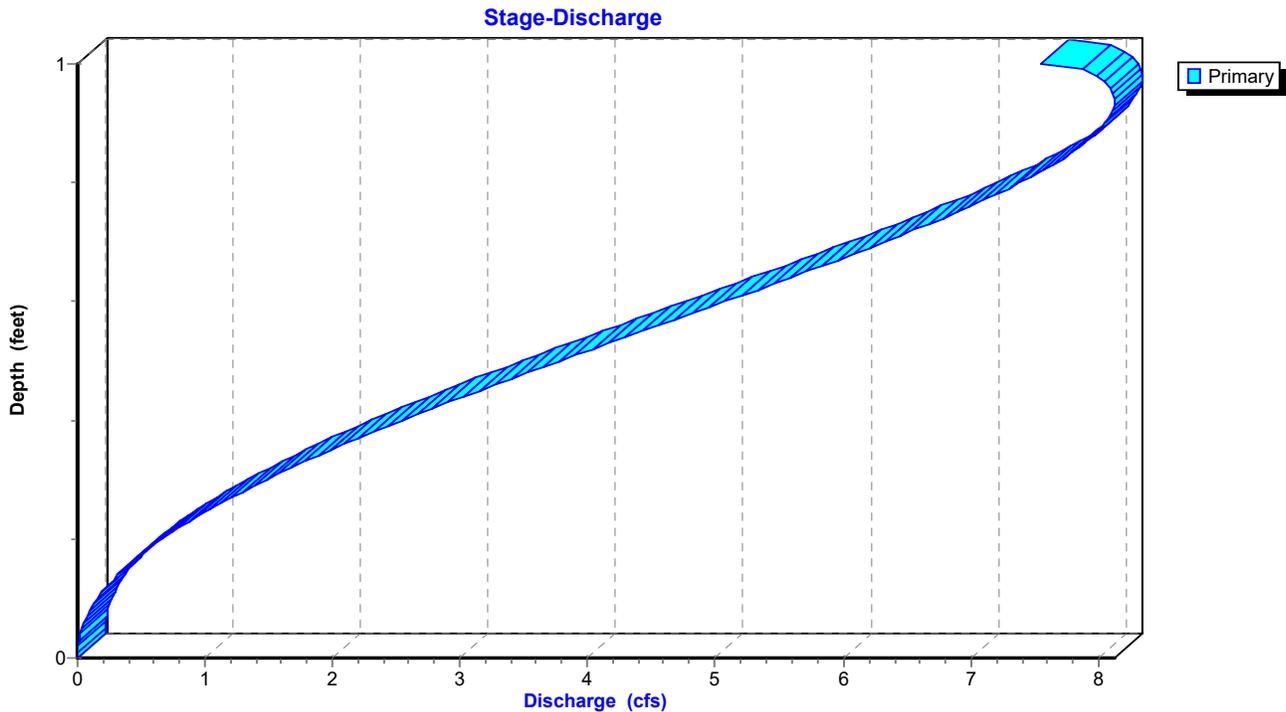
12.0" Round Pipe
n= 0.013
Length= 127.6' Slope= 0.0450 '/'
Inlet Invert= 529.57', Outlet Invert= 523.83'



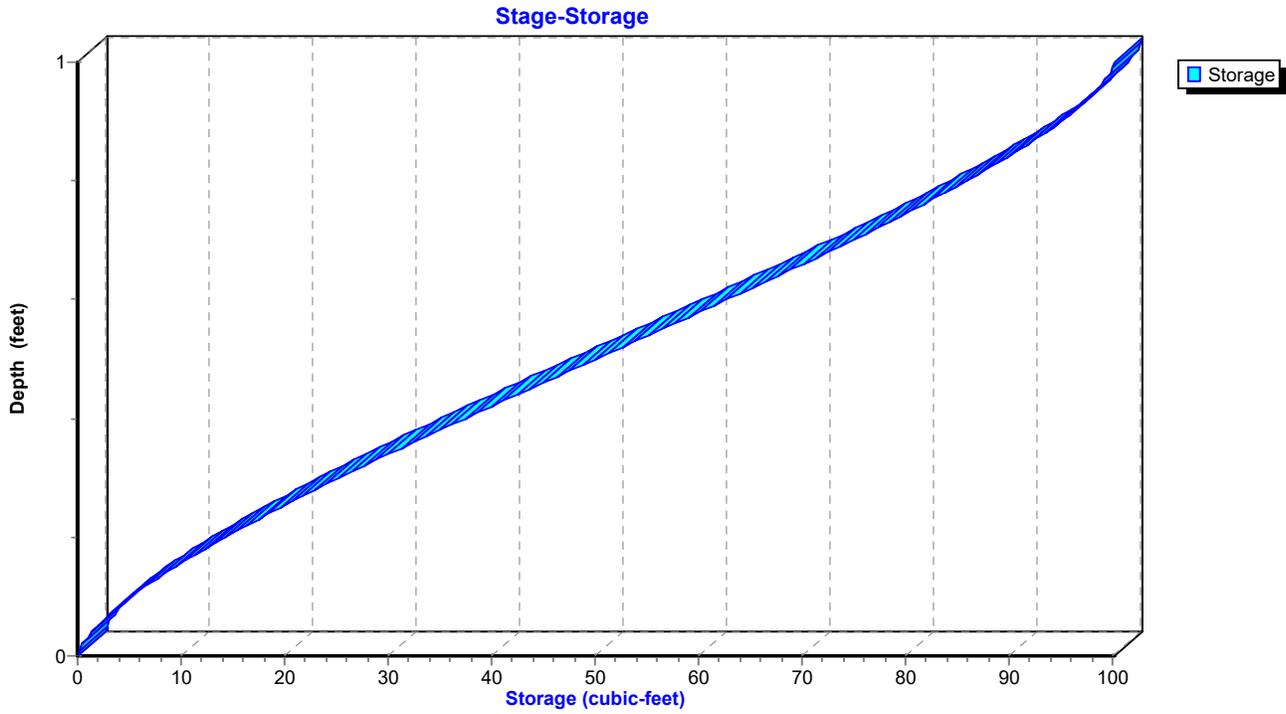
Reach 2-1: MH 2-1 TO CB 2-0



Reach 2-1: MH 2-1 TO CB 2-0



Reach 2-1: MH 2-1 TO CB 2-0



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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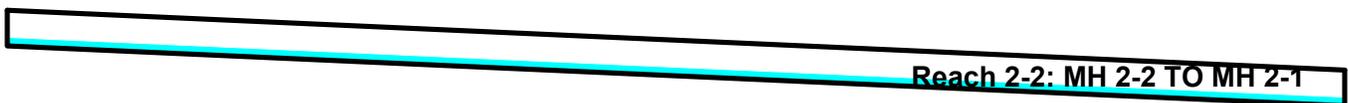
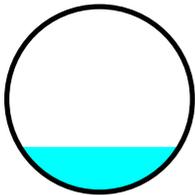
Summary for Reach 2-2: MH 2-2 TO MH 2-1

Inflow Area = 2.519 ac, 21.69% Impervious, Inflow Depth > 2.15" for 25-year event
Inflow = 1.13 cfs @ 8.00 hrs, Volume= 0.450 af
Outflow = 1.13 cfs @ 8.00 hrs, Volume= 0.450 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2-1 : MH 2-1 TO CB 2-0

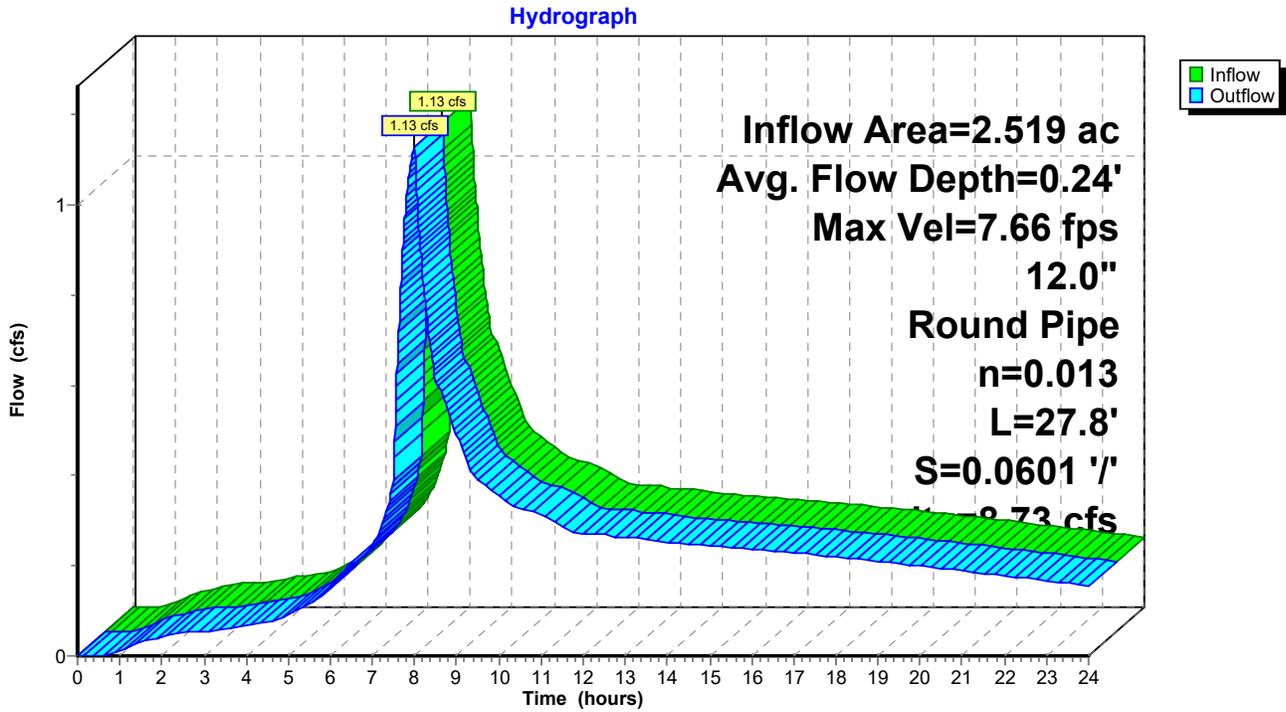
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.66 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.54 fps, Avg. Travel Time= 0.1 min

Peak Storage= 4 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.24' , Surface Width= 0.86'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.73 cfs

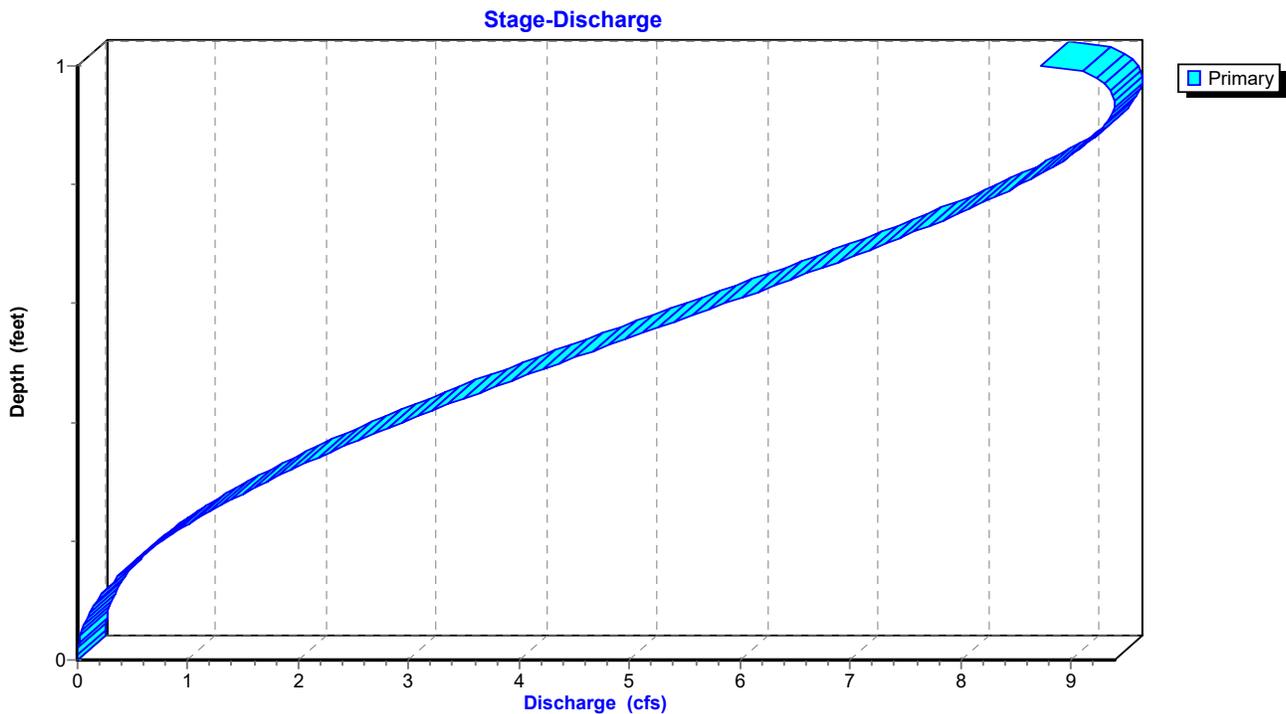
12.0" Round Pipe
n= 0.013
Length= 27.8' Slope= 0.0601 '/'
Inlet Invert= 531.44', Outlet Invert= 529.77'



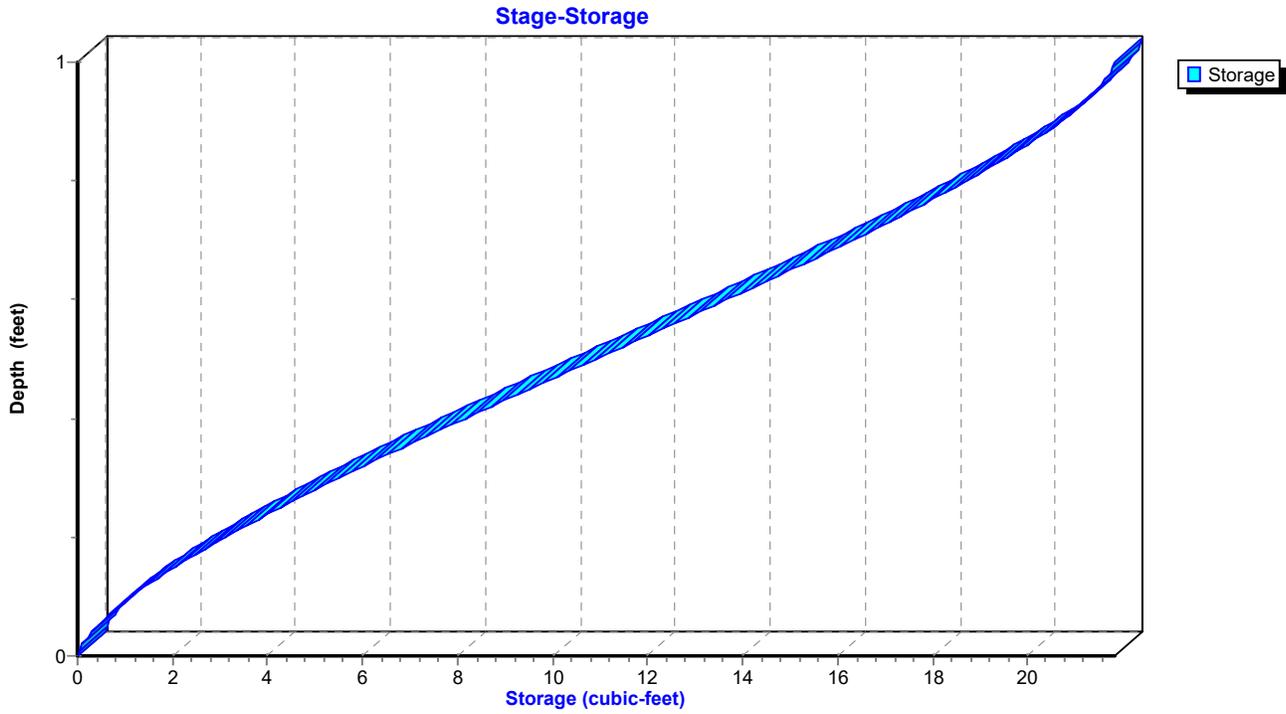
Reach 2-2: MH 2-2 TO MH 2-1



Reach 2-2: MH 2-2 TO MH 2-1



Reach 2-2: MH 2-2 TO MH 2-1



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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Summary for Pond 1-P: Stormwater Facility

Inflow Area = 4.939 ac, 36.28% Impervious, Inflow Depth > 2.38" for 25-year event
 Inflow = 2.62 cfs @ 7.96 hrs, Volume= 0.978 af
 Outflow = 1.00 cfs @ 8.99 hrs, Volume= 0.857 af, Atten= 62%, Lag= 61.8 min
 Primary = 1.00 cfs @ 8.99 hrs, Volume= 0.857 af

Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 524.68' @ 8.99 hrs Surf.Area= 4,684 sf Storage= 8,007 cf

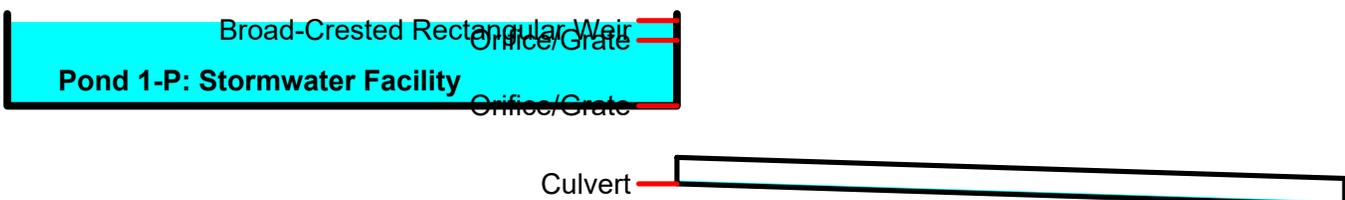
Plug-Flow detention time= 153.3 min calculated for 0.857 af (88% of inflow)
 Center-of-Mass det. time= 71.1 min (804.9 - 733.8)

Volume	Invert	Avail.Storage	Storage Description
#1	521.50'	9,545 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
521.50	5	0	0
522.00	652	164	164
522.50	1,588	560	724
523.00	2,740	1,082	1,806
523.50	3,268	1,502	3,308
524.00	3,837	1,776	5,085
524.50	4,450	2,072	7,156
525.00	5,106	2,389	9,545

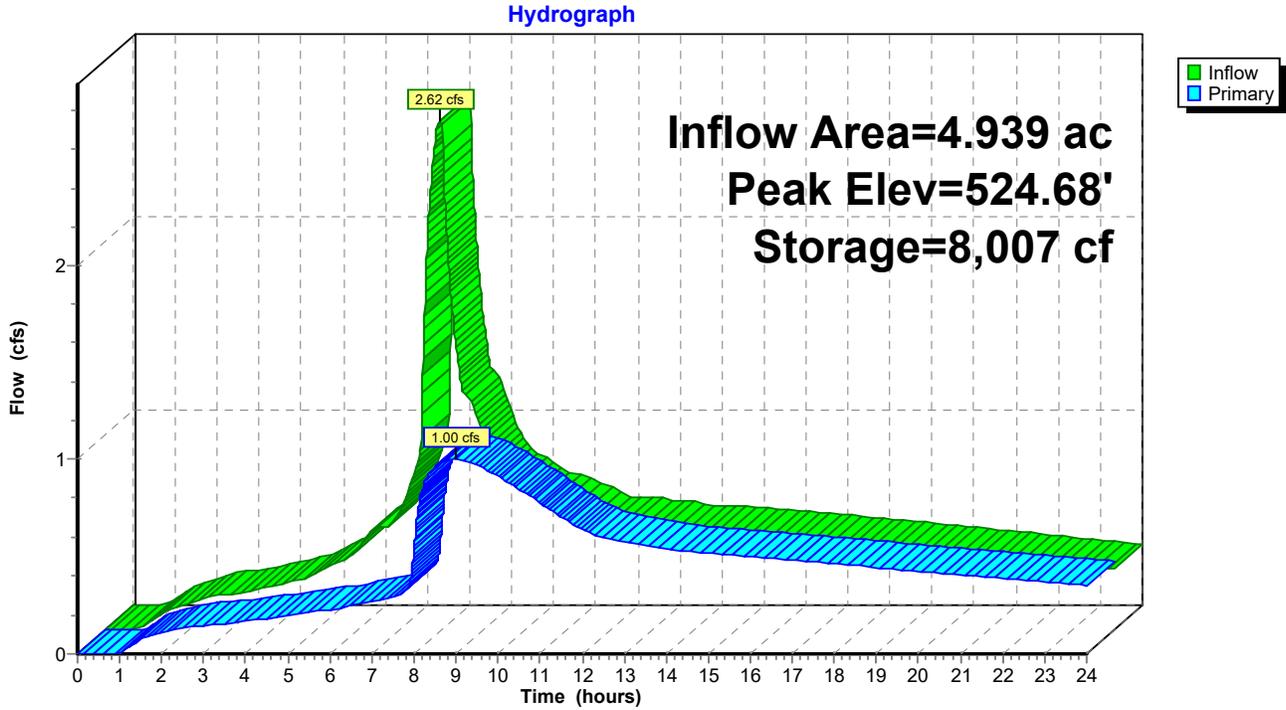
Device	Routing	Invert	Outlet Devices
#1	Primary	518.53'	12.0" Round Culvert L= 40.2' Ke= 0.500 Inlet / Outlet Invert= 518.53' / 517.73' S= 0.0199 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	521.50'	2.9" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	524.00'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	524.75'	2.0' long Broad-Crested Rectangular Weir Head (feet) 0.49 0.98 1.48 1.97 2.46 2.49 Coef. (English) 2.84 3.13 3.26 3.30 3.31 3.31

Primary OutFlow Max=1.00 cfs @ 8.99 hrs HW=524.68' TW=0.00' (Dynamic Tailwater)

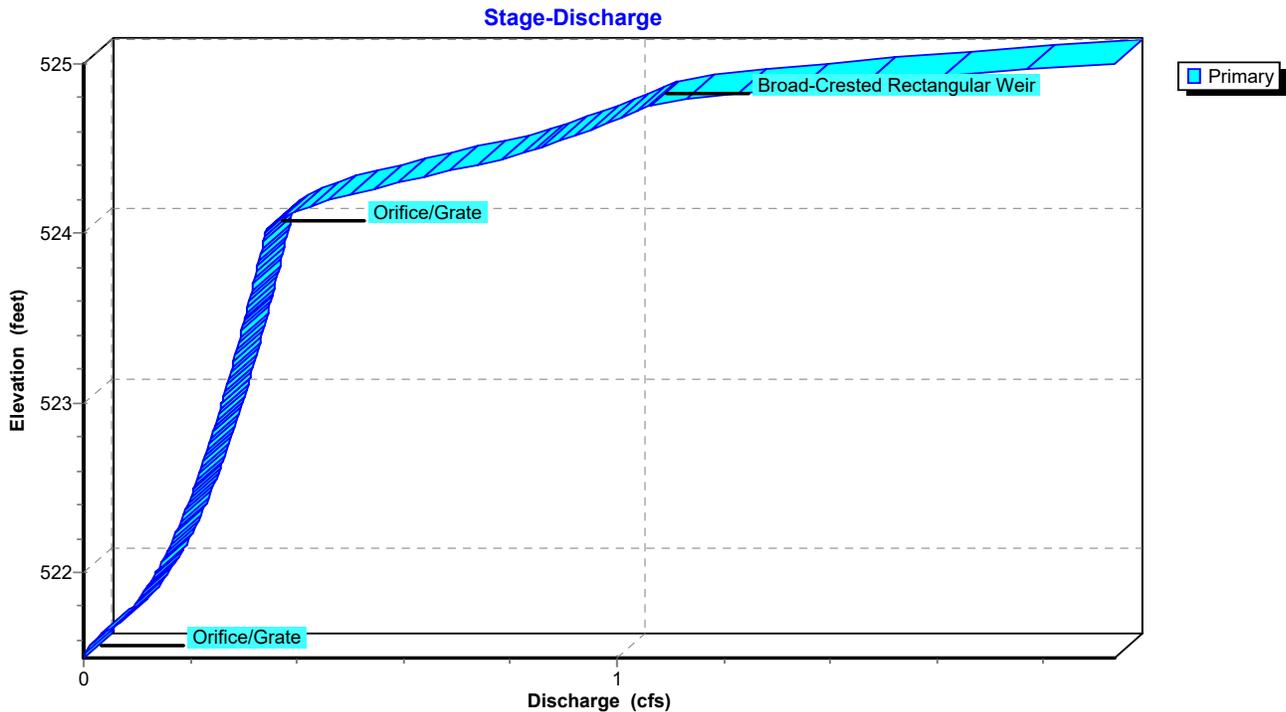
- 1=Culvert (Passes 1.00 cfs of 8.99 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.39 cfs @ 8.42 fps)
- 3=Orifice/Grate (Orifice Controls 0.62 cfs @ 3.15 fps)
- 4=Broad-Crested Rectangular Weir(Controls 0.00 cfs)



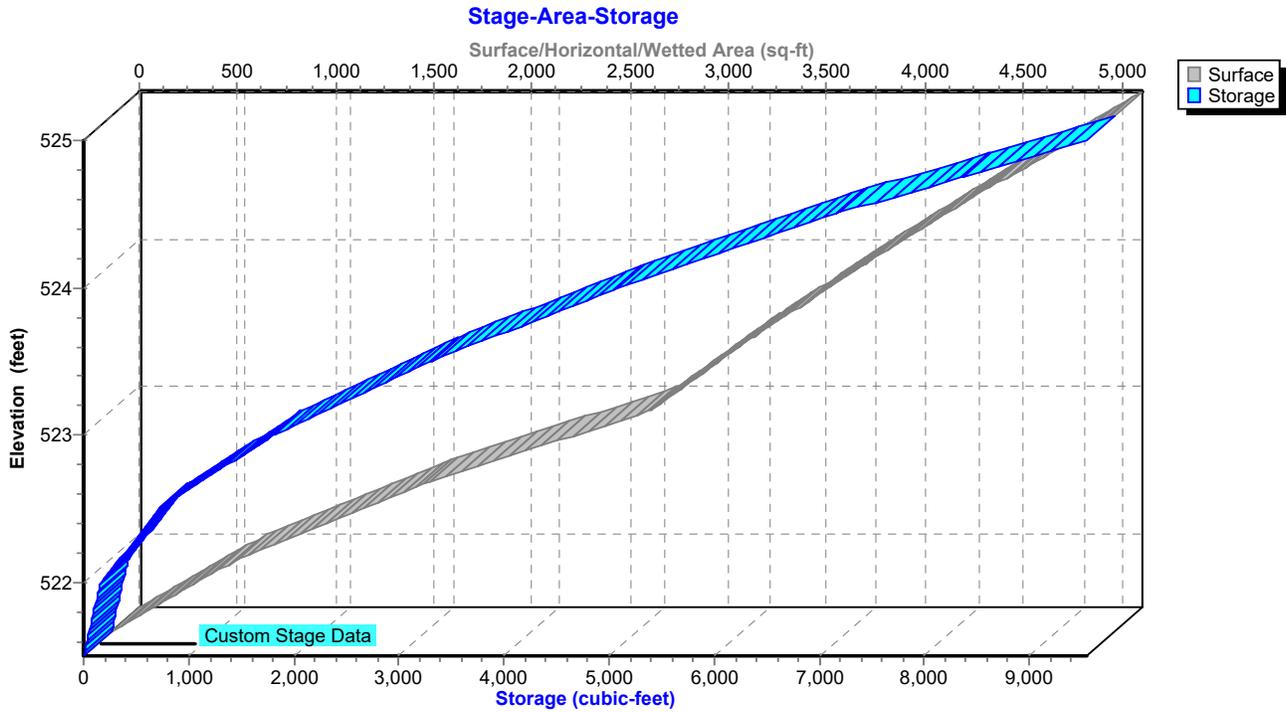
Pond 1-P: Stormwater Facility



Pond 1-P: Stormwater Facility



Pond 1-P: Stormwater Facility



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-21 Type IA 24-hr 25-year Rainfall=3.90"

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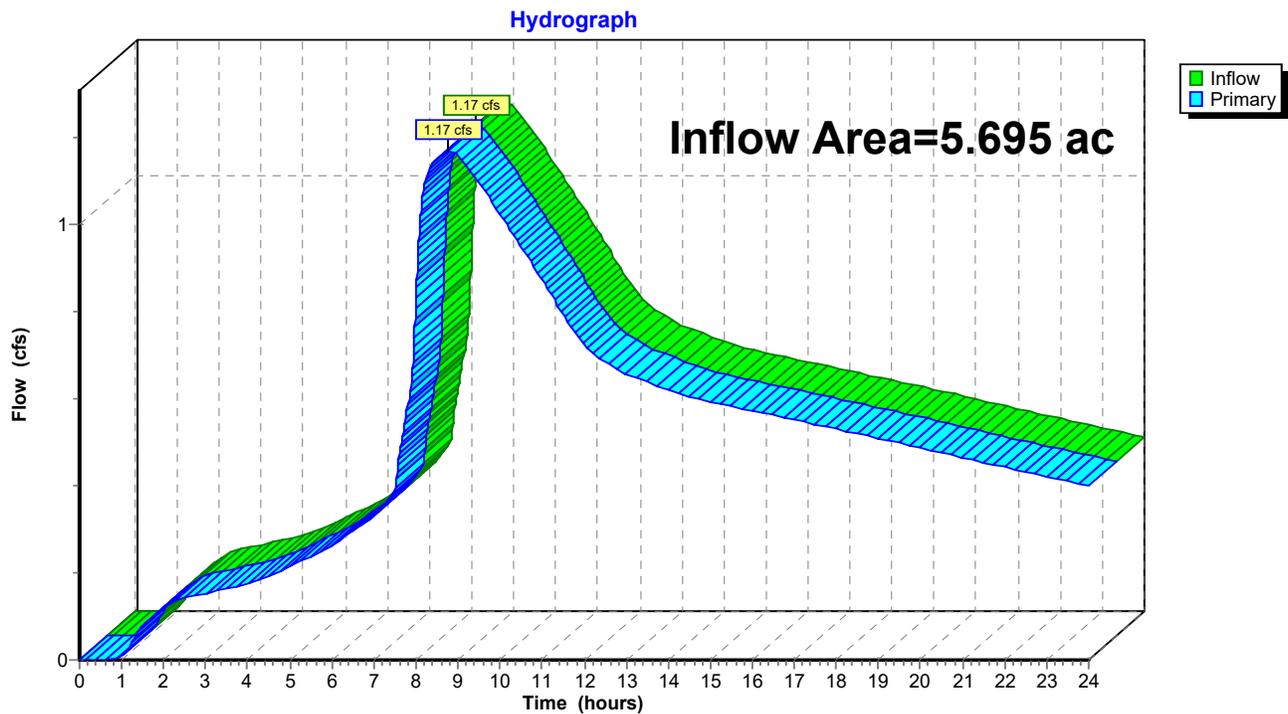
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Summary for Link TOTAL: POST DEVELOPED RELEASE RATE

Inflow Area = 5.695 ac, 32.48% Impervious, Inflow Depth > 2.07" for 25-year event
Inflow = 1.17 cfs @ 8.77 hrs, Volume= 0.984 af
Primary = 1.17 cfs @ 8.77 hrs, Volume= 0.984 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link TOTAL: POST DEVELOPED RELEASE RATE



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1:	Runoff Area=14,778 sf 0.00% Impervious Runoff Depth>1.89" Tc=5.0 min CN=74/0 Runoff=0.14 cfs 0.053 af
Subcatchment2: LOT 1&12 IMP ROAD &	Runoff Area=53,136 sf 36.58% Impervious Runoff Depth>2.72" Tc=5.0 min CN=74/98 Runoff=0.78 cfs 0.276 af
Subcatchment3: LOTS 2,3,7-11 IMPR	Runoff Area=50,099 sf 49.33% Impervious Runoff Depth>3.01" Tc=5.0 min CN=74/98 Runoff=0.82 cfs 0.288 af
Subcatchment4: Lots 4-6	Runoff Area=7,500 sf 100.00% Impervious Runoff Depth>4.16" Tc=5.0 min CN=0/98 Runoff=0.18 cfs 0.060 af
Subcatchment5: ROADWAY&LOT	Runoff Area=5,316 sf 58.09% Impervious Runoff Depth>3.21" Tc=5.0 min CN=74/98 Runoff=0.09 cfs 0.033 af
SubcatchmentA: PARKER ROAD	Runoff Area=1,162 sf 100.00% Impervious Runoff Depth>4.16" Tc=5.0 min CN=0/98 Runoff=0.03 cfs 0.009 af
SubcatchmentB: BUFFER AREA	Runoff Area=19,707 sf 0.00% Impervious Runoff Depth>2.52" Tc=26.3 min CN=82/0 Runoff=0.21 cfs 0.095 af
SubcatchmentBP: Parker 1	Runoff Area=27,744 sf 68.34% Impervious Runoff Depth>3.44" Tc=5.0 min CN=74/98 Runoff=0.53 cfs 0.183 af
SubcatchmentC: ONSITE TRIBUTARYTO	Runoff Area=9,328 sf 0.00% Impervious Runoff Depth>1.89" Tc=5.0 min CN=74/0 Runoff=0.09 cfs 0.034 af
SubcatchmentD: PARKER ROAD BYPASS	Runoff Area=3,887 sf 64.60% Impervious Runoff Depth>3.35" Tc=5.0 min CN=74/98 Runoff=0.07 cfs 0.025 af
SubcatchmentZ: OFFSITE	Runoff Area=55,422 sf 5.77% Impervious Runoff Depth>2.38" Tc=20.8 min CN=79/98 Runoff=0.58 cfs 0.252 af
Reach 1-0: MH 1-0 TO POND	Avg. Flow Depth=0.25' Max Vel=10.13 fps Inflow=1.54 cfs 0.530 af 12.0" Round Pipe n=0.013 L=146.9' S=0.1025 '/' Capacity=11.41 cfs Outflow=1.54 cfs 0.530 af
Reach 1-1: MH 1-1 TO MH 1-2	Avg. Flow Depth=0.24' Max Vel=10.55 fps Inflow=1.54 cfs 0.531 af 12.0" Round Pipe n=0.013 L=185.3' S=0.1150 '/' Capacity=12.08 cfs Outflow=1.54 cfs 0.530 af
Reach 1-2: MH 1-2 to mh 1-1	Avg. Flow Depth=0.19' Max Vel=6.88 fps Inflow=0.71 cfs 0.242 af 12.0" Round Pipe n=0.013 L=143.9' S=0.0650 '/' Capacity=9.08 cfs Outflow=0.71 cfs 0.242 af
Reach 2-0: CI 2-0 TO POND	Avg. Flow Depth=0.31' Max Vel=7.13 fps Inflow=1.46 cfs 0.570 af 12.0" Round Pipe n=0.013 L=46.1' S=0.0399 '/' Capacity=7.12 cfs Outflow=1.46 cfs 0.570 af
Reach 2-1: MH 2-1 TO CB 2-0	Avg. Flow Depth=0.29' Max Vel=7.31 fps Inflow=1.37 cfs 0.538 af 12.0" Round Pipe n=0.013 L=127.6' S=0.0450 '/' Capacity=7.56 cfs Outflow=1.37 cfs 0.537 af

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Reach 2-2: MH 2-2 TO MH 2-1 Avg. Flow Depth=0.27' Max Vel=8.11 fps Inflow=1.37 cfs 0.538 af
12.0" Round Pipe n=0.013 L=27.8' S=0.0601 '/' Capacity=8.73 cfs Outflow=1.37 cfs 0.538 af

Pond 1-P: Stormwater Facility Peak Elev=524.90' Storage=9,055 cf Inflow=3.12 cfs 1.154 af
Outflow=1.48 cfs 1.025 af

Link TOTAL: POST DEVELOPED RELEASE RATE Inflow=1.72 cfs 1.179 af
Primary=1.72 cfs 1.179 af

Total Runoff Area = 5.695 ac Runoff Volume = 1.308 af Average Runoff Depth = 2.76"
67.52% Pervious = 3.845 ac 32.48% Impervious = 1.850 ac

Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment 1:

Runoff = 0.14 cfs @ 7.99 hrs, Volume= 0.053 af, Depth> 1.89"
 Routed to Pond 1-P : Stormwater Facility

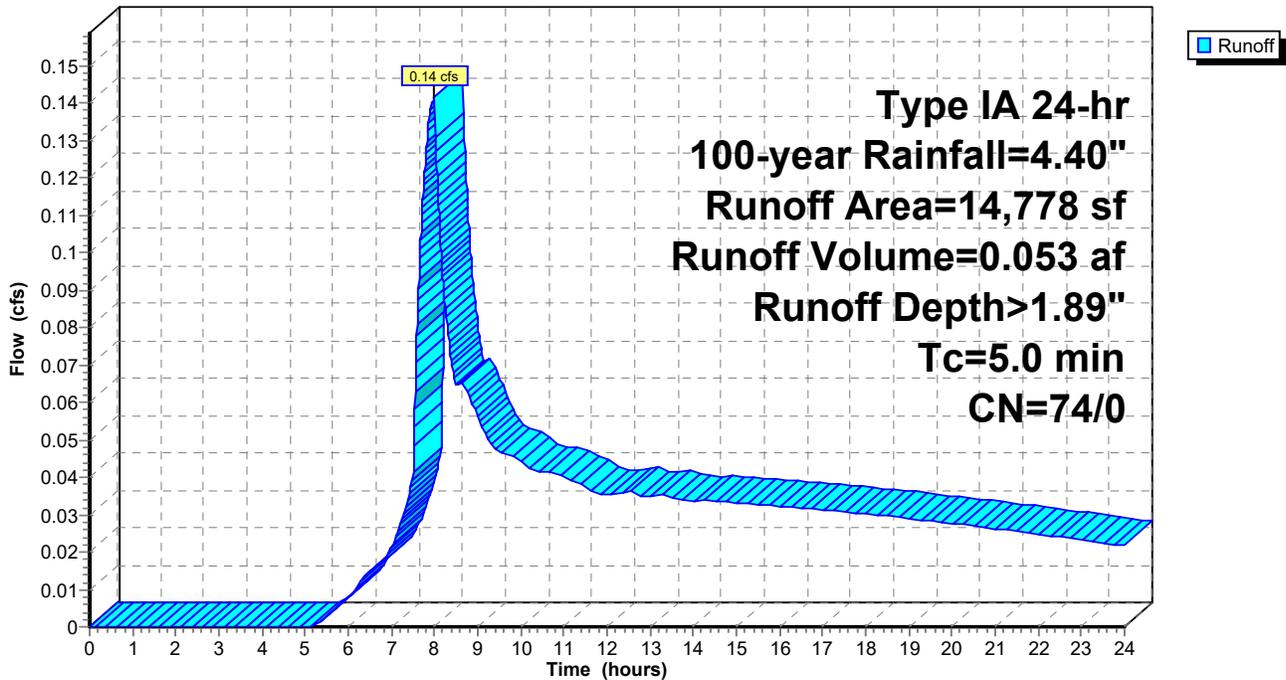
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

Area (sf)	CN	Description
* 14,778	74	
14,778	74	100.00% Pervious Area

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

Subcatchment 1:

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment 2: LOT 1&12 IMP ROAD & LOT PERV

Runoff = 0.78 cfs @ 7.93 hrs, Volume= 0.276 af, Depth> 2.72"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

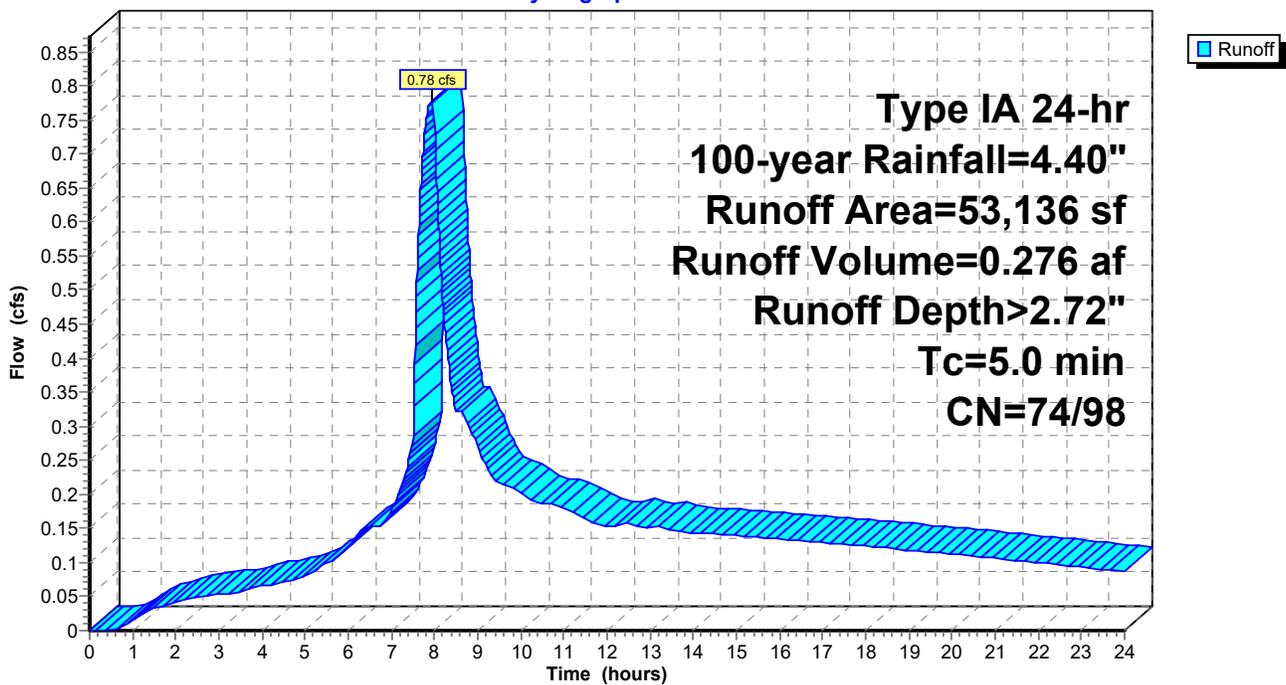
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

	Area (sf)	CN	Description
*	19,437	98	
*	33,699	74	
	53,136	83	Weighted Average
	33,699	74	63.42% Pervious Area
	19,437	98	36.58% Impervious Area

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

Subcatchment 2: LOT 1&12 IMP ROAD & LOT PERV

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment 3: LOTS 2,3,7-11 IMPR ROAD & PERV LOTS

Runoff = 0.82 cfs @ 7.91 hrs, Volume= 0.288 af, Depth> 3.01"
 Routed to Reach 1-1 : MH 1-1 TO MH 1-2

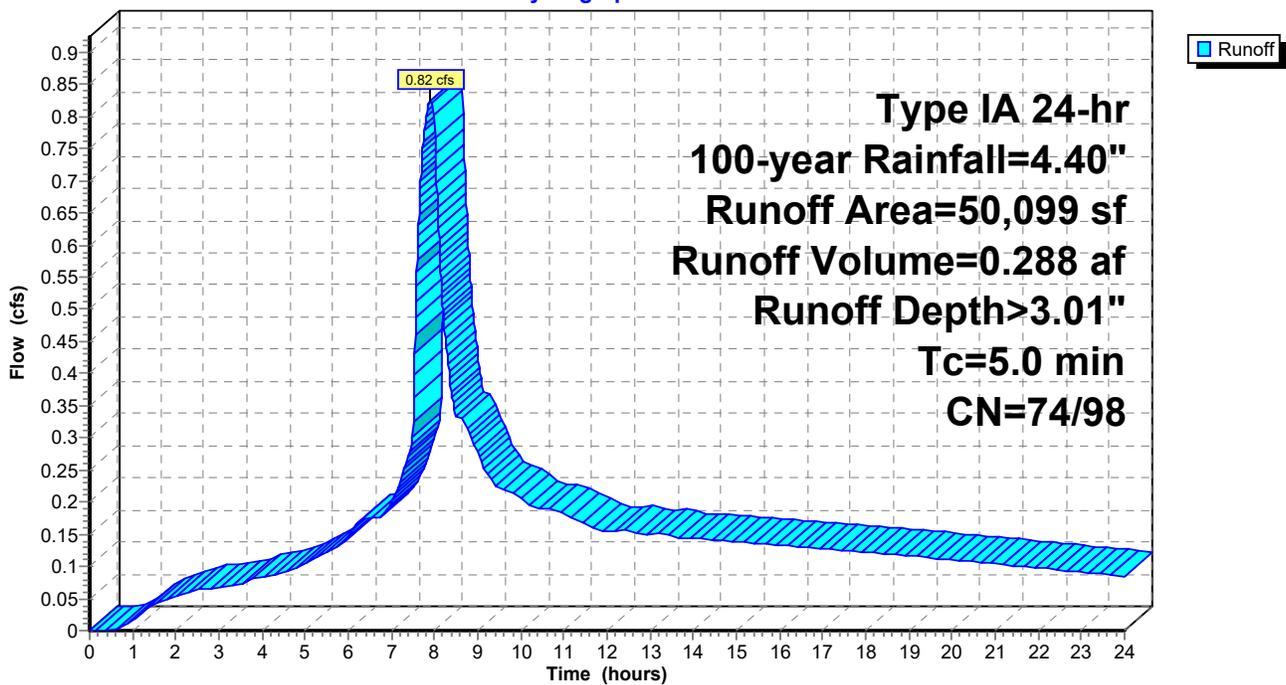
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

	Area (sf)	CN	Description
*	25,385	74	
*	24,714	98	
	50,099	86	Weighted Average
	25,385	74	50.67% Pervious Area
	24,714	98	49.33% Impervious Area

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

Subcatchment 3: LOTS 2,3,7-11 IMPR ROAD & PERV LOTS

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment 4: Lots 4-6

Runoff = 0.18 cfs @ 7.88 hrs, Volume= 0.060 af, Depth> 4.16"
 Routed to Reach 1-2 : MH 1-2 to mh 1-1

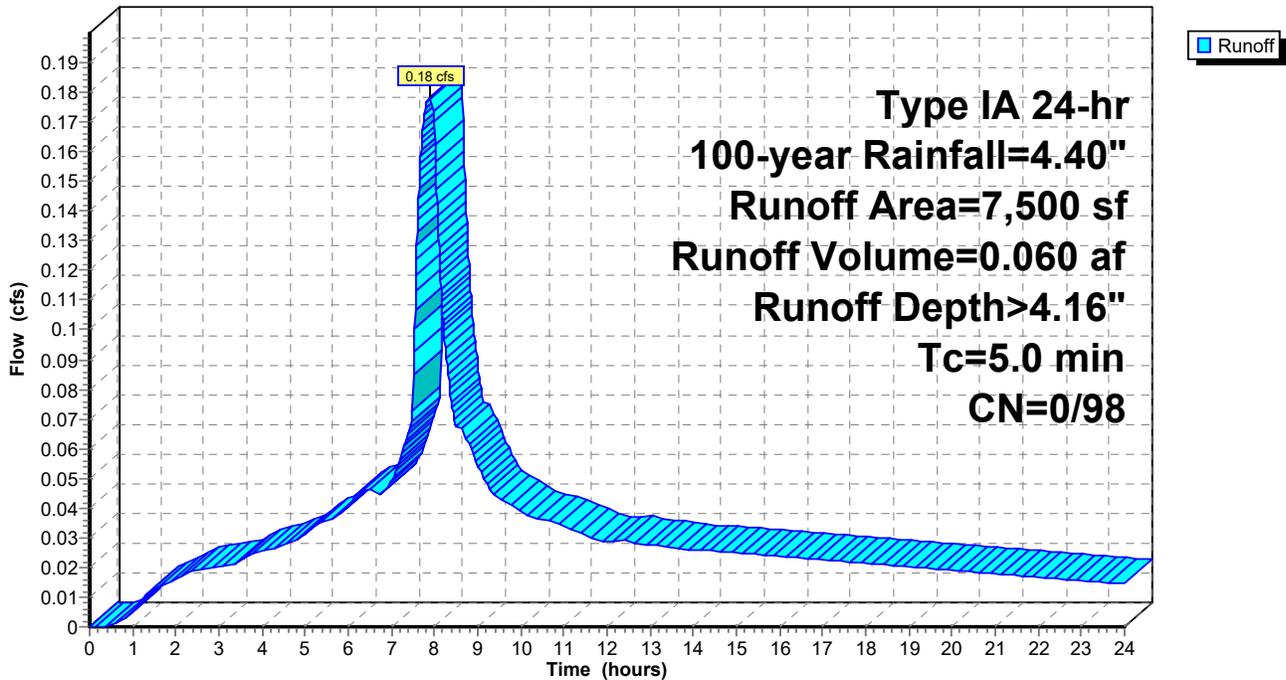
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

Area (sf)	CN	Description
* 7,500	98	
7,500	98	100.00% Impervious Area

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

Subcatchment 4: Lots 4-6

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment 5: ROADWAY & LOT PERVIOUS

Runoff = 0.09 cfs @ 7.91 hrs, Volume= 0.033 af, Depth> 3.21"
 Routed to Reach 2-0 : CI 2-0 TO POND

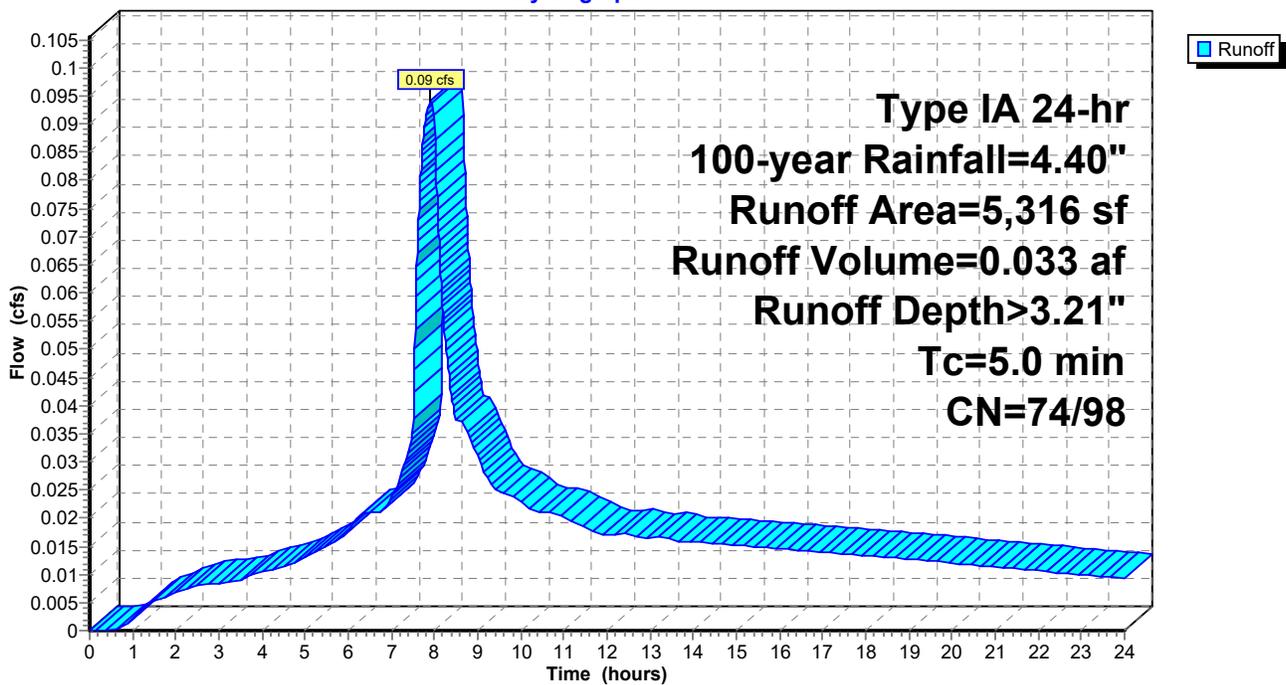
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

	Area (sf)	CN	Description
*	3,088	98	
*	2,228	74	
<hr/>			
	5,316	88	Weighted Average
	2,228	74	41.91% Pervious Area
	3,088	98	58.09% Impervious Area

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

Subcatchment 5: ROADWAY & LOT PERVIOUS

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment A: PARKER ROAD

Runoff = 0.03 cfs @ 7.88 hrs, Volume= 0.009 af, Depth> 4.16"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

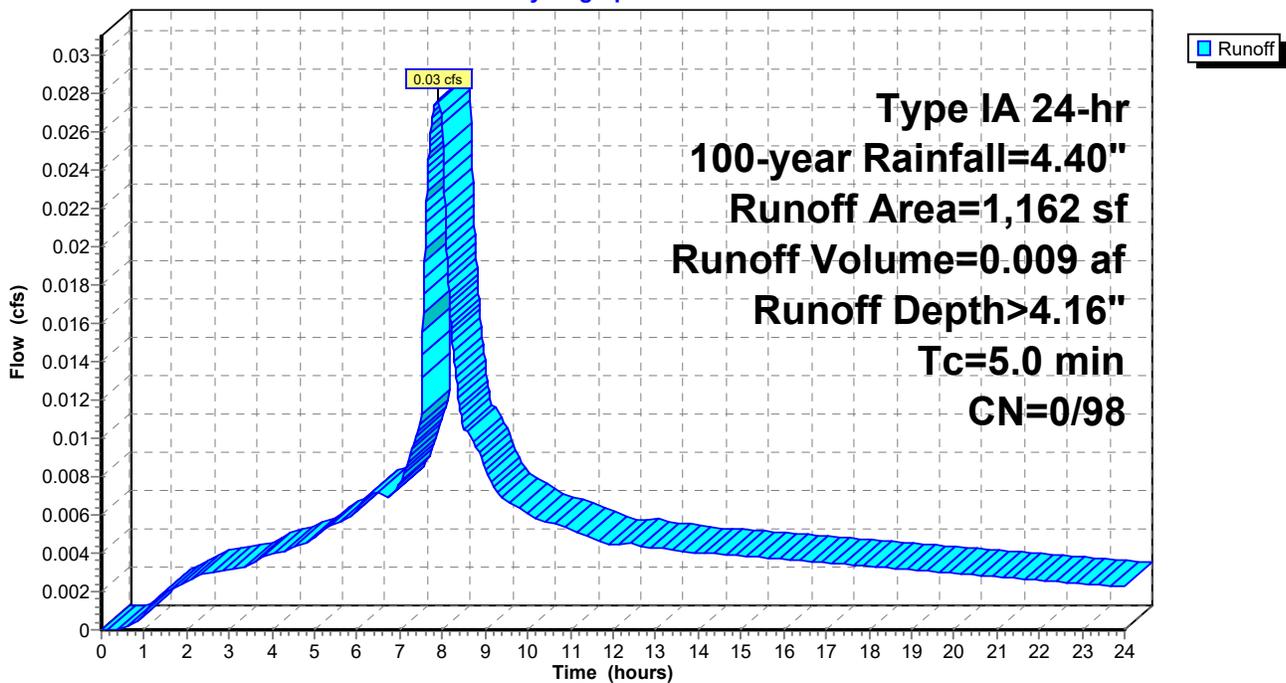
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

Area (sf)	CN	Description
* 1,162	98	
1,162	98	100.00% Impervious Area

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

Subcatchment A: PARKER ROAD

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment B: BUFFER AREA

Runoff = 0.21 cfs @ 8.01 hrs, Volume= 0.095 af, Depth> 2.52"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

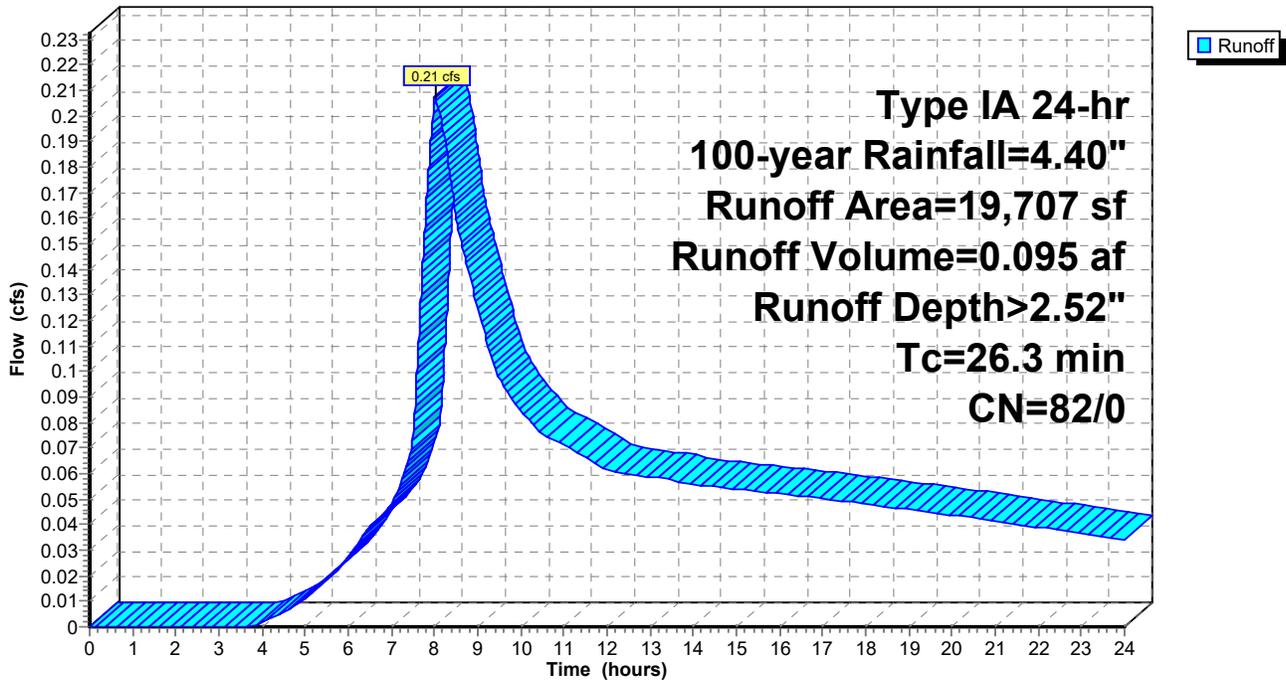
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

Area (sf)	CN	Description
* 19,707	82	
19,707	82	100.00% Pervious Area

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

Subcatchment B: BUFFER AREA

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment BP: Parker 1

Runoff = 0.53 cfs @ 7.90 hrs, Volume= 0.183 af, Depth> 3.44"
 Routed to Reach 1-2 : MH 1-2 to mh 1-1

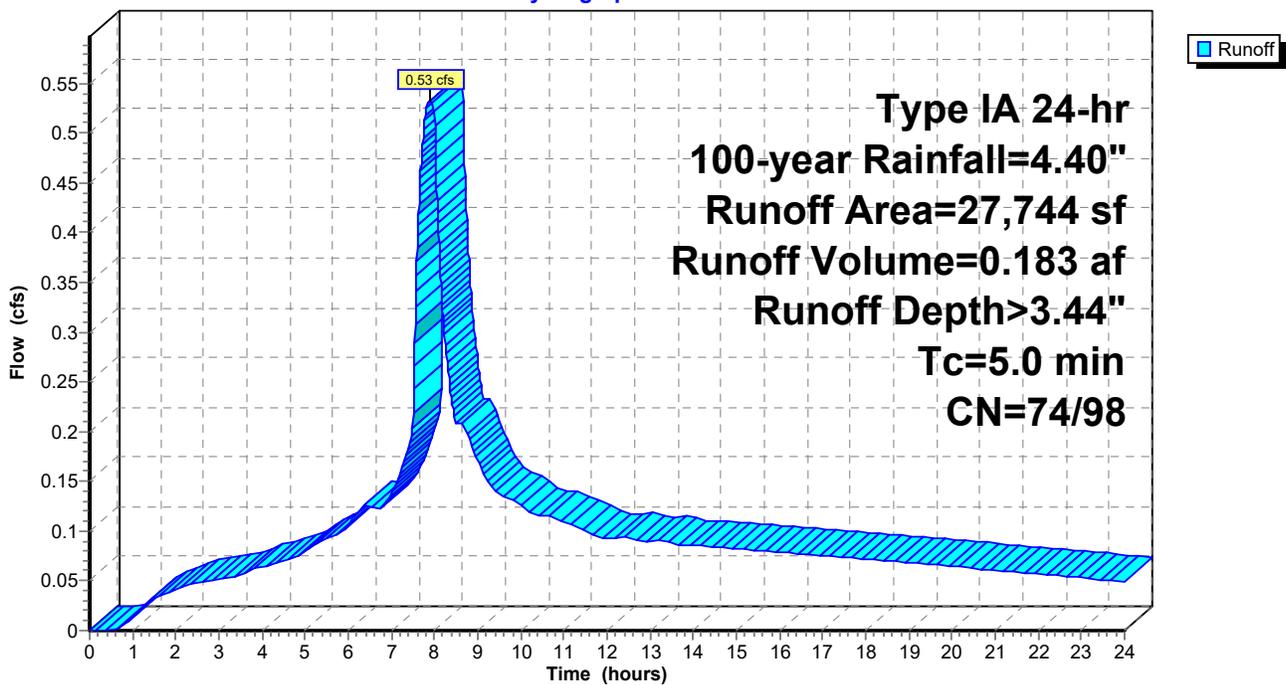
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

	Area (sf)	CN	Description
*	18,960	98	
*	8,784	74	
	27,744	90	Weighted Average
	8,784	74	31.66% Pervious Area
	18,960	98	68.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, 10

Subcatchment BP: Parker 1

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment C: ONSITE TRIBUTARY TO BUFFER AREA

Runoff = 0.09 cfs @ 7.99 hrs, Volume= 0.034 af, Depth> 1.89"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

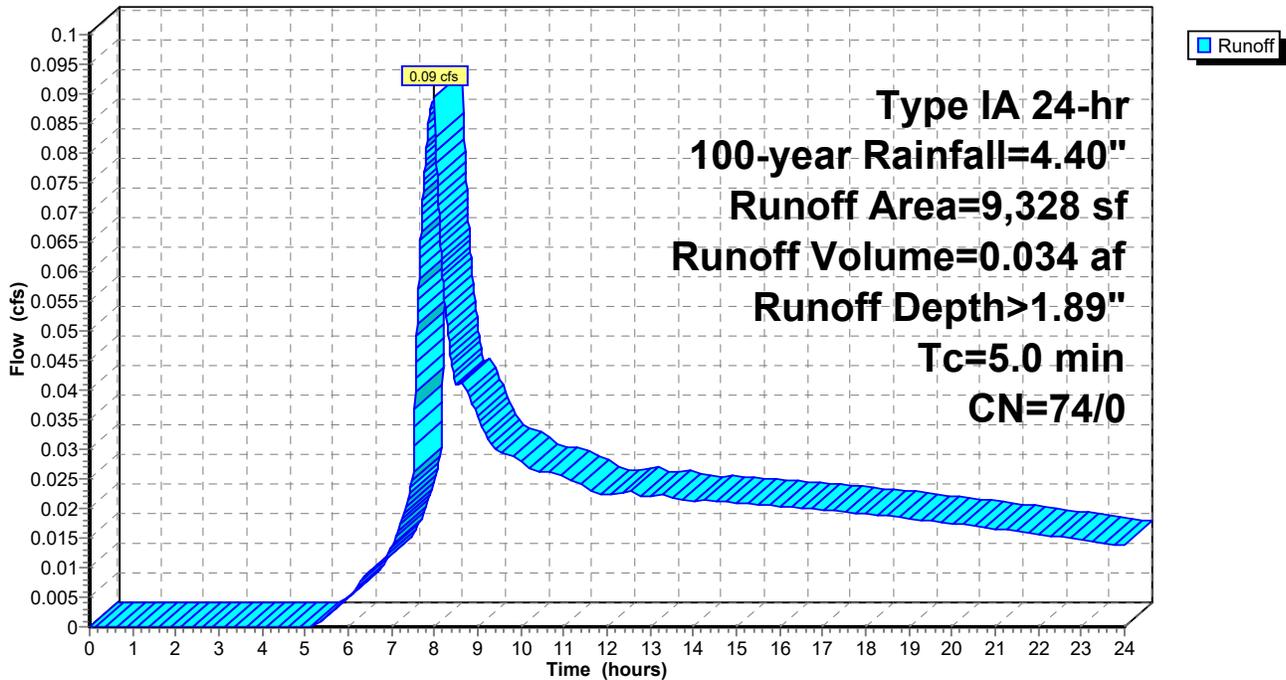
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

Area (sf)	CN	Description
* 9,328	74	
9,328	74	100.00% Pervious Area

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

Subcatchment C: ONSITE TRIBUTARY TO BUFFER AREA

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment D: PARKER ROAD BYPASS

Runoff = 0.07 cfs @ 7.90 hrs, Volume= 0.025 af, Depth> 3.35"
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

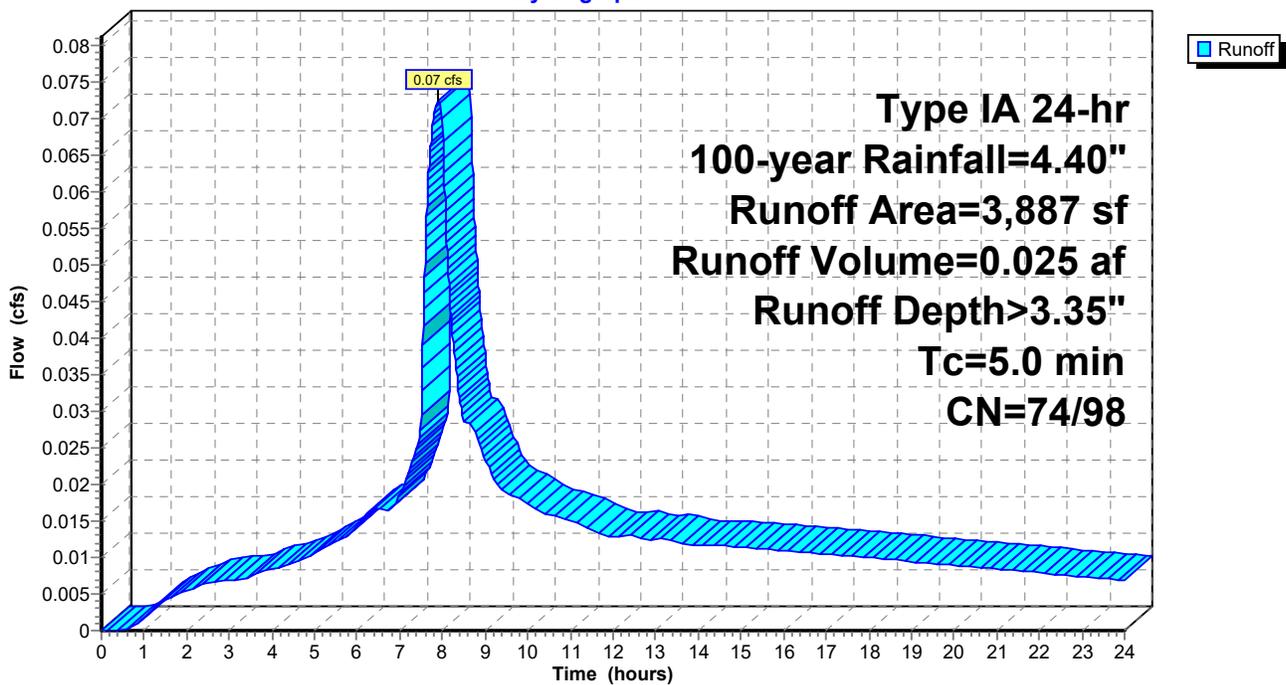
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

	Area (sf)	CN	Description
*	2,511	98	
*	1,376	74	
	3,887	90	Weighted Average
	1,376	74	35.40% Pervious Area
	2,511	98	64.60% Impervious Area

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

Subcatchment D: PARKER ROAD BYPASS

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Subcatchment Z: OFFSITE

Runoff = 0.58 cfs @ 8.01 hrs, Volume= 0.252 af, Depth> 2.38"
 Routed to Reach 2-2 : MH 2-2 TO MH 2-1

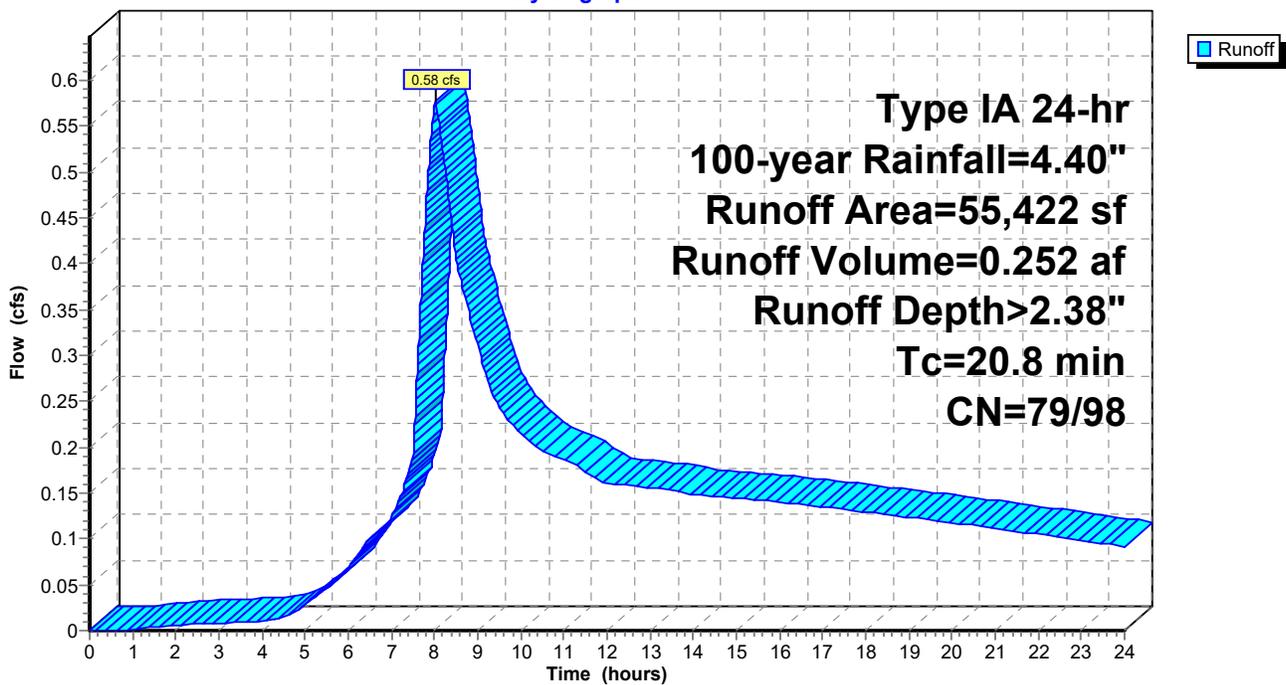
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 100-year Rainfall=4.40"

	Area (sf)	CN	Description
*	3,198	98	
*	52,224	79	
	55,422	80	Weighted Average
	52,224	79	94.23% Pervious Area
	3,198	98	5.77% Impervious Area

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

Subcatchment Z: OFFSITE

Hydrograph



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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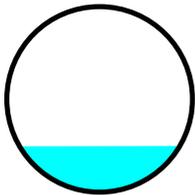
Summary for Reach 1-0: MH 1-0 TO POND

Inflow Area = 1.959 ac, 59.96% Impervious, Inflow Depth > 3.25" for 100-year event
Inflow = 1.54 cfs @ 7.91 hrs, Volume= 0.530 af
Outflow = 1.54 cfs @ 7.91 hrs, Volume= 0.530 af, Atten= 0%, Lag= 0.2 min
Routed to Pond 1-P : Stormwater Facility

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.13 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 5.83 fps, Avg. Travel Time= 0.4 min

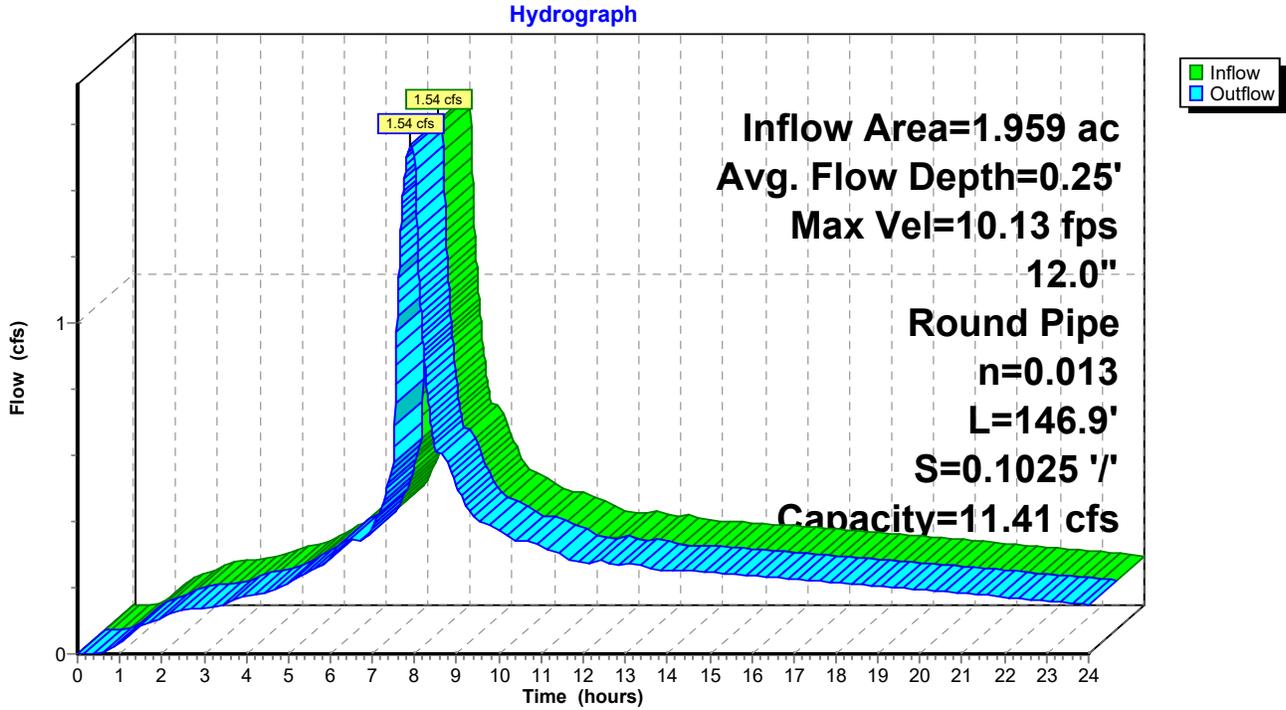
Peak Storage= 22 cf @ 7.91 hrs
Average Depth at Peak Storage= 0.25' , Surface Width= 0.86'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 11.41 cfs

12.0" Round Pipe
n= 0.013
Length= 146.9' Slope= 0.1025 '/'
Inlet Invert= 537.38', Outlet Invert= 522.32'

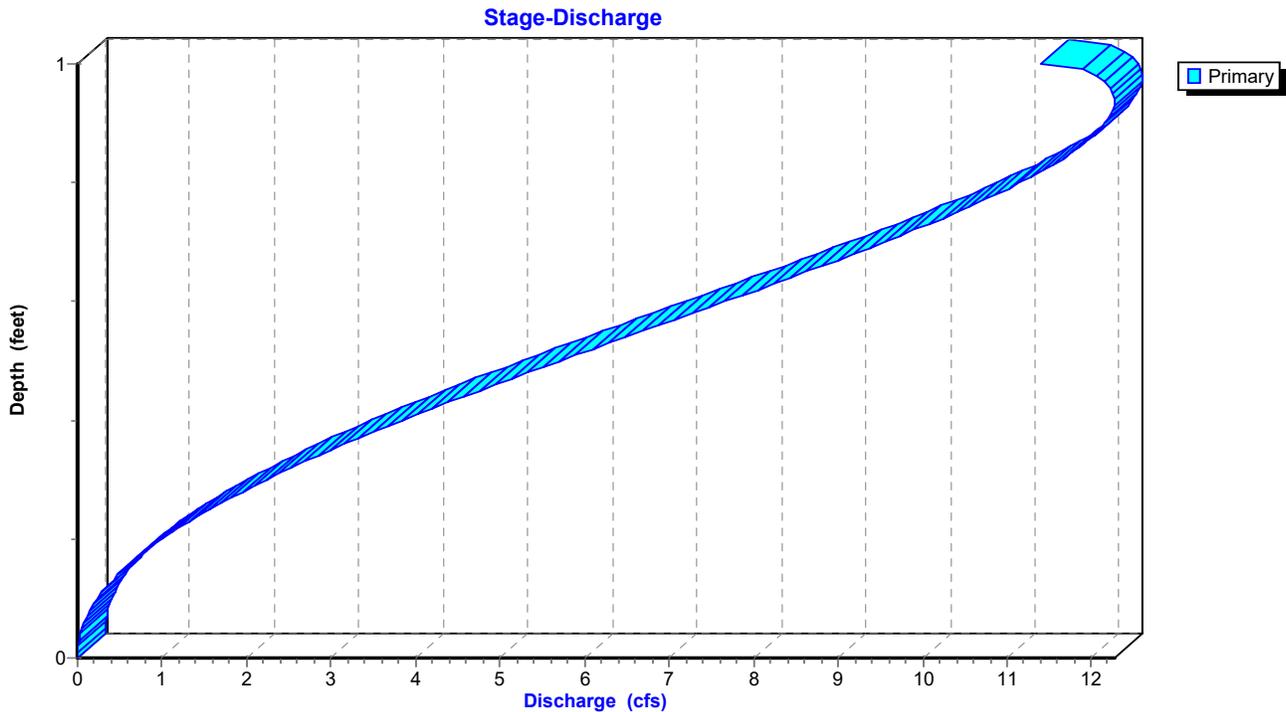


Reach 1-0: MH 1-0 TO POND

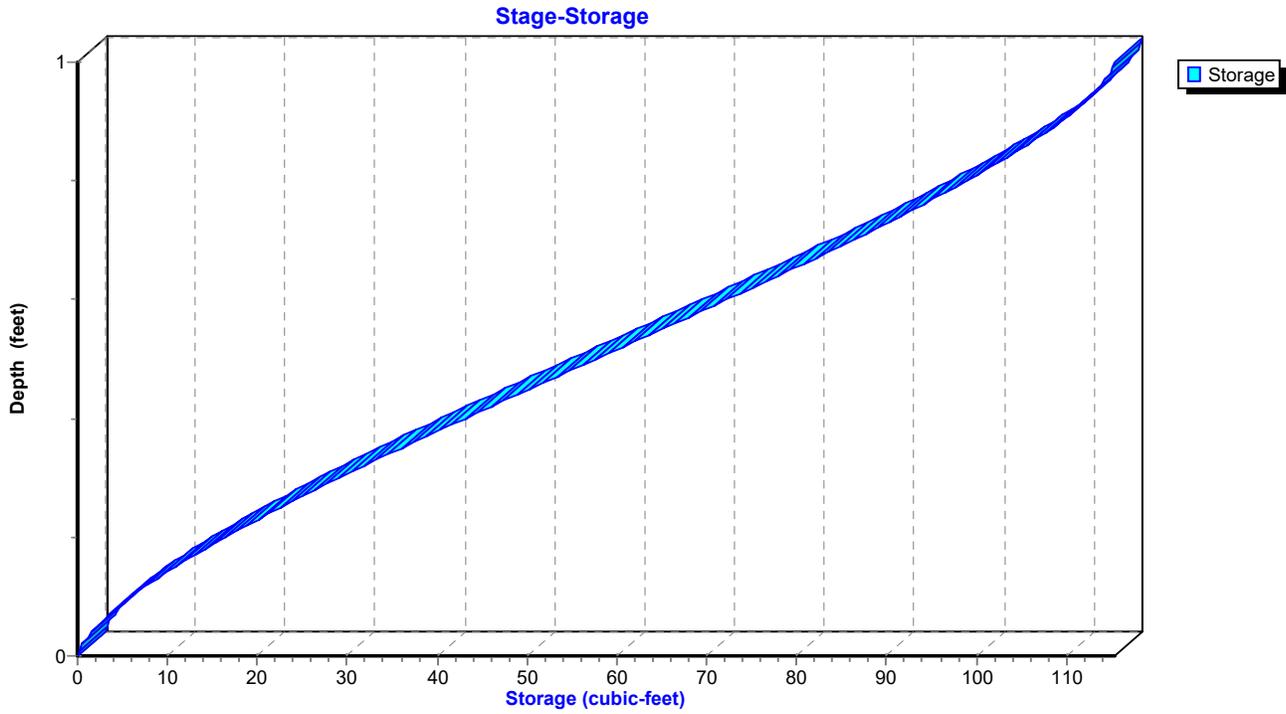
Reach 1-0: MH 1-0 TO POND



Reach 1-0: MH 1-0 TO POND



Reach 1-0: MH 1-0 TO POND



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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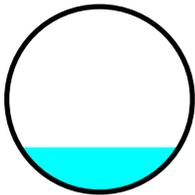
Summary for Reach 1-1: MH 1-1 TO MH 1-2

Inflow Area = 1.959 ac, 59.96% Impervious, Inflow Depth > 3.25" for 100-year event
Inflow = 1.54 cfs @ 7.91 hrs, Volume= 0.531 af
Outflow = 1.54 cfs @ 7.91 hrs, Volume= 0.530 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 1-0 : MH 1-0 TO POND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.55 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 6.06 fps, Avg. Travel Time= 0.5 min

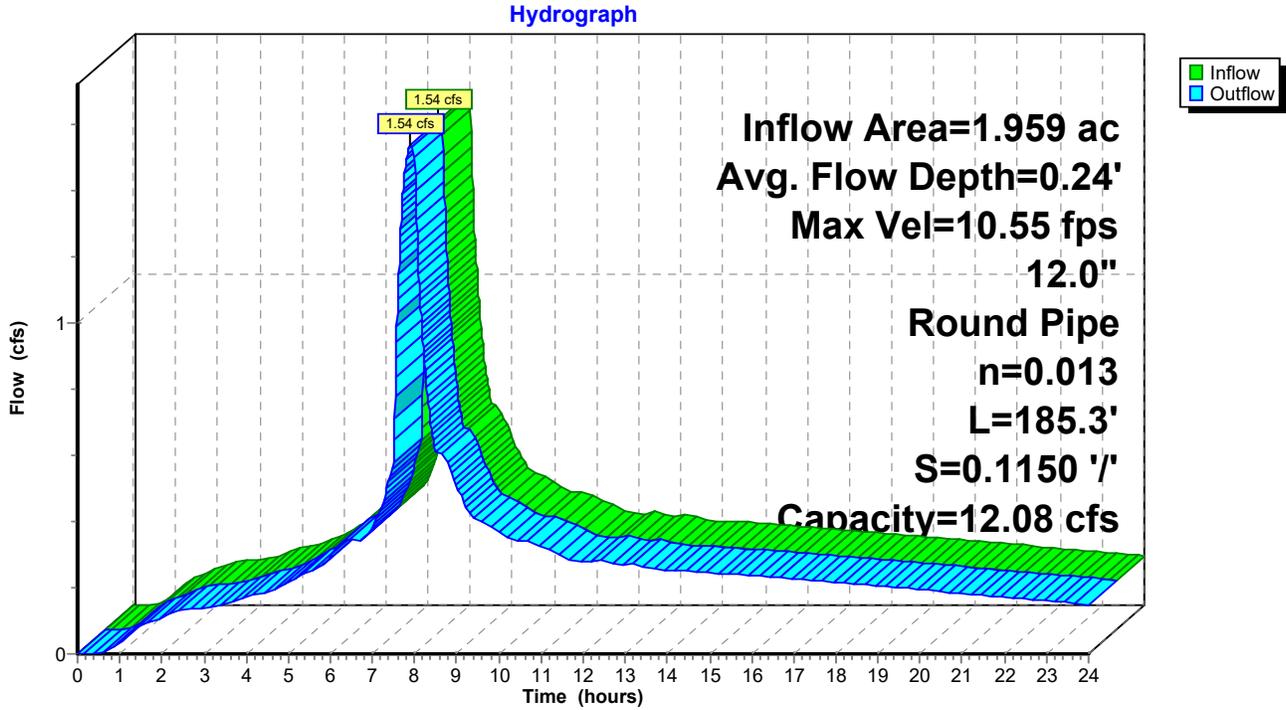
Peak Storage= 27 cf @ 7.91 hrs
Average Depth at Peak Storage= 0.24' , Surface Width= 0.86'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 12.08 cfs

12.0" Round Pipe
n= 0.013
Length= 185.3' Slope= 0.1150 '/'
Inlet Invert= 558.89', Outlet Invert= 537.58'

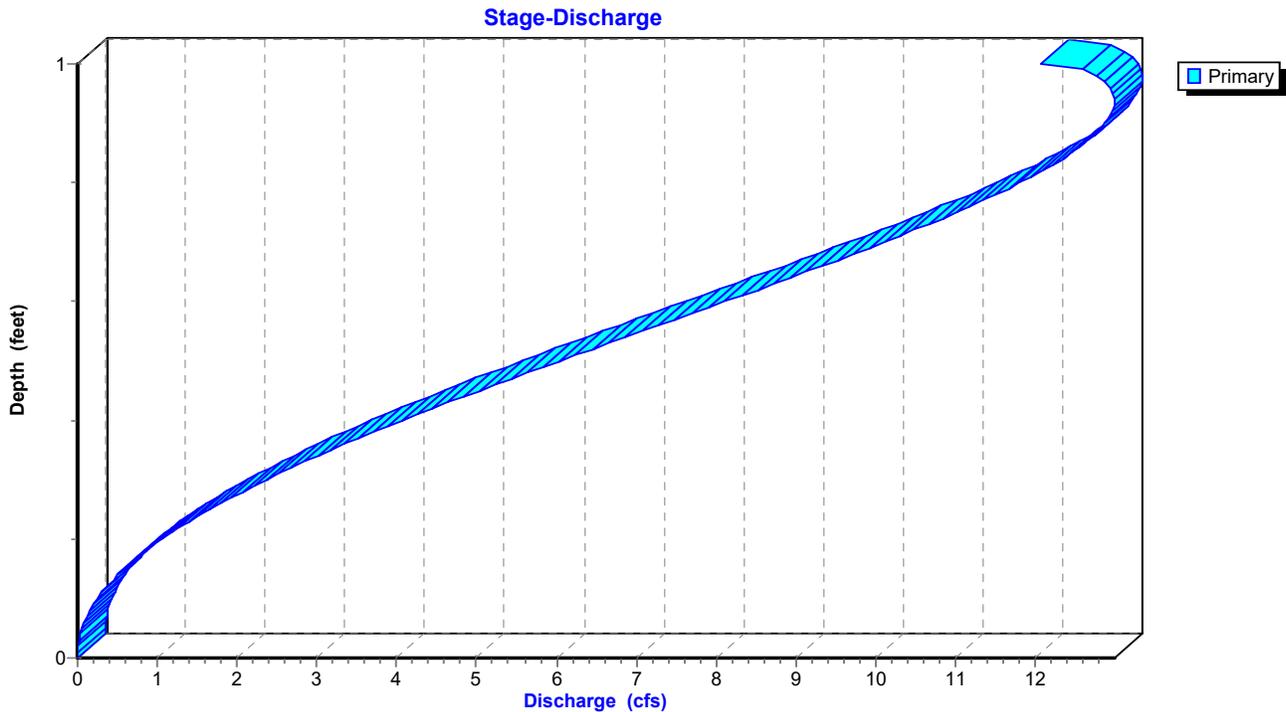


Reach 1-1: MH 1-1 TO MH 1-2

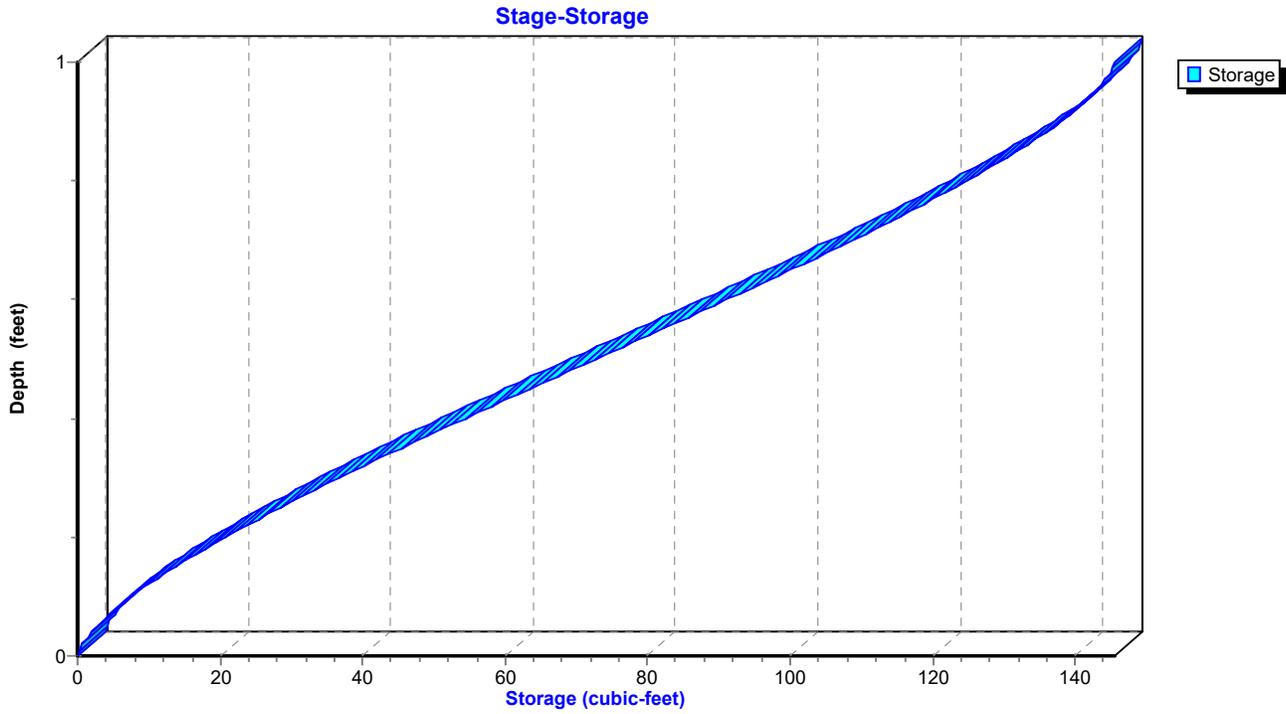
Reach 1-1: MH 1-1 TO MH 1-2



Reach 1-1: MH 1-1 TO MH 1-2



Reach 1-1: MH 1-1 TO MH 1-2



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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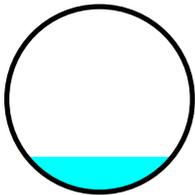
Summary for Reach 1-2: MH 1-2 to mh 1-1

Inflow Area = 0.809 ac, 75.08% Impervious, Inflow Depth > 3.59" for 100-year event
Inflow = 0.71 cfs @ 7.89 hrs, Volume= 0.242 af
Outflow = 0.71 cfs @ 7.90 hrs, Volume= 0.242 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 1-1 : MH 1-1 TO MH 1-2

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 6.88 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 3.92 fps, Avg. Travel Time= 0.6 min

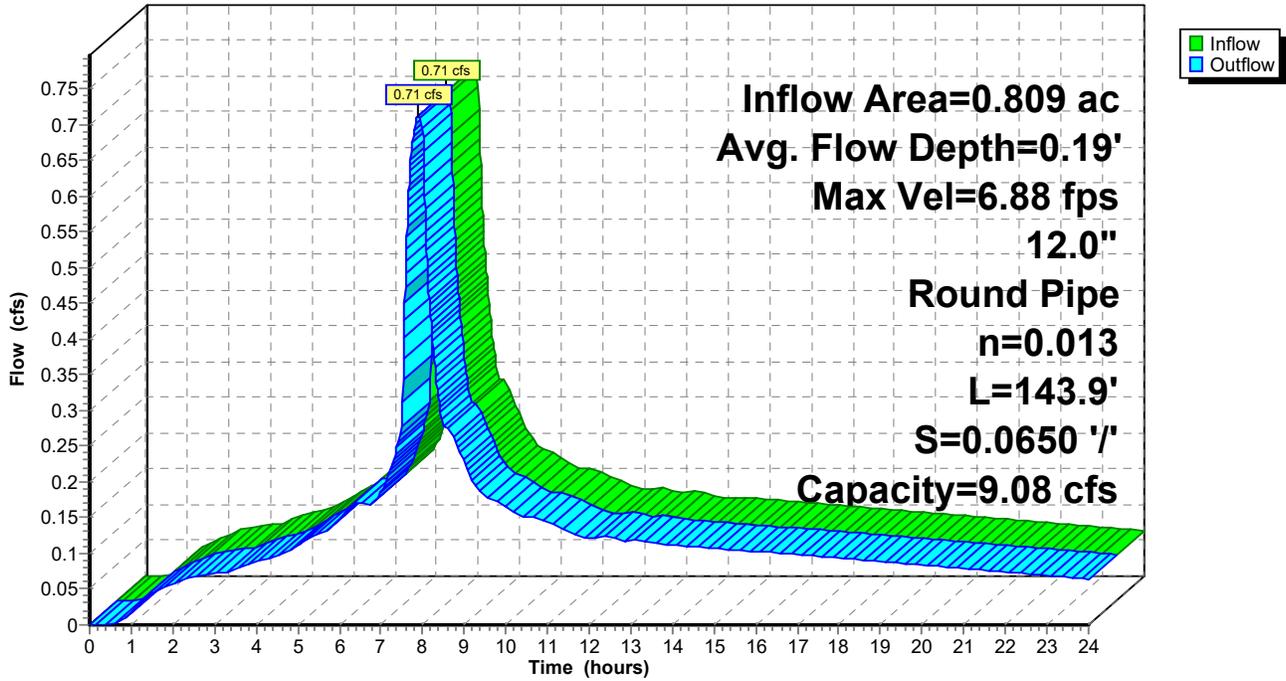
Peak Storage= 15 cf @ 7.90 hrs
Average Depth at Peak Storage= 0.19' , Surface Width= 0.78'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.08 cfs

12.0" Round Pipe
n= 0.013
Length= 143.9' Slope= 0.0650 '/'
Inlet Invert= 568.44', Outlet Invert= 559.09'



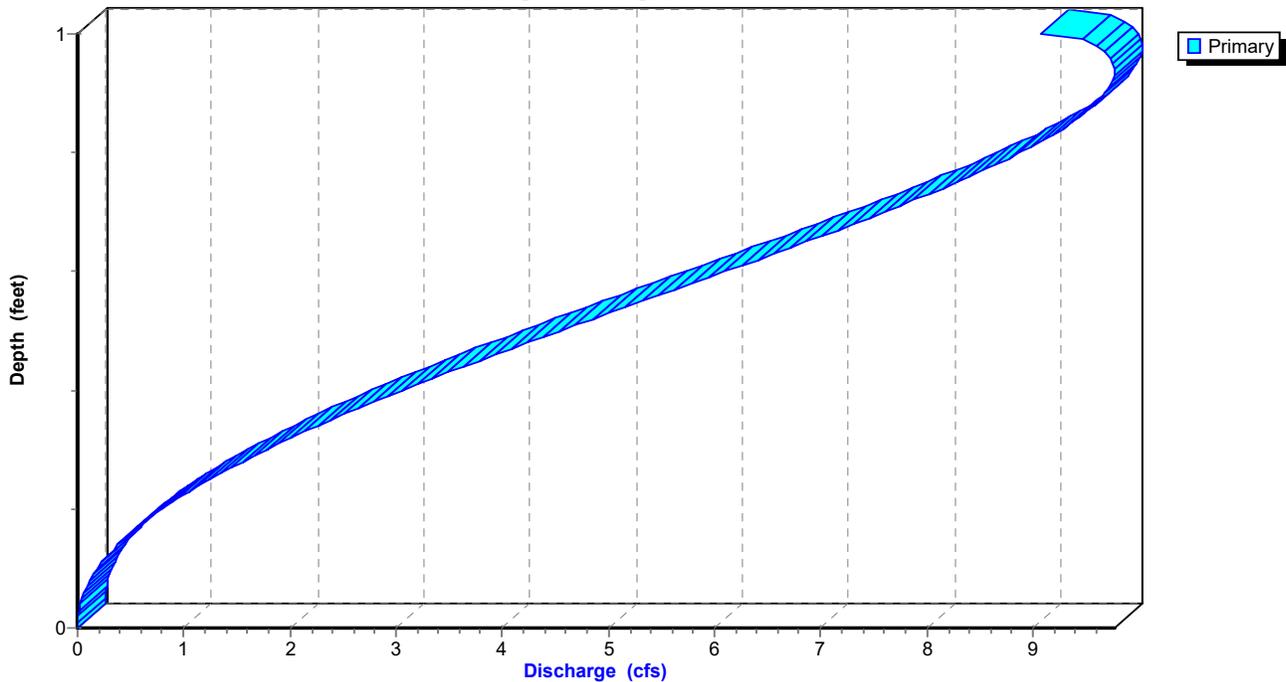
Reach 1-2: MH 1-2 to mh 1-1

Hydrograph

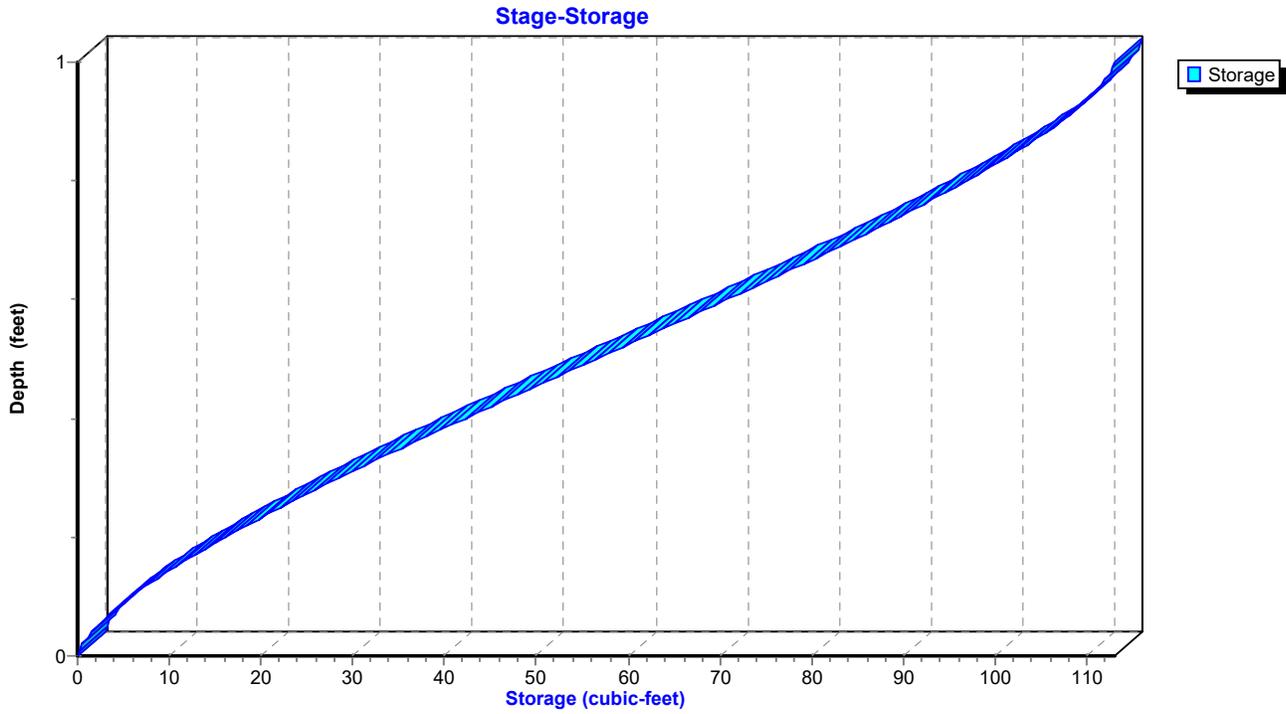


Reach 1-2: MH 1-2 to mh 1-1

Stage-Discharge



Reach 1-2: MH 1-2 to mh 1-1



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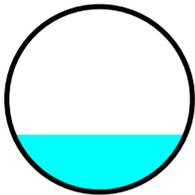
Summary for Reach 2-0: CI 2-0 TO POND

Inflow Area = 2.641 ac, 23.37% Impervious, Inflow Depth > 2.59" for 100-year event
Inflow = 1.46 cfs @ 8.00 hrs, Volume= 0.570 af
Outflow = 1.46 cfs @ 8.00 hrs, Volume= 0.570 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 1-P : Stormwater Facility

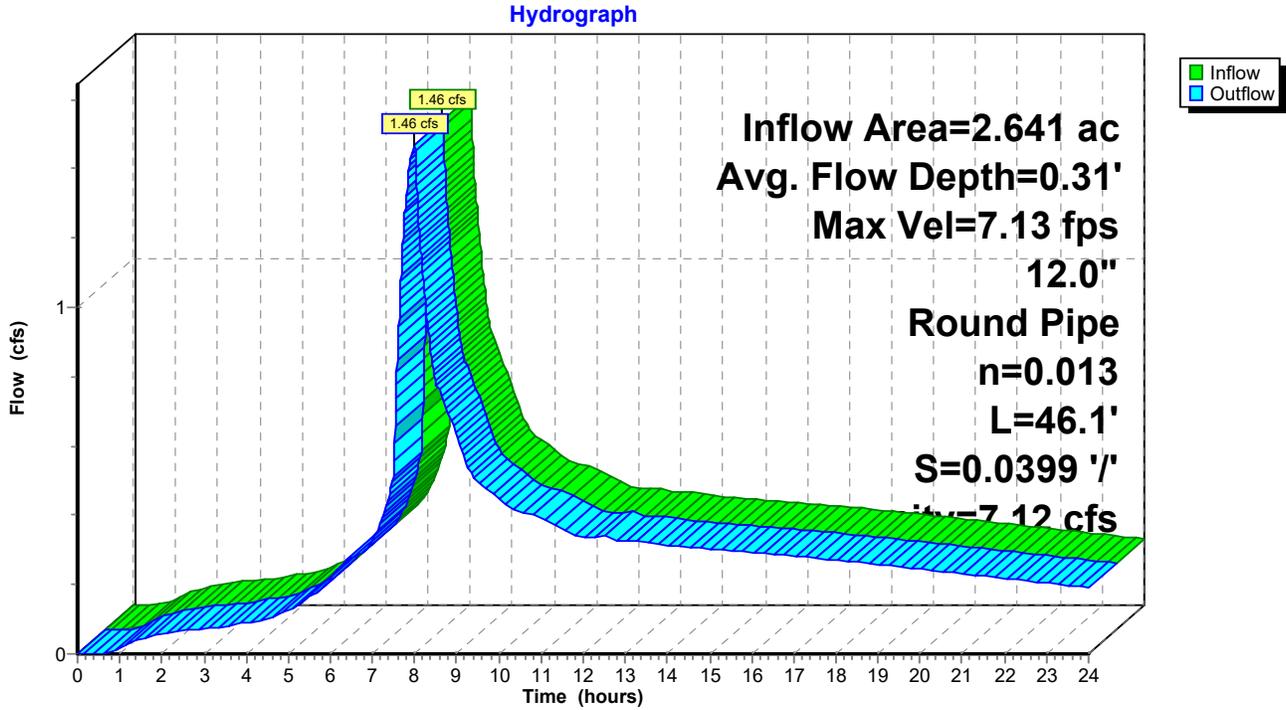
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.13 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.22 fps, Avg. Travel Time= 0.2 min

Peak Storage= 9 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.31' , Surface Width= 0.92'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.12 cfs

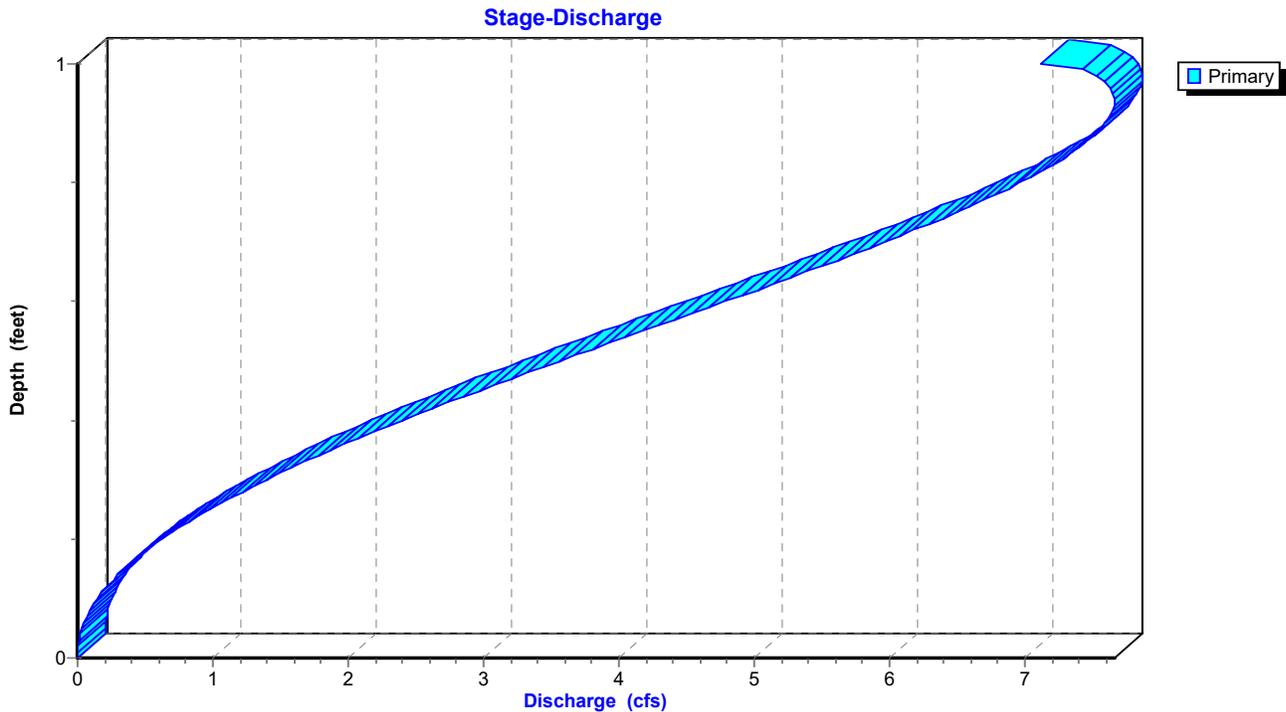
12.0" Round Pipe
n= 0.013
Length= 46.1' Slope= 0.0399 '/'
Inlet Invert= 523.83', Outlet Invert= 521.99'



Reach 2-0: CI 2-0 TO POND



Reach 2-0: CI 2-0 TO POND



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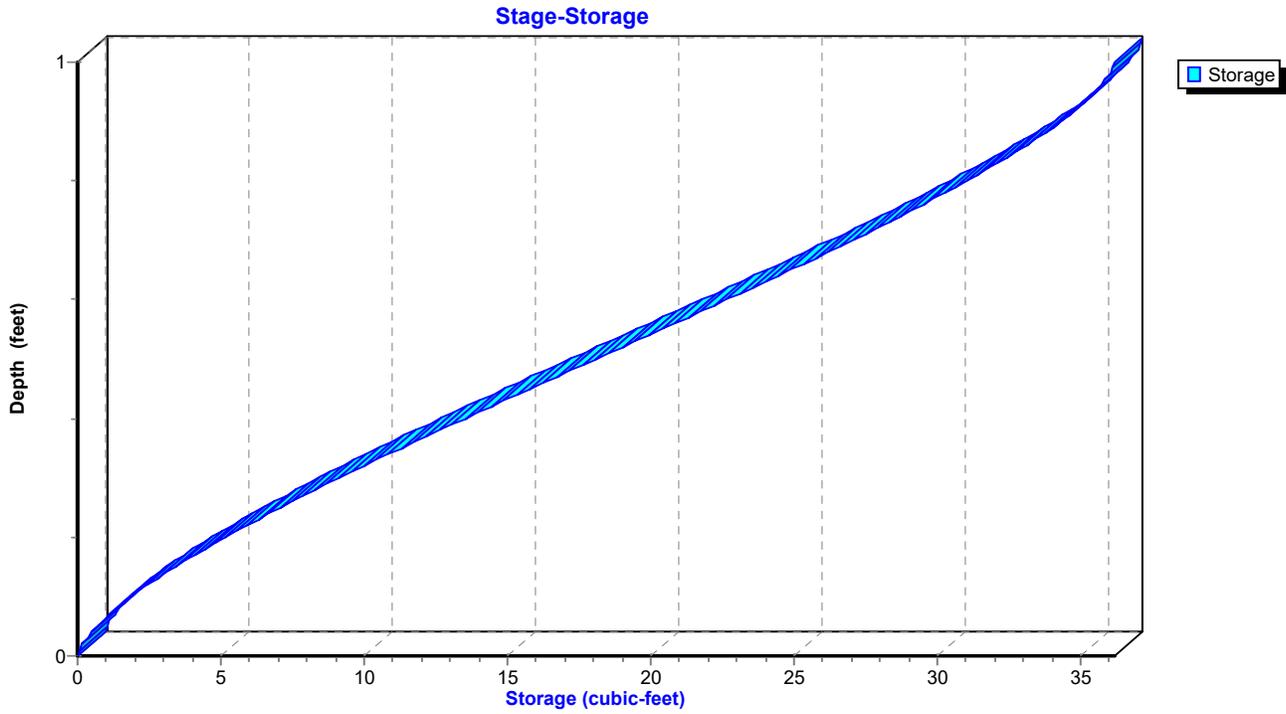
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Reach 2-0: CI 2-0 TO POND



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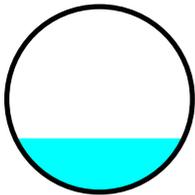
Summary for Reach 2-1: MH 2-1 TO CB 2-0

Inflow Area = 2.519 ac, 21.69% Impervious, Inflow Depth > 2.56" for 100-year event
Inflow = 1.37 cfs @ 8.00 hrs, Volume= 0.538 af
Outflow = 1.37 cfs @ 8.00 hrs, Volume= 0.537 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2-0 : CI 2-0 TO POND

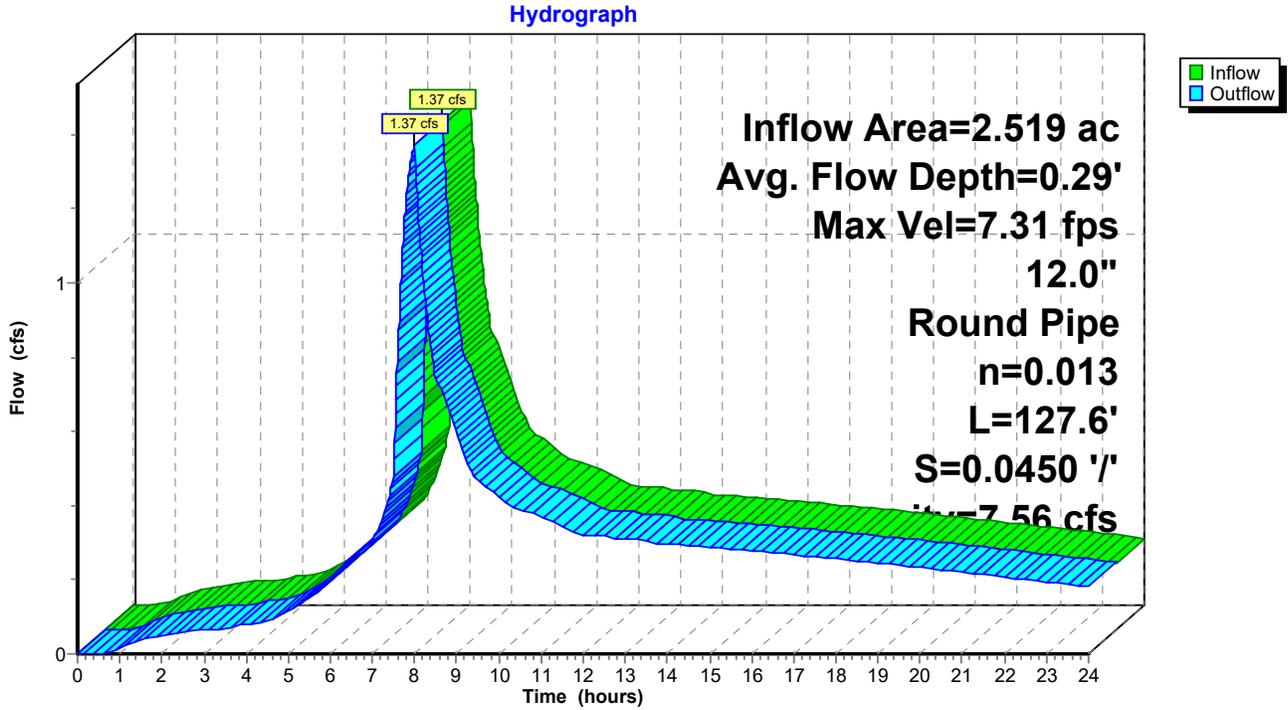
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 7.31 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 4.32 fps, Avg. Travel Time= 0.5 min

Peak Storage= 24 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.29' , Surface Width= 0.91'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.56 cfs

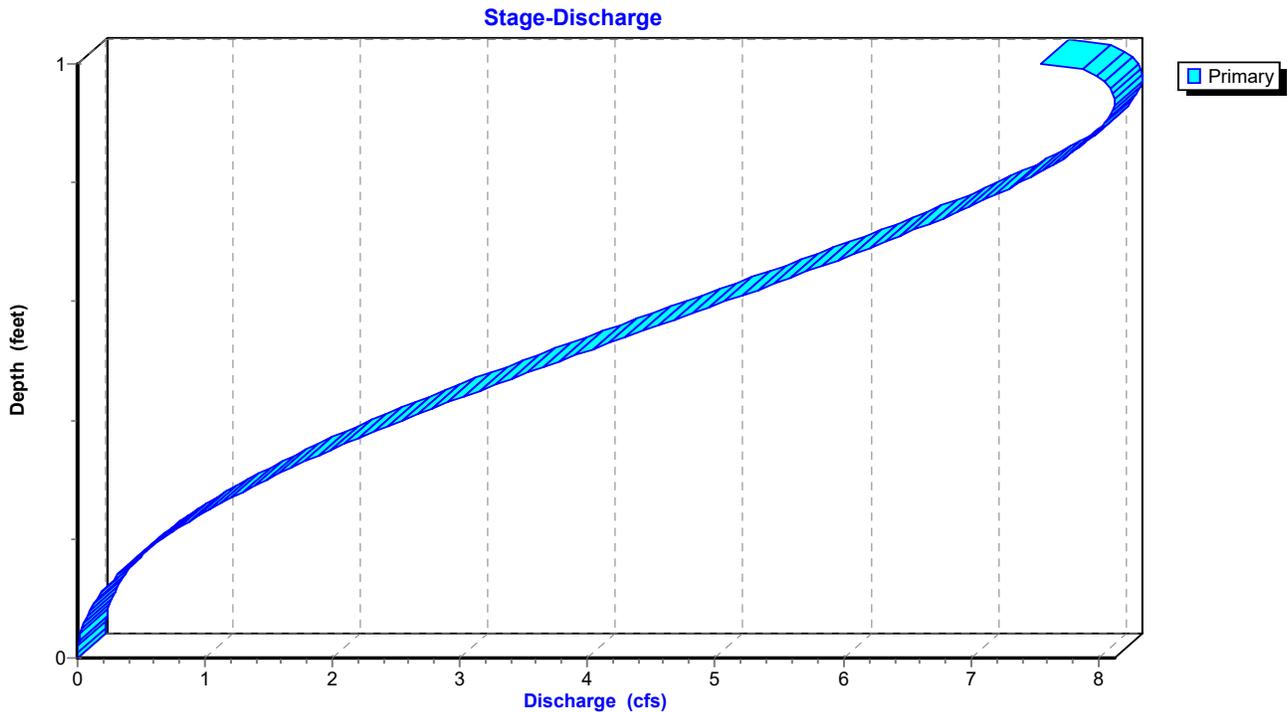
12.0" Round Pipe
n= 0.013
Length= 127.6' Slope= 0.0450 '/'
Inlet Invert= 529.57', Outlet Invert= 523.83'



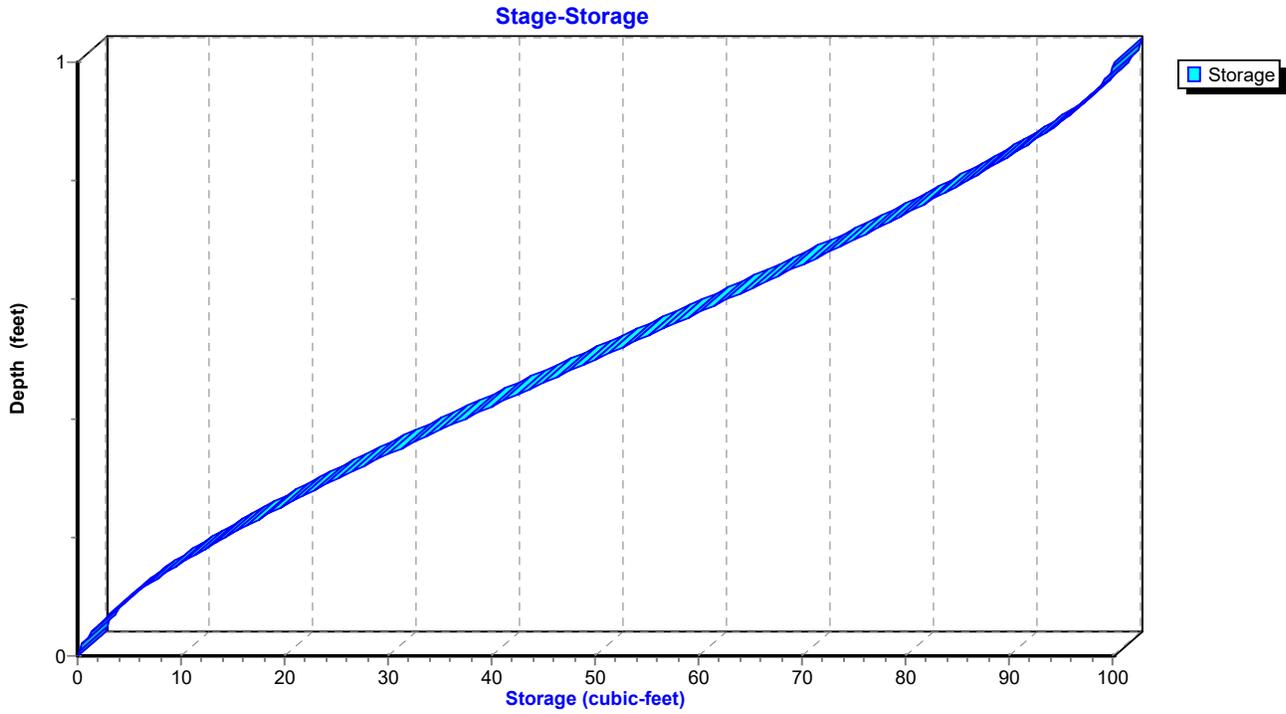
Reach 2-1: MH 2-1 TO CB 2-0



Reach 2-1: MH 2-1 TO CB 2-0



Reach 2-1: MH 2-1 TO CB 2-0



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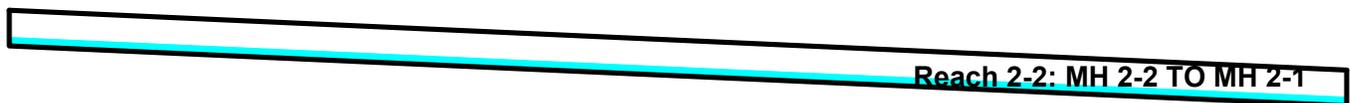
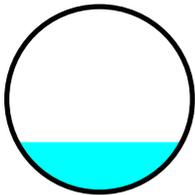
Summary for Reach 2-2: MH 2-2 TO MH 2-1

Inflow Area = 2.519 ac, 21.69% Impervious, Inflow Depth > 2.56" for 100-year event
Inflow = 1.37 cfs @ 8.00 hrs, Volume= 0.538 af
Outflow = 1.37 cfs @ 8.00 hrs, Volume= 0.538 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 2-1 : MH 2-1 TO CB 2-0

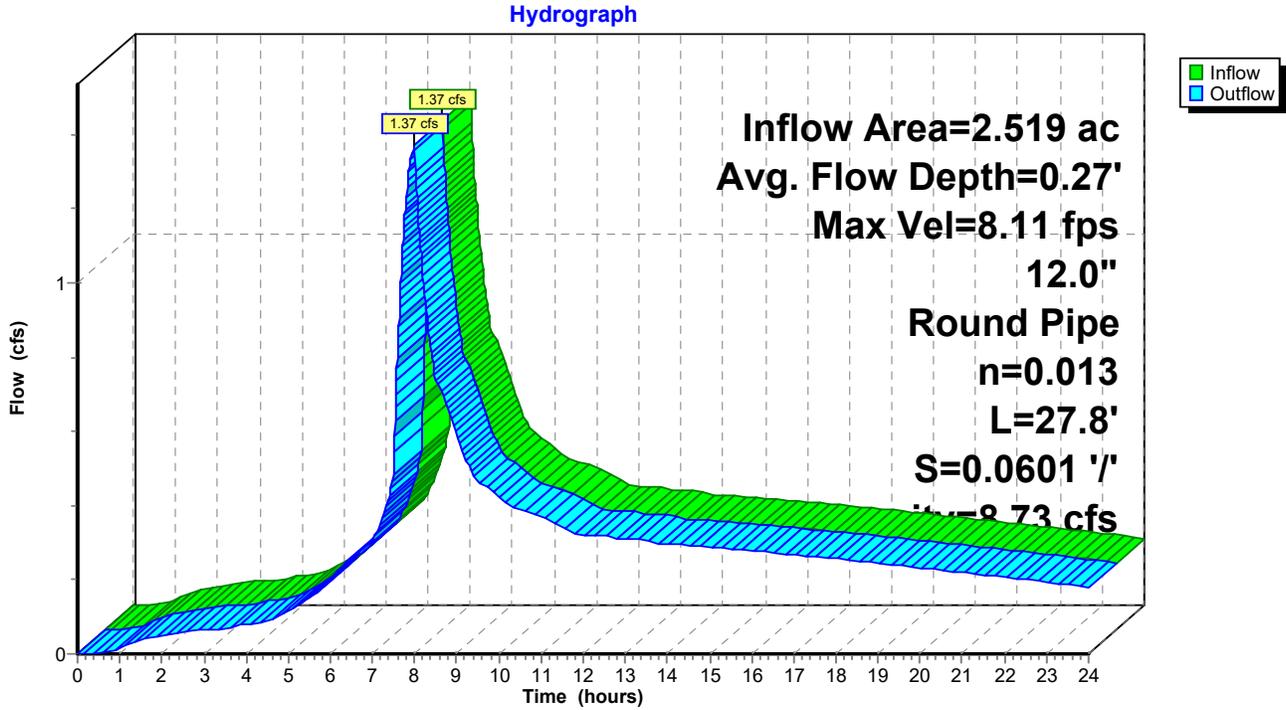
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Max. Velocity= 8.11 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.78 fps, Avg. Travel Time= 0.1 min

Peak Storage= 5 cf @ 8.00 hrs
Average Depth at Peak Storage= 0.27' , Surface Width= 0.89'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.73 cfs

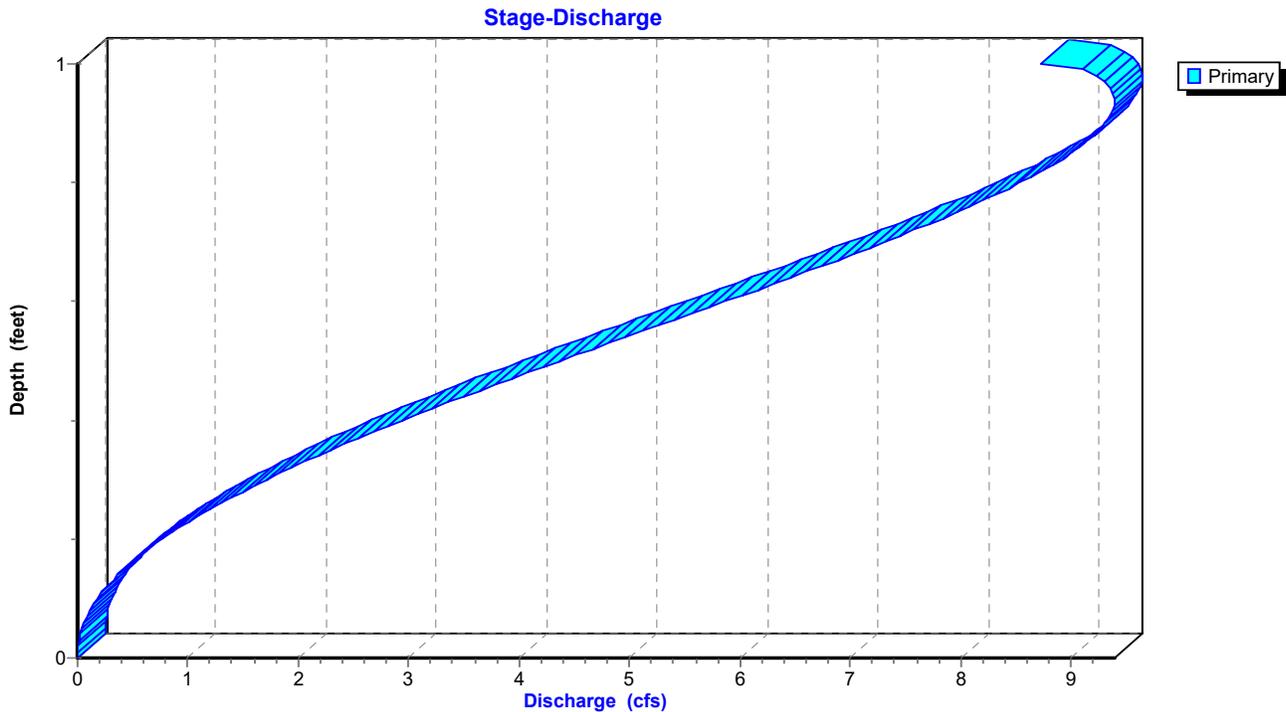
12.0" Round Pipe
n= 0.013
Length= 27.8' Slope= 0.0601 '/'
Inlet Invert= 531.44', Outlet Invert= 529.77'



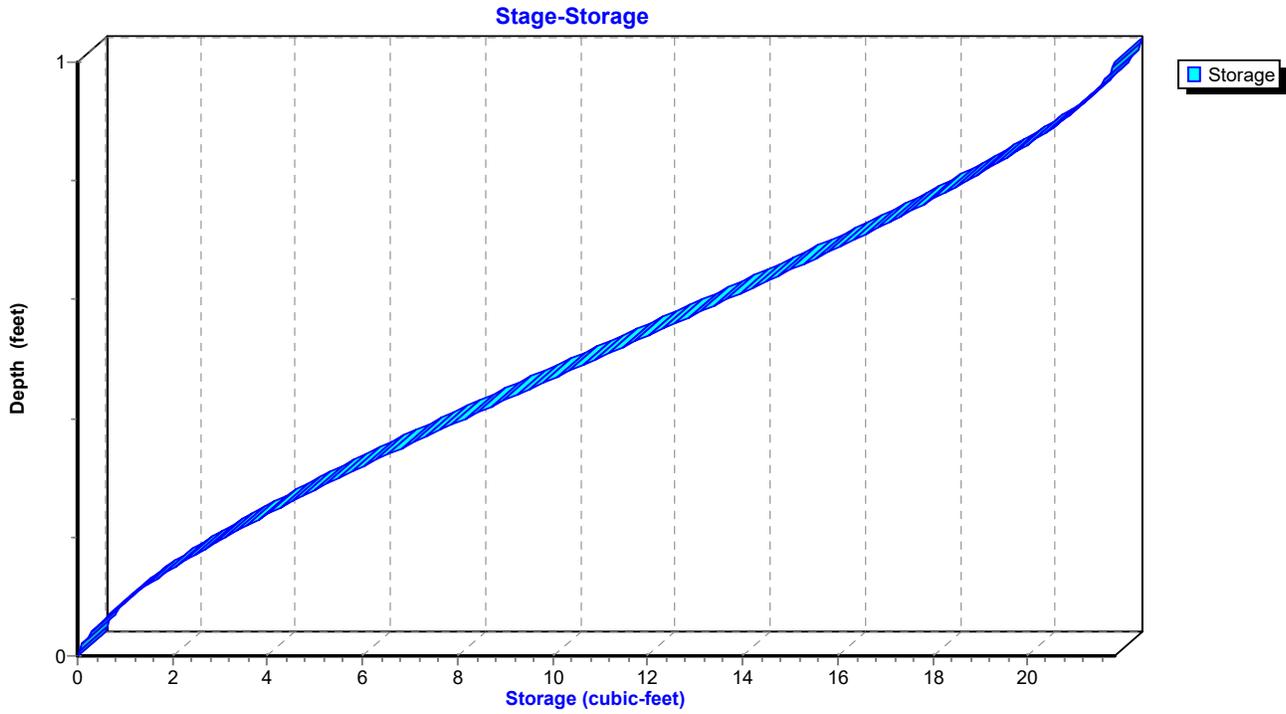
Reach 2-2: MH 2-2 TO MH 2-1



Reach 2-2: MH 2-2 TO MH 2-1



Reach 2-2: MH 2-2 TO MH 2-1



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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Summary for Pond 1-P: Stormwater Facility

Inflow Area = 4.939 ac, 36.28% Impervious, Inflow Depth > 2.80" for 100-year event
 Inflow = 3.12 cfs @ 7.96 hrs, Volume= 1.154 af
 Outflow = 1.48 cfs @ 8.48 hrs, Volume= 1.025 af, Atten= 53%, Lag= 31.1 min
 Primary = 1.48 cfs @ 8.48 hrs, Volume= 1.025 af
 Routed to Link TOTAL : POST DEVELOPED RELEASE RATE

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 524.90' @ 8.48 hrs Surf.Area= 4,971 sf Storage= 9,055 cf

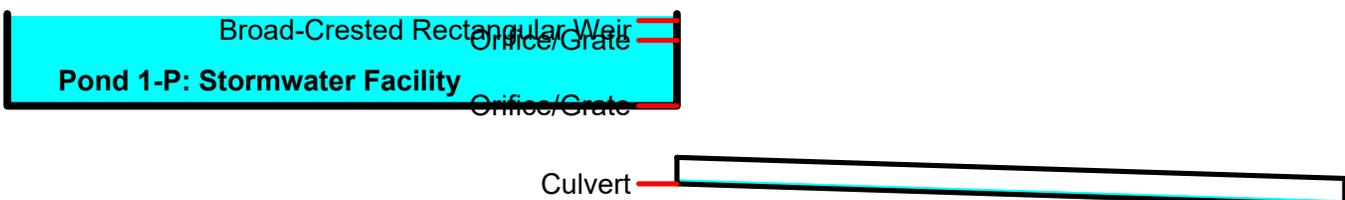
Plug-Flow detention time= 140.7 min calculated for 1.025 af (89% of inflow)
 Center-of-Mass det. time= 66.4 min (796.1 - 729.7)

Volume	Invert	Avail.Storage	Storage Description
#1	521.50'	9,545 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
521.50	5	0	0
522.00	652	164	164
522.50	1,588	560	724
523.00	2,740	1,082	1,806
523.50	3,268	1,502	3,308
524.00	3,837	1,776	5,085
524.50	4,450	2,072	7,156
525.00	5,106	2,389	9,545

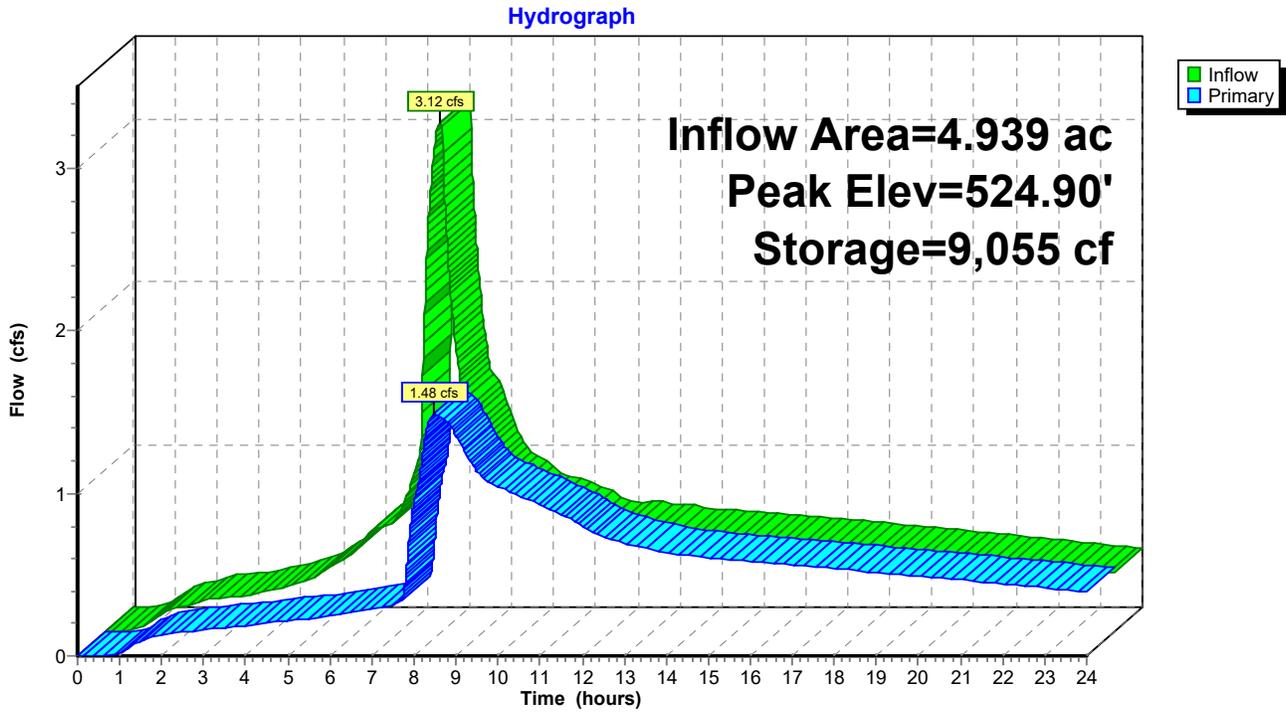
Device	Routing	Invert	Outlet Devices
#1	Primary	518.53'	12.0" Round Culvert L= 40.2' Ke= 0.500 Inlet / Outlet Invert= 518.53' / 517.73' S= 0.0199 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	521.50'	2.9" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	524.00'	6.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 1	524.75'	2.0' long Broad-Crested Rectangular Weir Head (feet) 0.49 0.98 1.48 1.97 2.46 2.49 Coef. (English) 2.84 3.13 3.26 3.30 3.31 3.31

Primary OutFlow Max=1.48 cfs @ 8.48 hrs HW=524.90' TW=0.00' (Dynamic Tailwater)

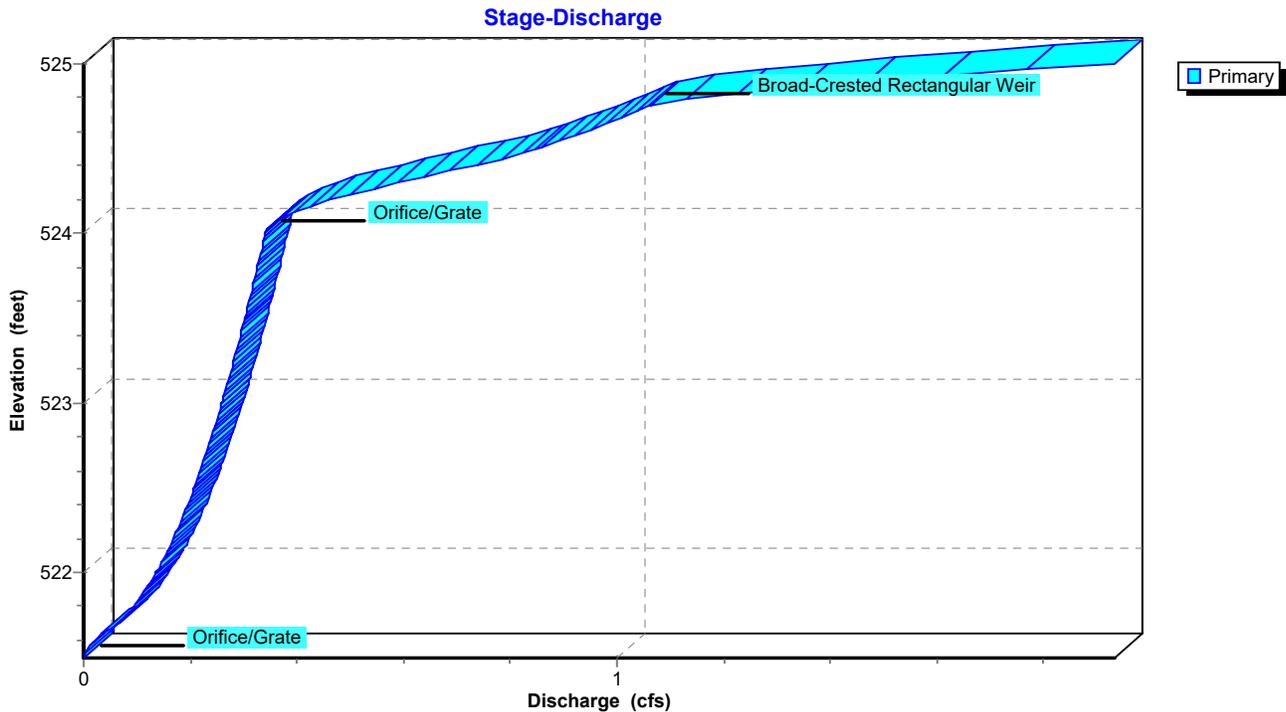
- 1=Culvert (Passes 1.48 cfs of 9.16 cfs potential flow)
- 2=Orifice/Grate (Orifice Controls 0.40 cfs @ 8.72 fps)
- 3=Orifice/Grate (Orifice Controls 0.76 cfs @ 3.87 fps)
- 4=Broad-Crested Rectangular Weir (Weir Controls 0.32 cfs @ 1.09 fps)



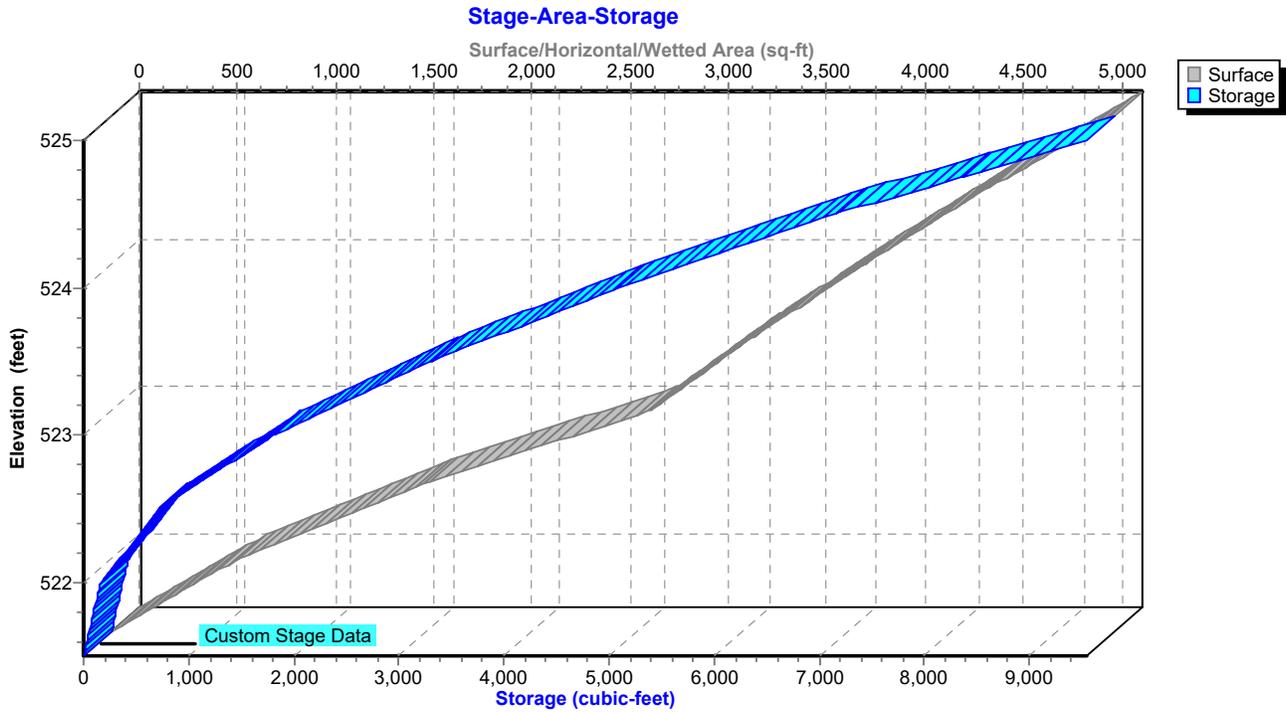
Pond 1-P: Stormwater Facility



Pond 1-P: Stormwater Facility



Pond 1-P: Stormwater Facility



Parker 1-10-26 Adjust Knollcrest Pond Revised 2-13-Type IA 24-hr 100-year Rainfall=4.40"

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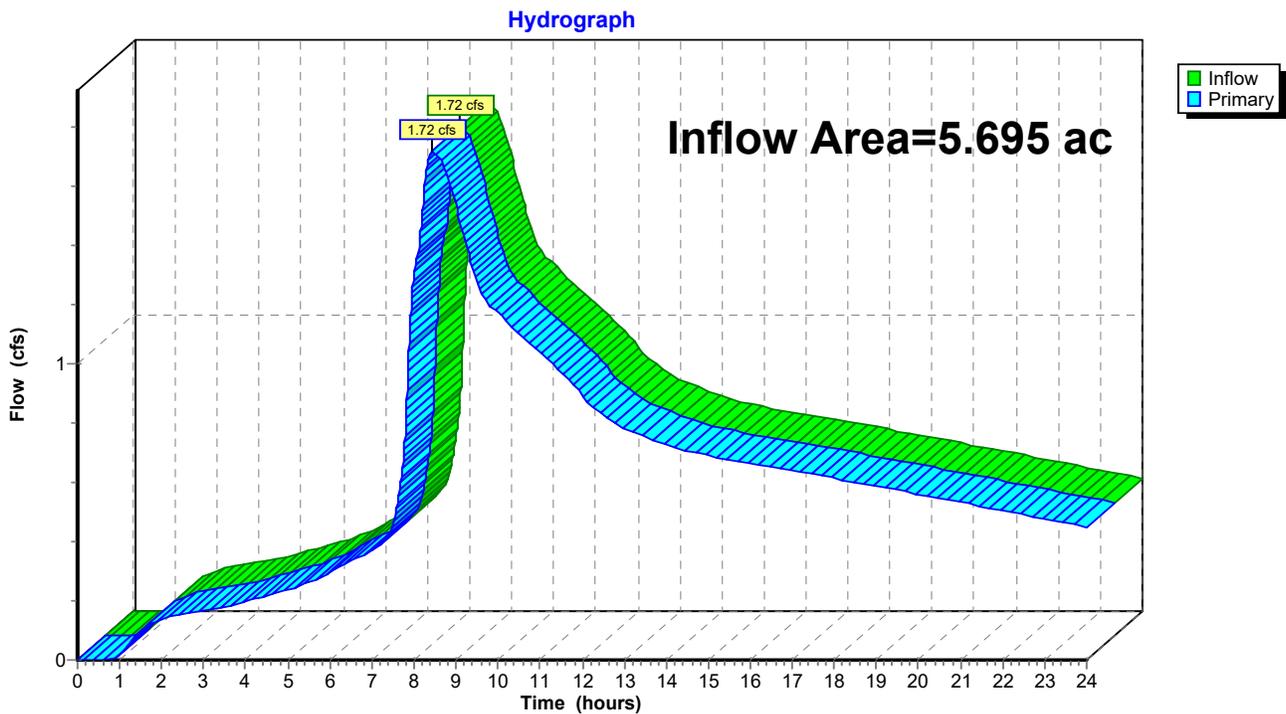
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Summary for Link TOTAL: POST DEVELOPED RELEASE RATE

Inflow Area = 5.695 ac, 32.48% Impervious, Inflow Depth > 2.48" for 100-year event
Inflow = 1.72 cfs @ 8.44 hrs, Volume= 1.179 af
Primary = 1.72 cfs @ 8.44 hrs, Volume= 1.179 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Link TOTAL: POST DEVELOPED RELEASE RATE



STORMWATER FACILITY DESIGN & CALCULATIONS

Hydraulic Design Criteria

Manning's #: 0.25

Avoid direct flow across WQ pond to avoid short circuiting

Swale Sizing Design:

Slope	Bottom Width	Manning's #	Side Slope	Depth of Swale	Design Length
(ft/ft)	(ft)	"n"	H:V	(ft)	(ft)
0.005	4	0.25	4	1	143

Water Quality Flow Hydraulic Calculations:

Q	Flow Depth	Flow Area	Wp	R	Velocity
(cfs)	(ft)	(sf)	(ft)	(ft)	(fps)
0.23	0.29	1.50	6.39	0.23	0.15

Check Against Design Criteria:

	<u>Calculated</u>		<u>Meet Design Criteria?</u>		
Min. Hydraulic Residence Time:	15.9	minutes	Yes	>	9 min
Minimum Freeboard (25-yr storm):	1.0	feet	Yes	≥	1 foot
Minimum Swale Length:	143.0	feet	Yes	>	100 feet
Maximum Velocity:	0.15	fps	Yes	<	0.9 fps

Parker 1 Subdivision

Check Existing Knollcrest Water Quality Swale

Man-Made Channels

CIVIL TOOLS PRO

English Units

01-11-2026 16:12:41

Results

Flow Depth	=	0.37 ft
Flowrate	=	0.36 cfs
Bottom Width	=	4.00 ft
Side Slope (H:V)	=	4.0000 H:V
Channel Slope (V:H)	=	0.0050 V:H
Manning's N	=	0.250
Wetted Area	=	2.00 sq ft
Wetted Perimeter	=	7.02 ft
Velocity	=	0.18 fps
Froude No.	=	0.06
Flow Regime	=	Sub-Critical

APPENDIX C – NRCS Custom Soil Resource Report



Custom Soil Resource Report for **Clackamas County Area, Oregon**

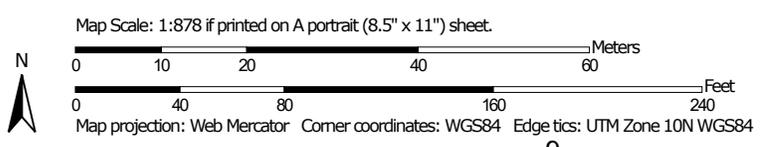
Parker 1 Subdivision



Custom Soil Resource Report Soil Map



Soil Map may not be valid at this scale.



MAP LEGEND

	Area of Interest (AOI)		Spoil Area
	Area of Interest (AOI)		Stony Spot
Soils			Very Stony Spot
	Soil Map Unit Polygons		Wet Spot
	Soil Map Unit Lines		Other
	Soil Map Unit Points		Special Line Features
Special Point Features			Streams and Canals
	Blowout	Transportation	
	Borrow Pit		Interstate Highways
	Clay Spot		Rails
	Closed Depression		US Routes
	Gravel Pit		Major Roads
	Gravelly Spot		Local Roads
	Landfill		Aerial Photography
	Lava Flow	Background	
	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		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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: Clackamas County Area, Oregon
 Survey Area Data: Version 22, Sep 9, 2025

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

Date(s) aerial images were photographed: Mar 1, 2024—Jul 1, 2024

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
23C	Cornelius silt loam, 8 to 15 percent slopes	2.0	100.0%
Totals for Area of Interest		2.0	100.0%

Map Unit Descriptions

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

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

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

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

Custom Soil Resource Report

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.

Clackamas County Area, Oregon

23C—Cornelius silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 223s

Elevation: 250 to 1,400 feet

Mean annual precipitation: 40 to 60 inches

Mean annual air temperature: 52 to 54 degrees F

Frost-free period: 165 to 210 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Cornelius and similar soils: 80 percent

Minor components: 4 percent

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

Description of Cornelius

Setting

Landform: Hillslopes

Landform position (two-dimensional): Footslope, summit

Landform position (three-dimensional): Interfluve, base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Silty material

Typical profile

H1 - 0 to 16 inches: silt loam

H2 - 16 to 34 inches: silty clay loam

H3 - 34 to 60 inches: silt loam

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: 30 to 40 inches to fragipan

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)

Depth to water table: About 27 to 37 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: F002XB005OR - Loess Hill Group

Forage suitability group: Moderately Well Drained < 15% Slopes (G002XY004OR)

Other vegetative classification: Moderately Well Drained < 15% Slopes (G002XY004OR)

Hydric soil rating: No

Custom Soil Resource Report

Minor Components

Delena

Percent of map unit: 4 percent

Landform: Terraces, hillslopes

Landform position (two-dimensional): Footslope

Landform position (three-dimensional): Interfluve, riser

Down-slope shape: Linear

Across-slope shape: Linear

Other vegetative classification: Poorly Drained (G002XY006OR)

Hydric soil rating: Yes

APPENDIX D – Pond Modification Exhibits

CONSTRUCTION DETAILS

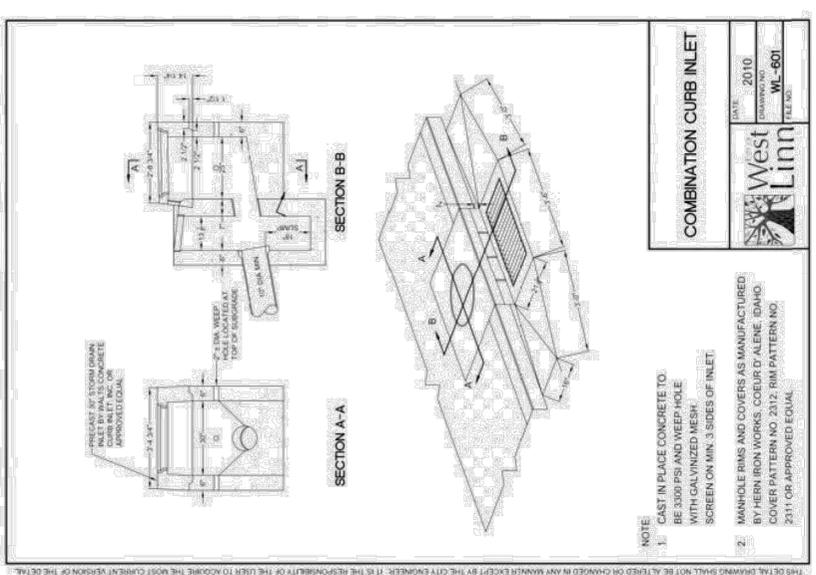
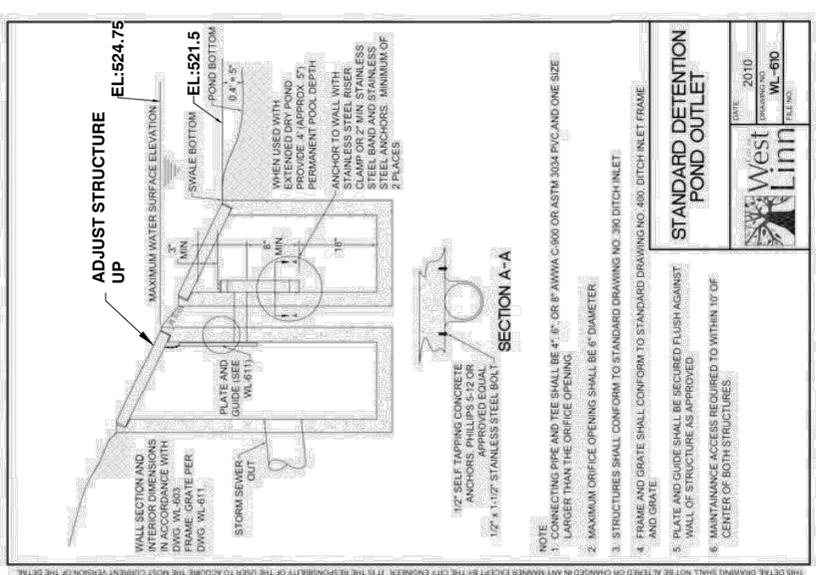
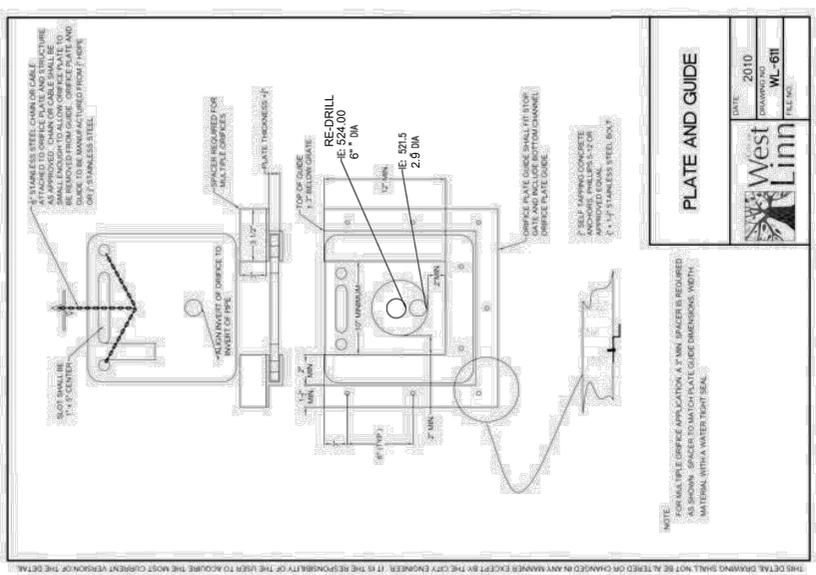
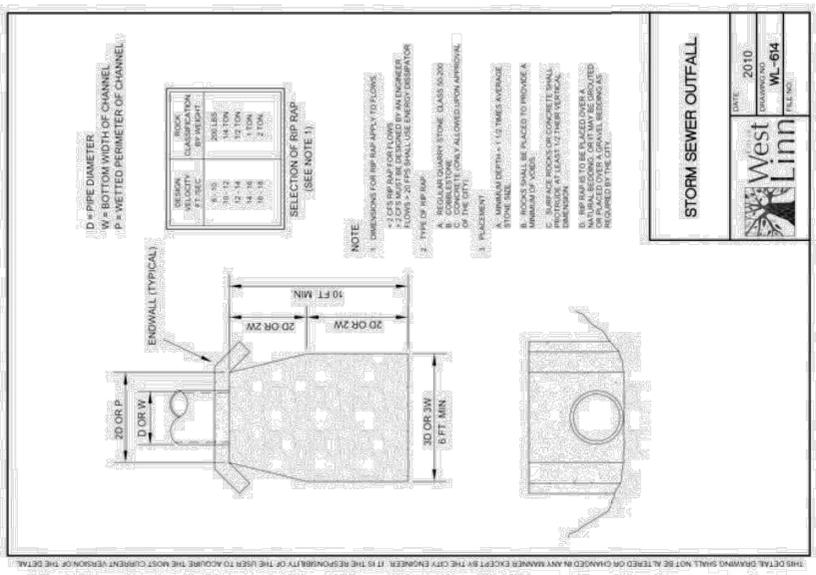
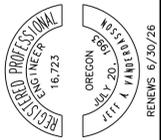
PROJECT NO.:
DESIGNED BY:
DATE: 1/14/26
DRAWN BY:
REVISIONS

Parker Road - C12 Construction Details.dwg



Vando Development LLC
915 SW Rimrock Way, Suite 201-230
Redmond, OR 97756
(C) 503-407-2228
vandodevelopment@gmail.com

Blue Palouse Properties
333 S. State Street, Suite V452
Lake Oswego, OR 97034
bp Homes
construction / development



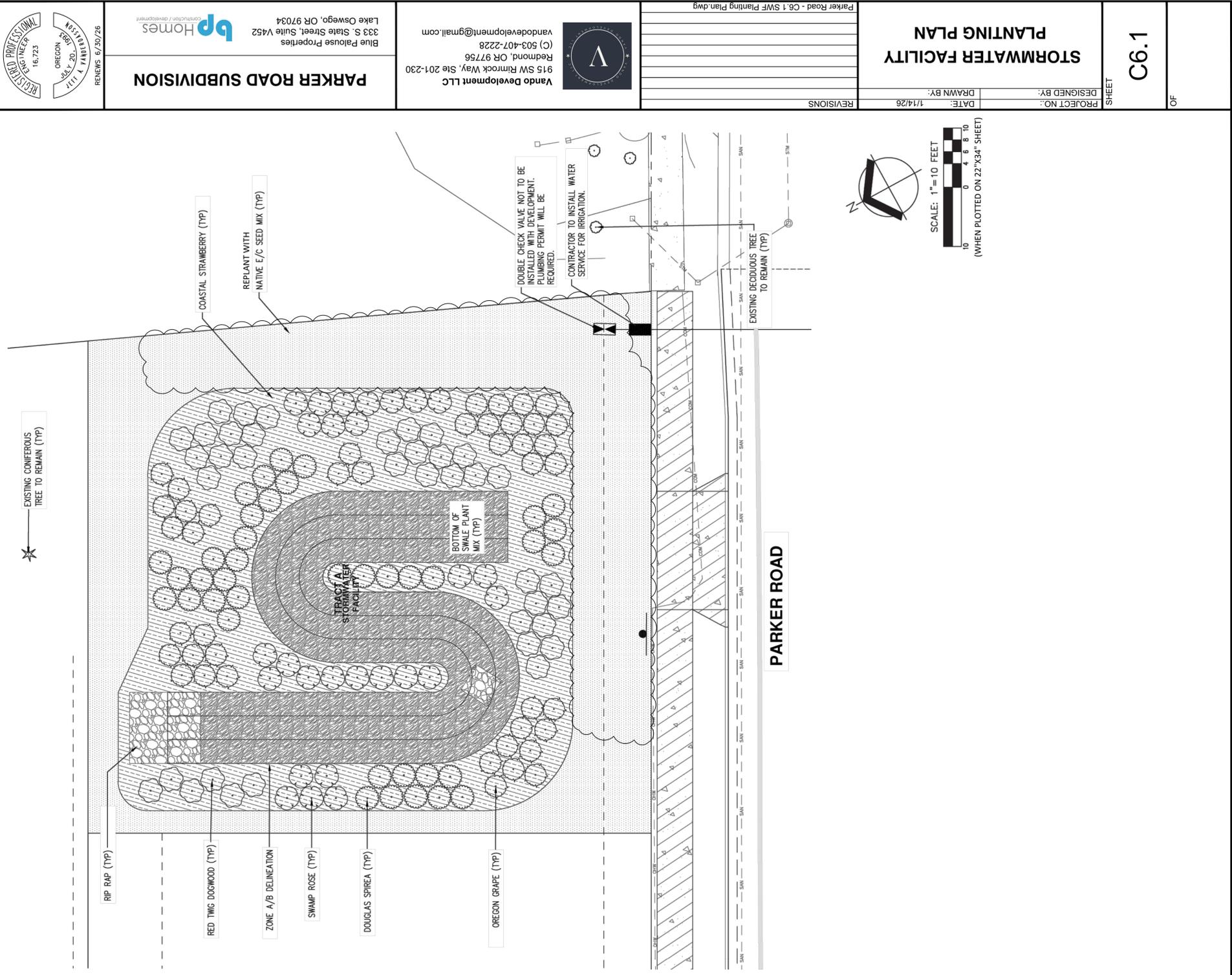
STORMWATER FACILITY PLANT SCHEDULE

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	37	CORNUS SERICEA	RED TWIG DOGWOOD	1 GAL CONT.	AS SHOWN
	42	MAHONIA AQUIFOLIUM	OREGON GRAPE	1 GAL CONT.	AS SHOWN
	27	ROSA PSOCARPA	SWAMP ROSE	1 GAL CONT.	AS SHOWN
	38	SPRAEA DOUGLASI	WESTERN SPIREA	1 GAL CONT.	AS SHOWN
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	1,737	FRAGARIA CHILOENSIS	COASTAL STRAWBERRY	1 GAL CONT.	12" o.c.
<p>1,652 SF± BOTTOM OF SWALE PLANT MIX (INSTALL 1.25' ON CENTER, GROUPED IN NATURAL LOOKING MASSES OF SAME SPECIES, MINIMUM OF 7 PLANTS PER GROUPING): 688 CAREX GRUPTA/SLOUGH SEDGE, MIN. 1 GALLON CONTAINER, PLANTED AT 1.25' O.C. 688 JUNCO PATENS/SPREADING RUSH, 1 GALLON CONTAINER, PLANTED AT 1.25' O.C. 689 SCORPUS MICROCARPUS/SMALL-FRUITED BOURBUSH, 1 GALLON CONTAINER, PLANTED AT 1.25' O.C. 2,065 PLANTS TOTAL</p>					
<p>3,166 SF± NATIVE E/C SEED MIX (OR APPROVED EQUAL) - SUNMARK SEEDS MEADOW BARLEY (40%); CALIFORNIA BROME (35%); NATIVE RED FESCUE (15%); TUFTED HAIRGRASS (3%); SPIKE BENTGRASS (2%); SKY LUPINE (5%) APPLY AT A RATE OF 1 LB./1,000 SF OR AS RECOMMENDED BY SUPPLIER APPLY ECOLINE ORGANICS FROM SUNMARK SEEDS IN ADDITION TO THE NATIVE E/C SEED MIX AT A RATE OF 1.5 LBS./1,000 SF.</p>					

STORMWATER FACILITY NOTES:

- PLANT AND PLANTINGS ARE SHOWN TO PORTRAY THE CHARACTER OF THE SITE AND CONFORM TO THE CITY OF PORTLAND STORMWATER MANAGEMENT MANUAL PLAN REVISIONS INCLUDING CHANGES TO PLANT SPECIES, SIZES, SPACING, QUANTITIES, ETC. DUE TO PLANT AVAILABILITY OR UNFORESEEN SITE CONDITIONS MAY BE MADE BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION WHERE ALLOWED BY THE CITY OF PORTLAND'S DESIGN STANDARDS. ALL PLANT SUBSTITUTIONS MUST BE FROM THE CITY OF PORTLAND'S STORMWATER MANAGEMENT MANUAL PUBLIC STORMWATER FACILITY PLANT LIST (CURRENT EDITION), AND BE APPROPRIATE FOR SOIL, HYDROLOGIC, AND SITE CONDITIONS.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING PLANT QUANTITIES AND ALL MATERIALS PRIOR TO BIDDING AND CONSTRUCTION. IF DISCREPANCIES OCCUR, DESIGN INTENT PREVAILS OVER QUANTITIES LISTED.
- LANDSCAPE INSTALLATION SHALL CONFORM TO THE CITY OF PORTLAND'S LANDSCAPE DESIGN STANDARDS AND TO AMERICAN NURSERY STANDARDS ASN 1260.1 IN ALL WAYS. PLANT IN ACCORDANCE WITH BEST PRACTICE STANDARDS ADOPTED BY THE OREGON LANDSCAPE CONTRACTOR'S BOARD (OLCB) AND THE AMERICAN ASSOCIATION OF NURSERMEN, INC. FIELD ADJUST PLANT LOCATIONS AS NECESSARY TO AVOID CONFLICTS WITH UTILITIES, ETC.
- ALL LANDSCAPING SHALL BE INSTALLED AT THE TIME OF CONSTRUCTION UNLESS OTHERWISE APPROVED BY THE CITY OF WEST Linn DUE TO INCLEMENT WEATHER OR TEMPORARY SITE CONDITIONS. UPON INSTALLATION, ALL PLANT MATERIALS SHALL BE VIGOROUS, WELL-BRANCHED, AND WITH HEALTHY, WELL-FURNISHED ROOT SYSTEMS, FREE OF DISEASE, INSECT PESTS, AND INJURIES.
- A TEMPORARY IRRIGATION SYSTEM, WITH A PLUMBING PERMIT AND BACKFLOW DEVICE APPROVED BY THE CITY OF WEST Linn, SHALL BE PROVIDED FOR ALL STORMWATER FACILITIES FOR THE ESTABLISHMENT AND LONG-TERM HEALTH OF PLANT MATERIAL. THE IRRIGATION SYSTEM SHALL BE "DESIGN-BUILD" BY THE LANDSCAPE CONTRACTOR, USING CURRENT WATER-SAVING TECHNOLOGY, AND INCLUDE ALL MATERIALS, COMPONENTS, CITY APPROVED BACKFLOW OR ANTI-SIPHON DEVICES, VALVES, ETC. NECESSARY FOR THE COMPLETE AND EFFICIENT COVERAGE OF STORMWATER AREAS SHOWN. THE LANDSCAPE CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND OWNER FOR POINT-OF-CONNECTION (POC), SLEEVING LOCATION, AND MAINLINE LAYOUT PRIOR TO ANY PAVING REPAIR OR STRIPING, AND SHALL PROVIDE CITY OF WEST Linn WITH IRRIGATION PLAN INCLUDING ZONING AND COMPONENT LAYOUT FOR APPROVAL PRIOR TO INSTALLATION. TEMPORARY IRRIGATION SYSTEM SHALL BE REMOVED ONCE PLANTS ARE FULLY ESTABLISHED, GENERALLY 2 TO 3 YEARS.
- SOIL: GROWING MEDIUM FOR VEGETATED STORMWATER FACILITIES SHALL BE PLACED AT A MINIMUM DEPTH OF 18" OVER NATIVE SOIL, UNLESS OTHERWISE NOTED. GROWING MEDIUM MUST CONFORM TO SPECIFICATIONS OUTLINED IN 01040.14(D)(1) OF CITY OF PORTLAND STORMWATER MANAGEMENT MANUAL, CURRENT EDITION. A BLEND OF LOAMY SOIL, SAND, AND COMPOST THAT IS 30-40% COMPOST (BY VOLUME) WHICH MEETS OTHER PORTLAND STORMWATER MANAGEMENT MANUAL CRITERIA AS SPECIFIED. MEDIUM SHALL BE LOOSE AND FRABLE, WELL MIXED AND HOMOGENOUS, FREE OF WOOD PIECES, PLASTIC, AND OTHER FOREIGN MATTER AND HAVE NO VISIBLE FREE WATER.
- MULCH: FINE TO MEDIUM HEMLOCK BARK SHALL BE PLACED AT A DEPTH OF 2" - 3" ABOVE HIGH WATER MARK, IN PLANTING ZONE B. MULCH SHALL NOT BE PLACED SUCH THAT IT MAY ENTER WATERWAYS OR CLOG INLETS/OUTLETS. MULCH MUST BE WEED FREE AND APPLIED 2"-3" THICK TO COVER ALL SOIL BETWEEN PLANTS. IT SHOULD NOT BE OVER-APPLIED.
- REFER TO SHEET L104 FOR STORMWATER FACILITY DETAILS.

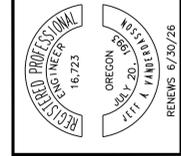
EXISTING CONIFEROUS TREE TO REMAIN (TYP)



PROJECT NO.:
 DESIGNED BY:
 DRAWN BY:
 DATE: 1/14/26
 REVISIONS:

STORMWATER FACILITY
 PLANTING PLAN

SHEET
 C6.1
 OF



PARKER ROAD SUBDIVISION
 bp Homes
 construction / development
 Blue Palouse Properties
 333 S. State Street, Suite V452
 Lake Oswego, OR 97034

Vando Development LLC
 915 SW Rimrock Way, Ste 201-230
 Redmond, OR 97756
 (C) 503-407-2228
 vandodevelopment@gmail.com

Parker Road - C6.1 SWF Planting Plan.dwg

Geotechnical Investigation

S Parker Road
West Linn, OR
Clackamas County Taxlot: 21E25CC00300

Prepared for:
Blue Palouse Homes

29 January 2026



EXPIRES: 12/31/26



3915 SW Plum Street
Portland, OR 97219
503-816-3689

1 INTRODUCTION

Rapid Soil Solutions Inc (RSS) has prepared this geotechnical report, as requested, for the proposed development at the Clackamas County tax lot 21E25CC00300. Currently, no situs address is assigned to the subject parcel. RSS understands that the project involves the division of 1.27 acres parent parcel into six (6) new lots. Access for the new lots will be via Roxbury Drive extension. As part of the development, two (2) small sheds located within new parcel 4 and parcel 5 will be demolished.

This report is based on visual observations of the subject site, six (6) shallow hand auger holes, and a review of available literature as referenced at the end of this report. Slopes and disturbance envelopes discussed in this report are approximate, primarily derived from on-site observations by RSS staff. RSS conducted a site investigation on 26 January 2026. RSS conducted on-site investigations unaccompanied.

2 SITE DESCRIPTION

2.1 Location

The subject property is situated in Parker Crest, a developed neighborhood located within the central area of West Linn. The neighborhood is characterized by urban/suburban residential settings on gentle-to-moderately sloping terrain. The site is situated in an Urban Low Density Residential (R10) zoning.

The site is situated on the north side of Parker Road and directly west of Roxbury Dr. The site is currently accessed via Roxbury Drive. Parker Subdivision borders the project site to the east. Adjacent properties to the site include 3945 S Parker Rd (southwest), 3939 Parker Rd (west), and 4000 S Ridge Ln (north).

The site is located about 1,200' south of Rosemont Rd, 0.30 miles west of Summit St, 0.60 miles east of Salamo Rd, and 1 mile west of Hwy-205. The site can be found in the southwest quarter of Section 25, Township 2-South, Range 1-East (W.M.) in Clackamas County and distinguished by the parcel number 00377808. The latitude and longitude of the site are 45.363915 and -122.636468 (45°21'50.1"N, 122°38'11.3"W).

2.2 Slopes

The site lies near the southeastern end of an uplifted bedrock ridge that extends from Lake Oswego to the southern portion of West Linn. The local neighborhood (Parker Crest) generally accommodates gentle to moderate dip towards the south direction. The south-southeast oriented Tanner Creek bisects the central and east end of the Parker Crest, at least 650' away (northeast) from the site.

Contour models presented by the City of West Linn and Metro Maps indicates that elevations at the site range from about 596' above sea level (north boundary) to 560' (south boundary). Internal slopes at the site are mapped as generally exceeding 10% but less than 25%. No steep slopes (exceeding 25%) are mapped within 200' distance to the site.

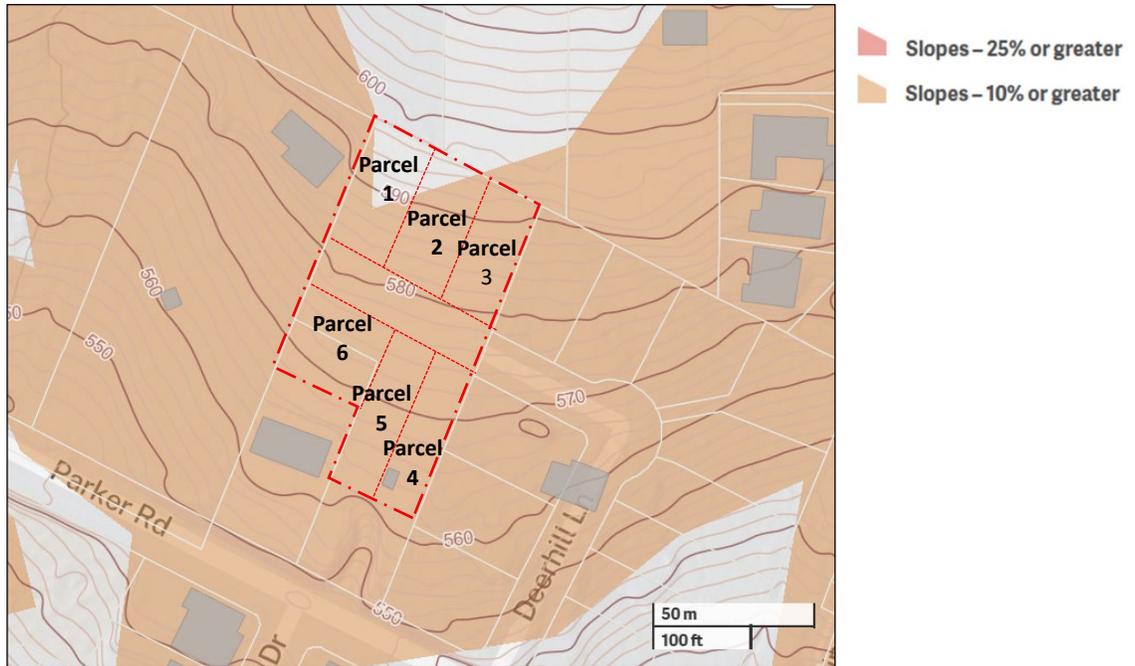


Figure 1: 2-ft contour and slope model at the site as presented by Metro maps online.

2.3 Built Conditions

The parent parcel forms an irregular boundary. The site is generally vacant except for two (2) small sheds at its south-southeastern end (within parcel 4 and parcel 5). Vegetation at the site is dominated by low grass. Cluster of trees are in the greater central segment of the site (within parcel 6, parcel 5, and new access road).

Our review of historical images depicted that the small sheds at the project site were added sometime between 2007-2010. Subsequent images collected from 2008-2024 indicate that the site conditions have remained generally consistent over time, with no apparent major changes in land use, grading, or development.

3 GEOLOGY

3.1 Regional Geology

The subject site is generally situated within the forearc basin of the Cascadia subduction system between the Cascade Range (volcanic arc) and the Coastal Range (accretionary/subduction complex). The site is tucked within an uplifted strip of bedrock within this basin, generally dividing the Portland Basin from the Tualatin Basin. This section of the uplifted ridge extends southwards from the Tualatin Mountains. Both the local uplifted bedrock and the adjacent basins are structural features resulting primarily from margin-parallel shorting associated with the Cascadia subduction system.

The margin-parallel tectonic forces that formed the Portland and Tualatin Basins also created the uplifted ridgeline on which the subject site sits. The uplifted ridge is structurally a late Cenozoic anticline bound by reverse faults that dip towards the anticlinal axis. This uplifted band of bedrock is the result of the compressional tectonic forces and produces a prominent structural feature that

separates the Portland basin from the Tualatin basin. Similar structures are common in the northwestern Willamette Valley, where they formed to accommodate margin-parallel shortening of the Cascadia forearc. The ridge is roughly 350 meters tall. The steep eastern slopes are steep and terminate abruptly along the trace of the nearly linear Portland Hills Fault. This fault forms a sharp contact between volcanic bedrock exposed within the mountains and the sedimentary deposits and artificial fill along the edge of the Willamette River. The western slopes of the Tualatin Mountains descend irregularly towards the structural and topographic Tualatin Valley basin.

The Tualatin Mountains are primarily capped by basalt flows collectively called the Columbia River Basalt group. Prior to deformation, these flows were thickly stacked in roughly horizontal layers across the pre-historic landscape. This thick accumulation of flood basalts was produced by dozens of fissure eruptions in eastern Oregon and Washington in the Middle Miocene. These volcanic eruptions are among the largest observed anywhere on earth. The floods of hot, fluid lava flowed across much of the eastern half of both Oregon and Washington, eventually reaching the Pacific Ocean. In the Portland area, these dark grey to black basalts can be divided into 8-10 distinct Columbia River Basalt flow types, comprised of as many as two dozen individual flows. The physical properties of these flows are very similar, often making it difficult to distinguish between individual flows. They have built up as much as 10,000 feet of lava in eastern Washington, and 850 feet in the Portland area.

3.2 Site Geology

The local bedrock is comprised of basalts from the Columbia River Basalt Group. Generally, the group is described as a dark-grey to black, dense, aphyric basaltic-andesite. At the subject site the deposits are further classified as the Basalt of Sand Hollow, a unit of the Frenchman Spring Member (Wanapum Basalt) within the Columbia River Basalt Group.

In mapping conducted north of the subject site, Madin, Ma and Niewendorp (2008) note that the ‘Columbia River Basalt group lavas of all units are profoundly weathered to a depth of several meters, and fresh material is found only in deep road cuts, in very rare natural exposures at the bottoms of steep canyons, and as core-stones preserved in otherwise profoundly weathered sections. Water wells typically describe as much as 20 m of “brown sandstone” in the weathered basalt horizon, and indeed the weathered material resembles light brown or tan sandstone. Although the rock is now composed entirely of clays, relict igneous textures can commonly be seen.’

Throughout the Tualatin Mountains, the Columbia River Basalt Group is draped in a thick layer of loess and/or colluvium. The colluvial deposit is composed of micaceous silt derived from loess deposits, clay and sand derived from weathered basalt, and angular pebble- to boulder-sized clasts of basalt and weathered basalt. Near the tops of slopes, the surficial material is primarily composed of loess-derived silt while near the bottom of slopes the deposit is predominantly derived from basalt and weathered basalt. On ridge crests the loess layer is generally stable, but as slopes steepen and descend into the nearby canyons, the loess typically moves slowly downhill under the influence of gravity, water, and numerous small landslides. This blanket of moving and mixing colluvium includes fragments of the underlying bedrock. When exposed in road cuts or excavations, the loess is featureless and tan. When saturated by heavy rainfall or runoff, the loess and loess-colluvium mix is very susceptible to landslides and can liquefy to flow down slopes.

The USDA National Resource Conservation Service Web Soil Survey classifies the soils within the subject site as Cornelius silt loam (8-15% slopes). These soils occur on dissected uplands and side slopes of low hills and terraces in the Willamette Valley and similar lowland settings of

western Oregon. It commonly forms on loess and silty colluvium overlying residuum from basalt or other volcanic bedrock, and is associated with moderately sloping to sloping terrain. The typical profile of Cornelius silt loam (8-15% slopes) is comprised of silt loam (H1: 0"-16" and H3: 34"-60") and silty clay loam (H2: 16"-34"). The soils are classified as somewhat well-drained with a water table at a depth of 27- to 37-inches; seepage was not observed during our investigation to an approximate maximum depth of 4-feet.

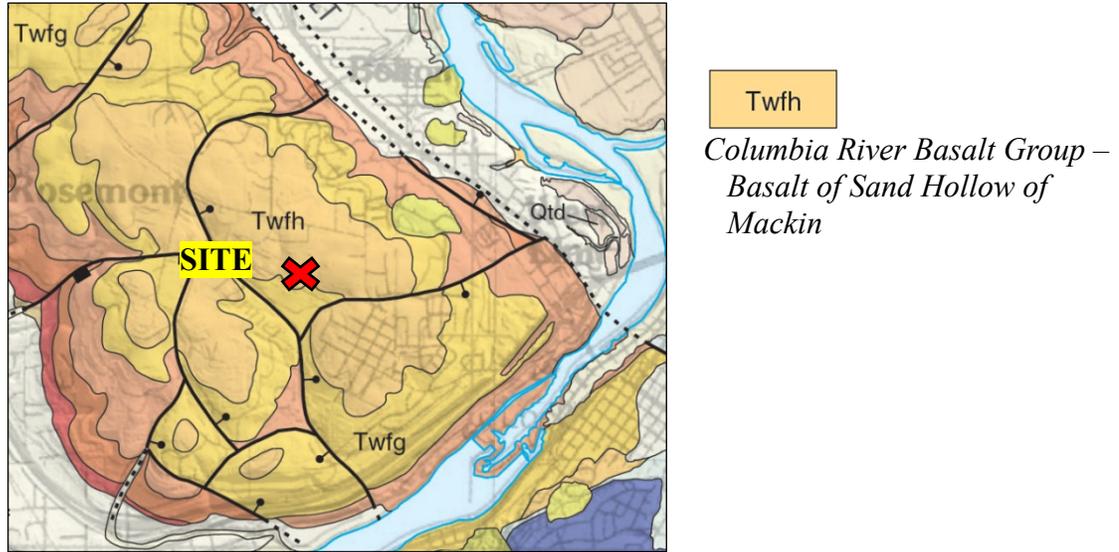


Figure 2: Geology at the site, excerpt from excerpt from Wells and others (2020, SIM-3443).

3.3 Geologic Hazards Review

The Oregon HazVu: Statewide Geohazard Viewer was reviewed to investigate mapped geological hazards.

Our review of the FEMA maps indicates that the project site is situated outside the floodplain areas. The site is located at least 300' away from the nearest wetland and/or creek.

The DOGAMI mapped two active quaternary faults within 3-miles distance to the site. The Bolton fault that passes roughly 0.8 miles northeast and the Oatfield fault at roughly 2.9 miles northeast.

The expected earthquake-shaking hazard at the site is classified as 'very strong' (VII on the instrumental intensity map) with 5-10% of damage from shaking probability.

The liquefaction hazard at the site is mapped as 'low'.

The Oregon HazVu classified the site as located within the National Earthquake Hazards Reduction Program (NEHRP) soil site class 'C' that corresponds to very dense soil and soft rock.

No landslides are mapped at the site. The local area generally accommodates moderate topographic change, lessening the likelihood of landslides.

During our reconnaissance, no geotechnical issues were observed that concern the stability of the subject site or its adjacent properties. No steep or abrupt slopes were observed within 200' to the subject property. No signs of landslide morphology such as fresh scarps, tension cracking, hummocky topography, slump blocks or sag ponds. No signs of soil erosion were noted at the site. Lidar based high-resolution modeling that depicts the texture of the earth's surface shows smooth slopes within the site. No hummocky topography is noted directly adjacent to the site.



Figure 3: DOGAMI lidar imagery at the site.

4 GEOTECHNICAL INVESTIGATION

4.1 Surface Conditions

RSS noted the following characteristics about the Site:

- Conditions on site (where observable) were generally consistent with mapped conditions, as described in the beginning of this report. The site generally slopes to the south/southwest direction towards Parker Road. The greater majority of the project site accommodates slopes of 8-12%.
- Moderate steep slopes of up to about 25-30% are located along the southernmost segment of new parcel 4 and parcel 5, as the terrain dips to the adjacent property (3945 S Parker Rd). Set of terraced rockery walls were built along the neighbor’s boundary line.
- There’s two (2) existing shed in the southeastern portion of the site and large trees along the middle western portion of the site.
- No standing or flowing water was observed at the subject site.



Figure 4: Existing conditions as observed on January 26th, 2026. Looking south along the northeastern property line.



Figure 5: Existing conditions as observed on January 26th, 2026. Looking south towards southern property line.

4.2 Subsurface Conditions

RSS drilled six (6) shallow hand auger borings at the site to characterize subsurface soil and to provide samples for laboratory analysis. Soil samples were collected and transported to the laboratory for further classification in seal bags.

A Geologist in Training (GIT) observed the hand auger borings and logged the subsurface materials. The logs were created using the Unified Soil Classification and Visual Manual Procedure (ASTM-D 2488). The soil descriptions were reviewed by a professional engineer. The logs and location of the boreholes are presented in the Appendix. Soil descriptions are summarized in the following Table 1.

Table 1: Soil Units Encountered

Soil Units		Soil Unit Depths (ft)					
Description	USCS	HA-1	HA-2	HA-3	HA-4	HA-5	HA-6
<u>Silt with clay</u> : Very moist, medium reddish brown, contain some roots and rootlets, soft.	MH	0 – 2'	np	np	np	np	np
<u>Silt with clay</u> : Very moist, medium to dark reddish brown, contain some rootlets, stiff.	MH	np	0 – 3'	0 – 3.5'	0 – 2'	0 – 3'	0 – 2'
<u>Silt with clay with angular gravels</u> : Very moist, medium to dark reddish brown, contain some rootlets, gravels up to 0.5", stiff to very stiff.	MH	np	np	3.5' – 4'	np	3' – 4'	np

Note: np not present, USCS Unified Soil Classification System Group Symbol (from ASTM D 2487) based on visual observation

4.3 Laboratory Testing and Results

The moisture content of the samples collected varies between 22.2% and 27.5%.

The result of the Atterberg limit test indicates that the near surface material at the site consists of Silt with clay (MH) with liquid limit of 58.3% and a plasticity index of 21.9%.

4.4 Groundwater

Regional groundwater trends suggest that the groundwater table is relatively deep.

At the time of the visit, RSS observed no standing/flowing water and no pockets of unusual vegetation within the site. Please note that the level of groundwater can fluctuate due to various reasons (i.e., season, amount of rainfall, and surface water runoff).

5 GEOTECHNICAL DESIGN AND RECOMMENDATIONS

5.1 Foundation Design

The new house foundations may be installed on either engineered fill or into the medium stiff native subgrade which was found at an average depth of 0.5' across the site. This depth may be locally variable and should be evaluated by a geotechnical engineer or their representative at the time of construction. *Please allow 48 hours' notice to call for foundation inspections.*

Continuous wall and isolated spread footings should be as per plan, and at least the minimum amounts per the Oregon Structural Specialty Code.

Footings placed on native sub-grade should be designed for an allowable bearing capacity of 1,500 pounds per square foot (psf). The recommended allowable bearing pressure may be increased by 1/3 for short-term loads such as those resulting from wind or seismic forces.

Based on our analysis the total post-construction settlement is calculated to be less than 1 inch, with differential settlement of less than 0.5 inch over a 50-foot span for maximum column, perimeter footing loads of less than 100 kips and 6.0 kips per linear foot.

Lateral loads on footings can be resisted by passive earth pressure on the sides of the structures and by friction at the base of the footings. An allowable lateral bearing pressure of 150 pounds per cubic foot (psf/f) below grade may be used. Adjacent floor slabs, pavements or the upper 12-inch depth of adjacent, unpaved areas should not be considered when calculating passive resistance.

The near surface soil found onsite is moisture sensitive. As such, when disturbed and exposed to prolonged periods of rain, these soils lose strength and will be unsuitable to support foundations. If construction is undertaken during periods of rain, we recommend a minimum of 2-inch-thick layer of compacted, crushed rock be placed over the footing subgrades as protection from disturbance due to the elements and foot traffic. See 'Wet Weather Conditions' section of this report.

Table 2: Engineering Values Summary

Bearing capacity soil/rock	1,500 psf/3,000 psf
Friction coefficient soil/rock	0.30 psf/0.35 psf
Active pressure	40 pcf
Passive pressure	300 pcf

5.2 Retaining Walls and Embedded Walls

Default lateral soil load for the design of basement and retaining walls supporting level backfill shall be 35 psf/ft for laterally unrestrained retaining walls and 60 psf/ft for laterally restrained retaining walls.

For embedded building walls, a superimposed seismic lateral force should be calculated based on a dynamic force of $5H^2$ pounds per lineal foot of wall, where H is the height of the wall in feet and applied at $1/3 H$ from the base of the wall. The wall footings should be designed in accordance with the guidelines provided in the 'Foundation Design' section of this report. These design parameters have been provided assuming that back-of-wall drains will be installed to prevent buildup of hydrostatic pressures behind all walls.

The backfill material placed behind the walls and extending a horizontal distance equal to at least half of the height of the retaining wall should consist of granular retaining wall backfill as specified in the 'Structural Fill' section of this report. The wall backfill should be compacted to a minimum of 95 percent of the maximum dry density, as determined by ASTM D698. However, backfill located within a horizontal distance of 3 feet from the retaining walls should only be compacted to approximately 92 percent of the maximum dry density, as determined by ASTM D698. Backfill placed within 3 feet of the wall should be compacted in lifts less than 6 inches thick using hand-operated tamping equipment (e.g., jumping jack or vibratory plate compactors). If flat work (e.g., sidewalks or pavements) is placed atop the wall backfill, we recommend that the upper 2 feet of material be compacted to 95 percent of the maximum dry density, as determined by ASTM D698.

A minimum 12-inch-wide zone of drain rock, extending from the base of the wall to within 6 inches of finished grade, should be placed against the back of all retaining walls. Perforated collector pipes should be embedded at the base of the drain rock. The drain rock should meet the requirements provided in the 'Structural Fill' section of this report. The perforated collector pipes should be discharged at an appropriate location away from the base of the wall. The discharge pipe(s) should not be tied directly into storm water drain systems, unless measures are taken to prevent backflow into the wall's drainage system. Settlements of up to 1 percent of the wall height commonly occur immediately adjacent to the wall as the wall rotates and develops active lateral earth pressures.

5.3 Seismic Design Criteria

The seismic design criteria for this project found herein are based on the ASCE 7-16. A summary of IBC seismic design criterion is below it is generated from the USGS web site for earthquake hazards using a latitude of 45.363915 and a longitude of -122.636468 and soil site class D (stiff soil). (Null = See Section 11.4.8)

Table 3: Recommended Earthquake Ground Motion Parameters (ASCE 7-16)

	Short period ($T_s=0.2$ second)	1 second period ($T_s=1.0$ second)
Maximum Credible Earthquake Spectral Acceleration	$S_s = 0.843$ g	$S_1 = 0.378$ g
Adjusted Spectral Acceleration	$S_{MS} = 0.980$ g	$S_{M1} = \text{null}$
Design Spectral Response Acceleration	$S_{DS} = 0.653$ g	$S_{D1} = \text{null}$

5.4 Pavements

RSS recommends 3" of asphalt concrete (AC) over 8" of rock base layer for standard duty traffic areas at the site. The base course shall be 2" thick of $\frac{3}{4}$ " minus over 6" thick of 1 $\frac{1}{2}$ " minus rock.

Pavement subgrades should be prepared in conformance with the 'Site Preparation' section of this report. If work takes place in the wet weather than geo-textile fabric is required.

RSS will need to proof roll before the rock section is placed to ensure that the subgrade is firm and relatively unyielding before paving. *Please allow 48 hours' notice to call for proofroll inspections.*

6 CONSTRUCTION RECOMMENDATIONS

6.1 Site Preparation

The initial site preparation will consist of topsoil stripping, and the removal of trees, where applicable. Removal of trees should include removal of the root ball, and any roots greater than $\frac{1}{2}$ -inch in diameter.

6.2 Excavations

Excavations can be accomplished with conventional excavating equipment. All excavations for footings and subgrades at the site should be performed by an excavator or backhoe equipped with a smooth-faced bucket (no teeth).

Because of safety considerations and the nature of temporary excavations, the Contractor should be made responsible for maintaining safe temporary cut slopes and supports for utility trenches, etc. We recommend that the Contractor incorporate all pertinent safety codes during construction, including the latest OSHA revised excavation requirements, and based on soil conditions and groundwater evidenced in cuts made during construction.

6.3 Wet Weather Conditions

The near-surface soil will be difficult to handle or traverse during/after extended periods of wet weather. Earthwork should be performed in small areas to minimize exposure to wet weather. Soils that have been disturbed during site preparation activities, or soft/loose zones identified during probing or proof rolling, should be removed and replaced with compacted structural fill.

Track-mounted excavating equipment will be required during wet weather. The imported granular material should be placed in one lift over the prepared, undisturbed sub-grade and compacted using a smooth drum, non-vibratory roller. Additionally, a geo-textile fabric should be placed as a barrier between the subgrade and imported granular material in areas of repeated traffic.

6.4 Structural Fills

Fills should be placed over subgrade which has been prepared in conformance with the 'Site Preparation' section of this report. Material used as structural fill should be free of organic matter, or other unsuitable materials and should meet specifications provided in OSSC, depending upon the application. A discussion of these materials is in the following sections. Compaction tests are required for backfills of more than 2 ft thick and are done every 2 vertical feet. *Please allow 48-hour notice to call for compaction testing and at least a week for proctor.*

6.4.1 Native Soils

The native soils at the site are suitable for use as structural fill, provided the soil is free of organics, cobbles larger than 6" in maximum diameter, or other deleterious matter. Our laboratory testing indicates that the moisture content of the near-surface soils is greater than the optimum moisture content required for satisfactory compaction. Moisture conditioning (drying) of the soil to within a few percentage points of the optimum moisture content will be required. If the native soil cannot be moisture conditioned properly, use of imported granular material may be necessary. When used as structural fill, native soils should be placed on level benches of thin lifts and compacted to not less than 92 percent of the Maximum Dry Density (MDD) as determined by the Standard Proctor Test (ASTM D698).

6.4.2 Imported Granular Fill

Granular materials located under area of footings, slabs, and pavements shall consist of free-draining, well-graded, crushed aggregate base with a maximum particle size of $\frac{3}{4}$ inch. The rock material must be reasonably well graded to between coarse and fine material and shall not contain more than 5% fines (material passing the No. 200 sieve, as tested by ASTM D-1140). Imported granular material should be placed in lifts 8 to 12 inches and be compacted to not less than 92% of the Maximum Dry Density (MDD) as determined by the Modified Proctor Test (ASTM D-1557). Where imported granular material is placed over wet or soft soil subgrades, we recommend that a geotextile serves as a barrier between the subgrade and imported granular material.

6.5 Drainage Considerations

The Contractor shall be made responsible for temporary drainage of surface water and groundwater, as necessary, to prevent standing water and/or erosion at the working surface. We recommend removing only the foliage necessary for construction to help minimize erosion.

Slope the ground surface around the structure to create a minimum gradient of 2 percent away from the foundations for a distance of at least 5 feet. Surface water should be directed away from all buildings into drainage swales or into a storm drainage system.

7 CONSTRUCTION OBSERVATIONS

Satisfactory pavement and earthwork performance depends on the quality of construction. Sufficient monitoring of the activities of the contractor is a key part of determining that the work is completed in accordance with the construction drawings and specifications. I recommend that a geotechnical engineer observe general excavation, stripping, fill placement, and sub-grades in addition to base. Subsurface conditions observed during construction should be compared with those encountered during the subsurface explorations. Recognition of changed conditions requires experience. Therefore, qualified personnel should visit the site with sufficient frequency to detect whether subsurface conditions change significantly from those anticipated.

8 LIMITATIONS

This report has been prepared for the exclusive use of the addressee, and their architects and engineers for aiding in the design and construction of the proposed development. It is the addressee's responsibility to provide this report to the appropriate design professionals, building officials, and contractors to ensure correct implementation of the recommendations. The opinions, comments and conclusions presented in this report were based upon information derived from our literature review, field investigation, and laboratory testing. Conditions between, or beyond, our exploratory borings may vary from those encountered. Unanticipated soil conditions and seasonal soil moisture variations are commonly encountered and cannot be fully determined by merely taking soil samples or soil borings. Such variations may result in changes to our recommendations and may require that additional expenditures be made to attain a properly constructed project. Therefore, some contingency fund is recommended to accommodate such potential extra costs.

If there is a substantial lapse of time between the submission of this report and the start of work at the site; if conditions have changed due to natural causes or construction operations at, or adjacent to, the site; or, if the basic project scheme is significantly modified from that assumed, it is recommended this report be reviewed to determine the applicability of the conclusions and recommendations. The work has been conducted in general conformance with the standard of care in the field of geotechnical engineering currently in practice in the Pacific Northwest for projects of this nature and magnitude. No warranty, express or implied, exists on the information presented in this report. By utilizing the design recommendations within this report, the addressee acknowledges and accepts the risks and limitations of development at the site, as outlined within the report.

9 REFERENCES

- Clackamas County <https://wcgis1.co.washington.or.us/>
City of West Linn maps <https://geo.westlinnoregon.gov/>
Metro Map <https://gis.oregonmetro.gov/metromap/>
Portland Maps <https://www.portlandmaps.com/>
DOGAMI Oregon StateWide Geohazard Viewer (HazVu) <https://gis.dogami.oregon.gov/maps/hazvu/>
DOGAMI Statewide Landslide Information Layer for Oregon <https://gis.dogami.oregon.gov/maps/slido/>
Burns, W.J., Madin, I.P., Mickelson, K.A., and Duplantis, S., 2012, Inventory of landslide deposits from light detection and ranging (lidar) imagery of the Portland metropolitan region, Oregon and Washington: Oregon Department of Geology and Mineral Industries, Interpretive Map Series 53, scale 1:8,000.
Ma, L., Madin, I.P., Duplantis, S., and Williams, K.J., 2012, Lidar-based surficial geologic map and database of the greater Portland, Oregon, area, Clackamas, Columbia, Marion, Multnomah, Washington, and Yamhill Counties, Oregon, and Clark County, Washington: Oregon Department of Geology and Mineral Industries, Open-File Report 0-2012-02, scale 1:8,000.
Wells, R.E., Haugerud, R.A., Niem, A.R., Niem, W.A., Ma, Lina, Evarts, R.C., O'Connor, J.E., Madin, I.P., Sherrod, D.R., Beeson, M.H., Tolan, T.L., Wheeler, K.L., Hanson, W.B., and Sawlan, M.G., 2020, Geologic map of the greater Portland metropolitan area and surrounding region, Oregon and Washington: U.S. Geological Survey, Scientific Investigations Map SIM-3443, scale 1:63,360.
Wong, I., Silva, W., Bott, J., Wright, D., Thomas, P., Gregor, N., Li, S., Mabey, M., Sojourner, A., and Wang, Y., (2000), Earthquake scenario ground shaking map for the Portland, Oregon, metropolitan area: Portland Hills Fault M 6.8 earthquake, Peak horizontal acceleration (g) at the ground surface: DOGAMI, IMS-15. Scale 1:62,500

Appendix

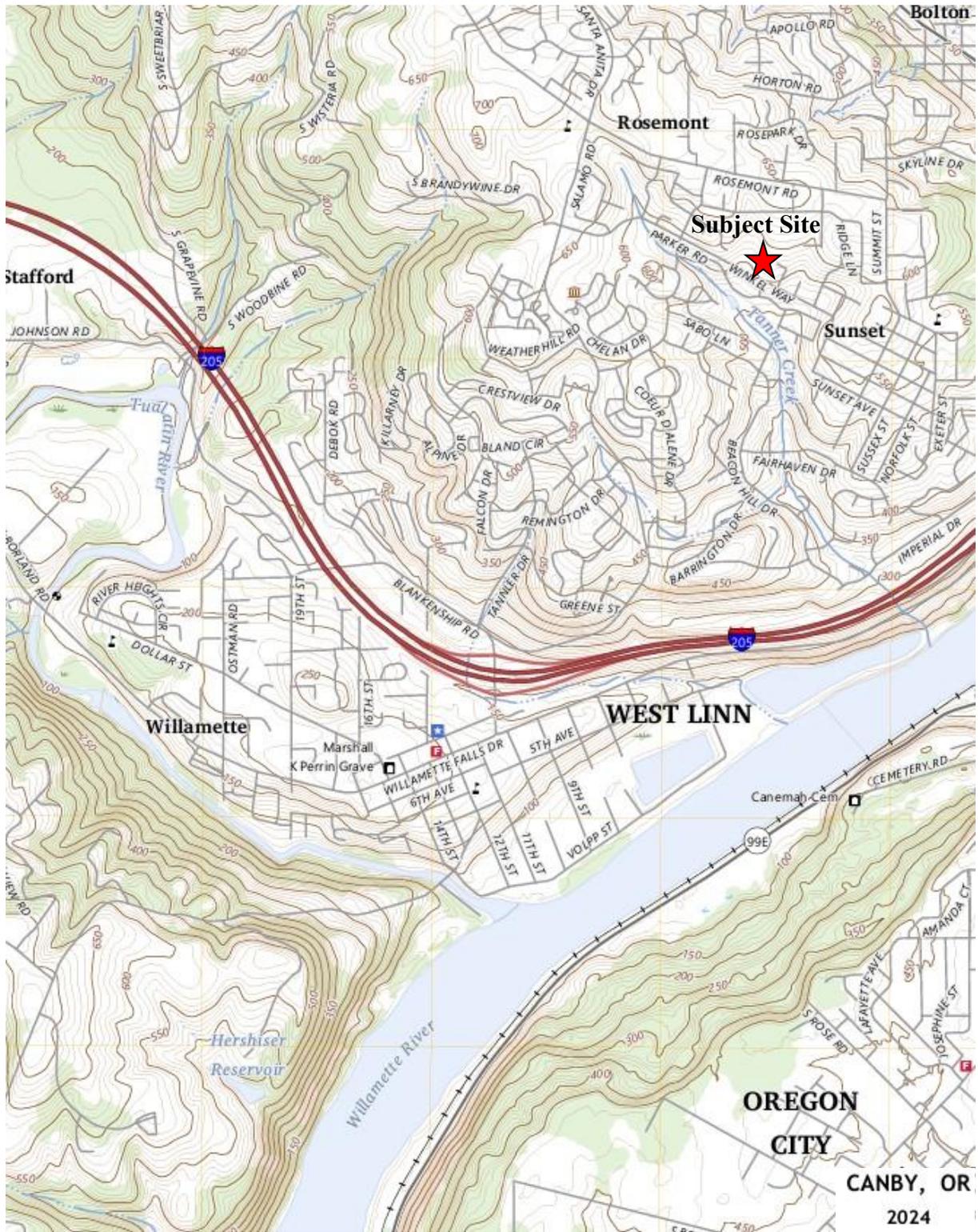


Figure 1: Subject site location in the northwest quarter of the Canby, OR, Quadrangle

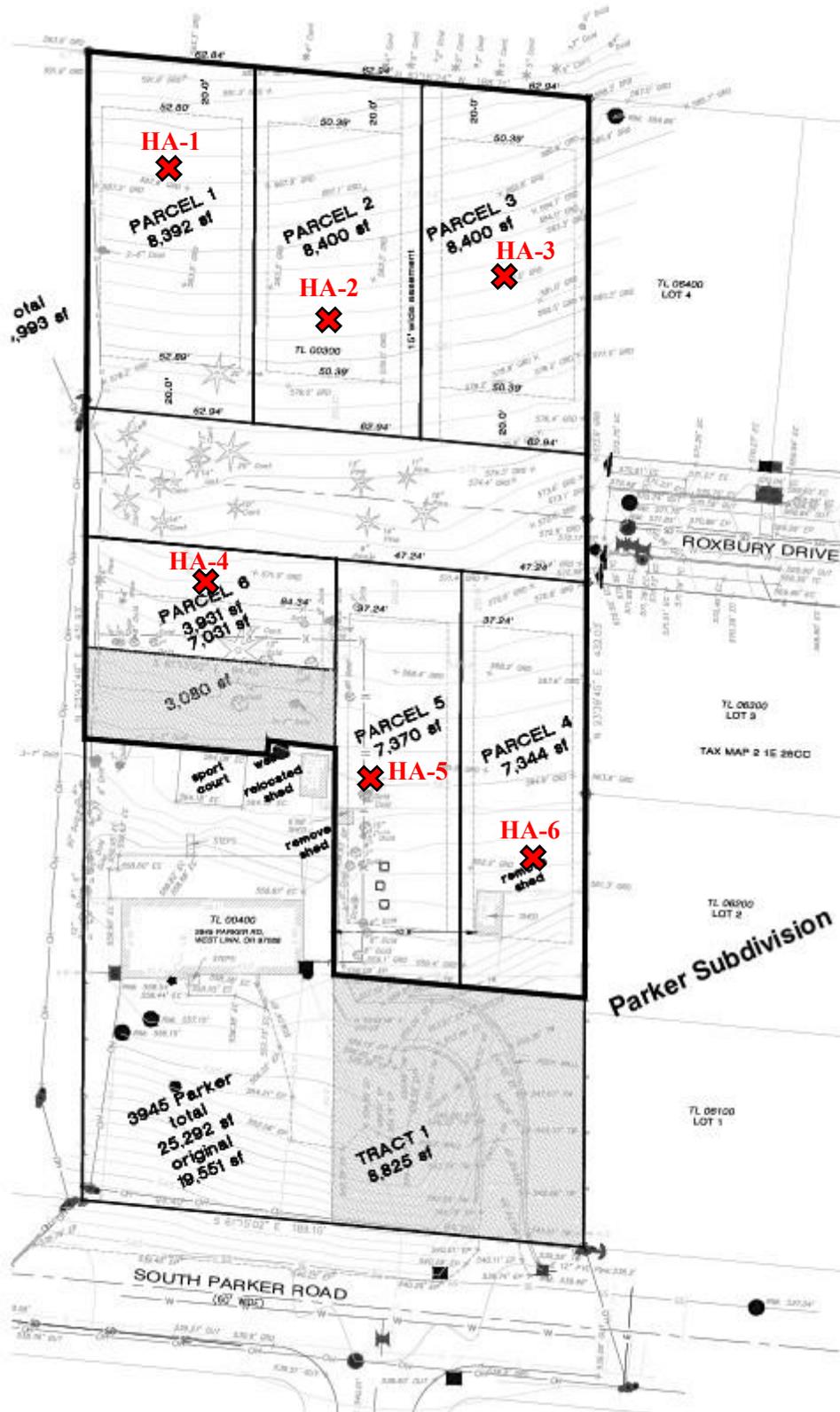


Figure 2: Excerpt from the site plan, as provided to RSS; Approximate hand auger boring locations noted.

Lab Results

Project Name: Parker Rd. - West Linn, OR

Sample Date: 1/26/2026

Moisture

Sample number	HA-1	HA-2	HA-3	HA-4
1 Date and time in oven	1/26/2026 - 1:52PM	1/26/2026 - 1:52PM	1/26/2026 - 1:52PM	1/26/2026 - 1:52PM
2 Date and time out of oven	1/27/2026 - 10:50AM	1/27/2026 - 10:50AM	1/27/2026 - 10:50AM	1/27/2026 - 10:50AM
3 Depth (ft)	2	3	4	2
4 Tare No.	1	2	3	4
5 Tare Mass	236	237	237	235
6 Tare plus sample moist	1146	1137	1151	1348
7 Tare plus sample dry	954	943	962	1146
8 Mass of water (g)	192	194	189	202
9 Mass of soil (g)	718	706	725	911
10 Water Content (%)	26.7	27.5	26.1	22.2

Atterberg Limit Test

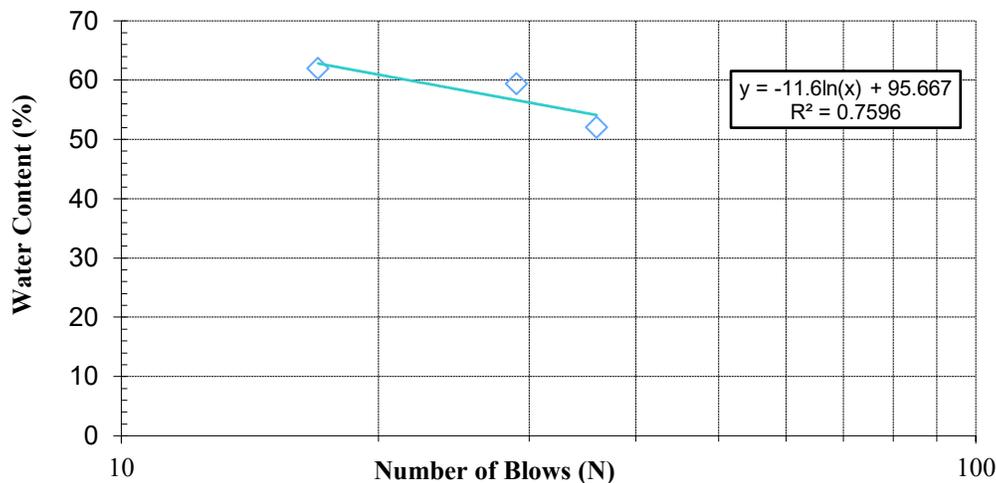
Sample Number: HA-2

Depth: 3-ft

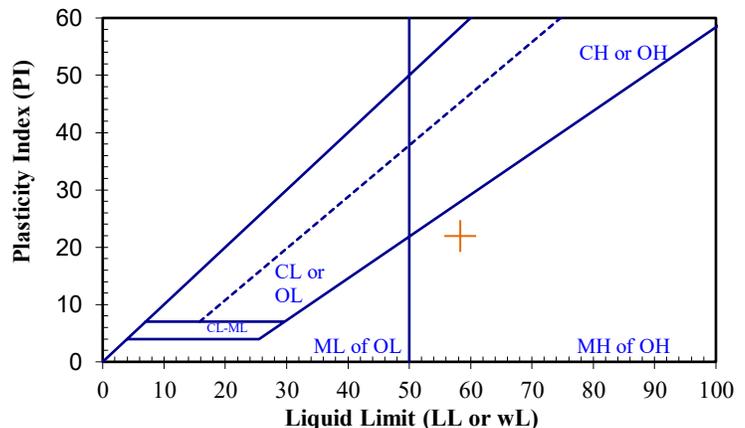
Liquid Limit

Plastic Limit

	d1.1	d1.2	d1.3	r1.1	r1.2
1 Tare No.					
2 Tare Mass (g)	39.49	39.85	40.69	39.47	40.26
3 Tare Plus Wet Soil (g)	65.59	65.60	66.01	50.54	49.19
4 Tare Plus Dry Soil (g)	56.65	56.00	56.32	47.60	46.79
5 Mass of Water (g)	8.94	9.60	9.69	2.94	2.40
6 Mass of Soil (g)	17.16	16.15	15.63	8.13	6.53
7 Water Content (%)	52.10	59.44	62.00	36.16	36.75
8 No. Blows	36	29	17		



Liquid Limit (%) **58.3**
Plastic Limit (%) **36.5**
Plasticity Index (%) **21.9**
USCS Classification of fines: MH



Lab Results

Project Name: Parker Rd. - West Linn, OR

Sample Date: 1/26/2026

Moisture

	Sample number	HA-5	HA-6
1	Date and time in oven	1/26/2026 - 1:52PM	1/26/2026 - 1:52PM
2	Date and time out of oven	1/27/2026 - 10:50AM	1/27/2026 - 10:50AM
3	Depth (ft)	4	2
4	Tare No.	5	6
5	Tare Mass	236	237
6	Tare plus sample moist	1122	1291
7	Tare plus sample dry	924	1090
8	Mass of water (g)	198	201
9	Mass of soil (g)	688	853
10	Water Content (%)	28.8	23.6



HA-1

Surface Elevation:
 Boring Date: 26 January 2026
 Boring Location: Clackamas County, OR
 Drilling Method: Hand Auger (3")

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Users\Owner\Desktop\GEO TECH REPORTS\3933 Parker Rd - WEST LINN\Parker Rd-WL Logs Log Date: 1/28/2026

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0						
1						
2	26.7					
3						
4						
5						
6						
7						

GWT not encountered

MH

Very moist, medium reddish brown, fine grained, soft, some rootlets and roots, high-plasticity SILT with clay

Boring completed at a depth of 2'

LOG OF BORING

RAPID SOIL SOLUTIONS

Taxlot: 21E25CC00300
 West Linn, Oregon

Plate 1

HA-2

Surface Elevation:
 Boring Date: 26 January 2026
 Boring Location: Clackamas County, OR
 Drilling Method: Hand Auger (3")

SuperLog CivilTech Software USA www.civiltech.com File: C:\Users\Owner\Desktop\GEO TECH REPORTS\3933 Parker Rd - WEST LINN\Parker Rd-WL Logs.log Date: 1/28/2026

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0						
1						
2						
3	LL=58.3, PI=21.9	27.5				
4						
5						
6						
7						

GWT not encountered

MH

Very moist, medium to dark reddish brown, fine grained, stiff, some rootlets, high-plasticity SILT with clay

Boring completed at a depth of 3'

LOG OF BORING

RAPID SOIL SOLUTIONS	Taxlot: 21E25CC00300 West Linn, Oregon	Plate 2
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HA-3

Surface Elevation:
 Boring Date: 26 January 2026
 Boring Location: Clackamas County, OR
 Drilling Method: Hand Auger (3")

SuperLog Civil/Tech Software, USA www.civiltech.com File: C:\Users\Owner\Desktop\GEO TECH REPORT\S1933 Parker Rd - WEST LINN\Parker Rd-WL Logs.log Date: 1/28/2026

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0						
1						
2						
3						
4	26.1					
5						
6						
7						

GW not encountered

MH

Very moist, medium to dark reddish brown, fine grained, stiff, some rootlets, high-plasticity SILT with clay

Very moist, medium to dark reddish brown, fine grained with angular gravel up to 0.5", stiff to very stiff, some rootlets, high-plasticity SILT with clay and angular gravel up to 0.5"

Boring completed at a depth of 4'

LOG OF BORING

RAPID SOIL SOLUTIONS

Taxlot: 21E25CC00300
 West Linn, Oregon

Plate 3

HA-4

Surface Elevation:
 Boring Date: 26 January 2026
 Boring Location: Clackamas County, OR
 Drilling Method: Hand Auger (3")

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Users\Owner\Desktop\GEO TECH REPORTS\1933 Parker Rd - WEST LINN\Parker Rd-WL Logs.log Date: 1/28/2026

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0						
1						
2	22.2					
3						
4						
5						
6						
7						

GWT not encountered



MH

Very moist, medium to dark reddish brown, fine grained, stiff, some rootlets, high-plasticity SILT with clay

Boring completed at a depth of 2'

LOG OF BORING

RAPID SOIL SOLUTIONS	Taxlot: 21E25CC00300 West Linn, Oregon	Plate 4
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HA-5

Surface Elevation:
 Boring Date: 26 January 2026
 Boring Location: Clackamas County, OR
 Drilling Method: Hand Auger (3")

SuperLog CivilTech Software, USA www.civiltech.com File: C:\Users\Owner\Desktop\GEO TECH REPORTS\3933 Parker Rd - WEST LINN\Parker Rd-MW Logs.log Date: 1/28/2026

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0						
1						
2						
3						
4	28.8					
5						
6						
7						

GWT not encountered

MH

Very moist, medium to dark reddish brown, fine grained, stiff, some rootlets, high-plasticity SILT with clay

Very moist, medium to dark reddish brown, fine grained with angular gravel up to 0.5", stiff to very stiff, some rootlets, high-plasticity SILT with clay and angular gravel up to 0.5"

Boring completed at a depth of 4'

LOG OF BORING

RAPID SOIL SOLUTIONS

Taxlot: 21E25CC00300
 West Linn, Oregon

Plate 5

HA-6

Surface Elevation:
 Boring Date: 26 January 2026
 Boring Location: Clackamas County, OR
 Drilling Method: Hand Auger (3")

SuperLog CivilTech Software USA www.civiltech.com File: C:\Users\Owner\Desktop\GEO TECH REPORTS\3933 Parker Rd - WEST LINN\Parker Rd-WL Logs.log Date: 1/28/2026

Depth	Remarks	Moisture (%)	Dry Density	Blow Counts	Sample Type	Water Table
0						
1						
2	23.6					
3						
4						
5						
6						
7						

GWT not encountered



MH

Very moist, medium to dark reddish brown, fine grained, stiff, some rootlets, high-plasticity SILT with clay

Boring completed at a depth of 2'

LOG OF BORING

RAPID SOIL SOLUTIONS	Taxlot: 21E25CC00300 West Linn, Oregon	Plate 6
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EXHIBIT F – TVFR SERVICE PROVIDER LETTER

**FIRE CODE / LAND USE / BUILDING REVIEW
APPLICATION**



North Operating Center
11945 SW 70th Avenue
Tigard, OR 97223
Phone: 503-649-8577

South Operating Center
8445 SW Elligsen Rd
Wilsonville, OR 97070
Phone: 503-649-8577

REV 6-30-20

Project Information

Applicant Name: Rob Matthews – Blue Palouse Properties
 Address: 333 S. State St, Suite V452 Lake Oswego, OR 97034
 Phone: 503-936-3212
 Email: robm@bluepalouse.com
 Site Address: None Assigned
 City: West Linn
 Map & Tax Lot #: 21E25CC0300
 Business Name: Blue Palouse Properties
 Land Use/Building Jurisdiction: West Linn
 Land Use/ Building Permit # PA 25-11

Choose from: Beaverton, Tigard, Newberg, Tualatin, North Plains, West Linn, Wilsonville, Sherwood, Rivergrove, Durham, King City, Washington County, Clackamas County, Multnomah County, Yamhill County

Project Description

Proposed 6-lot subdivision which will be served by an extension of Roxbury Drive. One fire hydrant is proposed. There is no practical place to construct a firetruck turnaround. Applicant will install sprinkler systems in each proposed home.

Permit/Review Type (check one):

- Land Use / Building Review - Service Provider Permit
- Emergency Radio Responder Coverage Install/Test
- LPG Tank (Greater than 2,000 gallons)
- Flammable or Combustible Liquid Tank Installation (Greater than 1,000 gallons)
 - * Exception: Underground Storage Tanks (UST) are deferred to DEQ for regulation.
- Explosives Blasting (Blasting plan is required)
- Exterior Toxic, Pyrophoric or Corrosive Gas Installation (in excess of 810 cu.ft.)
- Tents or Temporary Membrane Structures (in excess of 10,000 square feet)
- Temporary Haunted House or similar
- OLCC Cannabis Extraction License Review
- Ceremonial Fire or Bonfire (For gathering, ceremony or other assembly)

For Fire Marshal's Office Use Only

TVFR Permit # 2025-0220
 Permit Type: SPP-West Linn
 Submittal Date: 12/1/25
 Assigned To: DFM Arn
 Due Date: NA
 Fees Due: \$0.
 Fees Paid: \$0.

Approval/Inspection Conditions

(For Fire Marshal's Office Use Only)

This section is for application approval only

[Signature] 0430 12-2-25
 Fire Marshal or Designee Date

Conditions: See approved fire service plan.

See Attached Conditions: Yes No

Site Inspection Required: Yes No

This section used when site inspection is required

Inspection Comments:

Final TVFR Approval Signature & Emp ID _____ Date _____

FD Notes: Applicant to submit fire flow data prior to construction (OFC Appendix B).

Applicant is proposing to install residential fire sprinklers in lieu of a fire department turnaround. The installation of residential fire sprinklers also requires approval by the Building Official as per the Uniform Alternate Construction Standard (UACS) outlined by BCD.

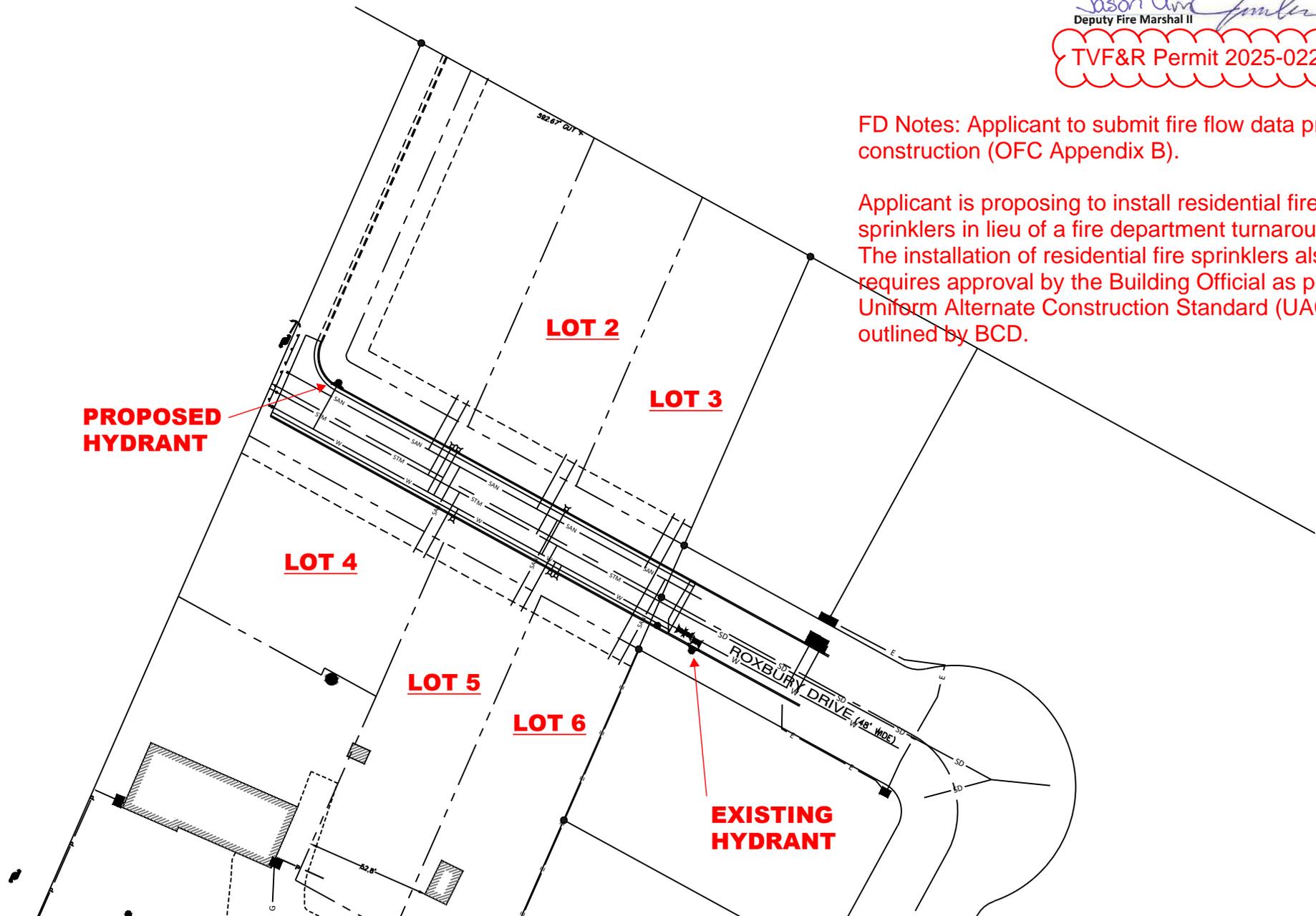


EXHIBIT G – NEIGHBORHOOD MEETING PACKET

December 12, 2025

Property Owner and/or Resident

RE: Pre-Application No. PA-25-11

Dear Property Owner,

Vando Development LLC is representing the owner of the property located at tax lot 21E25CC00300 (no address assigned). We are considering proposing a 6-lot Subdivision of this property. Prior to submitting a land use application to the City of West Linn for the necessary approval, we would like to discuss the proposal in more detail with the surrounding property owners. The neighborhood association for the area is inactive and did not respond to our request to meet. Per the requirements of CDC Chapter 99.038, you are invited to attend a meeting on:

Date: January 13, 2026
Time: 6:15 pm – 7:15 pm

**THE MEETING WILL BE HELD AT THE WEST LINN ADULT COMMUNITY CENTER
LOCATED AT 1180 ROSEMONT ROAD, WEST LINN.**

Please note, that this will be an informational meeting on preliminary development plans. These plans may be altered prior to submittal of the application to the City.

Please contact Jeff Vanderdasson with any questions.

Sincerely,
Jeff Vanderdasson
Vando Development, LLC
(503) 407-2228
vandodevelopment@gmail.com

SIGN IN SHEET

Case File No.: PA-25-11 & PA-25-25

Date: 1/13/26

Subject: Neighborhood Meeting - Parker Road Subdivisions



Name	Address	Phone	Email
Warren Guest	4027 Ridge Lane	503-656-2159	
Claudia Gurog			
Joe Hunter	2985 Winkler	503-367-6196	
Debbie Shell	Kapteen St.		debbieshell13@gmail.com
Dana Monaghan	2107 Deerhill		Justdan@outlook.com
Mussi & Dirk Knuth	2053 Roxbury Dr. W	503-913-0718	dirk.mussi@comcast.net
Matt Brown	2101 Deerhill		mgbrown979@yahoo.com
Steph Brown	"		
Sally Carter	3050 Roxbury	205-901-4089	alansally@gmail.com
Alan Carter	"	205-821-3589	alancarter1949@gmail.com
Josh / Paris Baker	3056 Roxbury	408-693-8954	nashedjosh@yahoo.com
Tracy Allen	3303 Ridge Ln	503-344-4109	tracymallen@hotmail.com
Tim Kilgore	3051 Roxbury Dr	503-550-7276	james.e.kilgore@gmail.com
BARRY & CAROL ANN	Rosge 3076 Roxbury Dr	503-702-6971	Brogge45@gmail.com
Darrel Ferchland	4543 Damon Drive	503-805-8837	dferchland@comcast.net
Kunara &	3008 Sabo Lane	818-515-7564	alake100@gmail.com
Bob & Nancy Sorenson	3042 Roxbury	503-320-2831	Bob_Sorenson@outlook.com
MARCY NASHMITH	2116 DEERHILL LN	425-444-6734	MARCYNASHMITH@gmail.com
CHRIS MORGAN	3800 Ridge Ln	503-807-5959	cmorganmd@gmail.com
Mitch Peterson	2420 SW Walnut Ln	503-709-3774	mitche@mitchpeterson.net
DEPEL PETERSEN	24350 SW Woodmont	503-332-0177	DEPEL@DEPELPETERSEN.COM
JOHN FALCONER	3046 RIDGELANE	925-262-3247	johnfalconer22@gmail.com
ERIC THORNBREW	3070 ROXBURY CT		THORNBREW@GMAIL
Scott Speer	2110 Deerhill Ln	503-961-2146	Scott.Speer@gmail.com
Matt Eckmann	3049 Roxbury Dr.	360-442-1600	meckmann@gmail.com
Ethan Hopkins	3067 Roxbury Pr	503-502-4669	ethan.h.hopkins@gmail.com
Yana Matriyenko	3055 Roxbury	925-565-2237	yomatriyenko@gmail.com
Bill Relyea	3016 Sabo Lane	503-636-1292	wrelyea@comcast.net
Sarah: RepRithu	2113 Deerhill Ln.	323-309-0089	SarahLivingstone@gmail.com
ROBIN BARNEY	3939 PARKER	503-991-1736	ROBRICMAB@COMCAST.NET

Neighborhood Meeting Summary

Date: Tuesday, January 13, 2026

Attendance: 31 neighbors signed in

Developers Present: Rob Mathews, Tracy Peterson, Derek Peterson

Additional Team Member: Jeff Vanderdassen (not present due to location; available for follow-up questions)

Recording: Full audio recording of the meeting is available

Purpose of Meeting

The meeting was intended to be an informational session to:

- Review the status of Parker 1, 2, and 3
- Explain development challenges and timelines
- Allow neighbors to ask questions and voice concerns

Project Overview

Parker 1

- Proposed **six-lot subdivision** adjacent to the Deerhill neighborhood
- Access will continue from **Deerhill to Ridge Lane** into the six new lots
- One **single-family residential (SFR) lot** will remain on Parker Road (Raymond Hill parcel), with **no access through this parcel**

Current Status:

- Pre-application completed
- Property line adjustment completed
- Lot annexed into the City of West Linn
- Next step: **Land Use / Subdivision Application**

This application will include conditions and questions to be addressed before moving to City Council. Parker 1 is the most advanced and is expected to be completed **approximately one year ahead of Parker 2 and 3**, with lots potentially coming out of the ground in **fall 2026**.

Parker 2

- Approximately **2 acres**
- Some steep areas but considered **developable**
- Currently in **feasibility stage**, along with Parker 3

Work underway includes:

- Cost analysis
- Site investigation
- Coordination with multiple agencies

Next steps for land use are estimated to take **3–4 months**. Parker 2 is considered easier to develop than Parker 3 due to slope conditions and is less adversely impacted.

Parker 3

- Located west of Parker 2
- Access proposed from below Parker Road

Key Challenges:

- Presence of a large wetland area (potentially **up to 2.6 acres**)
- Steep slopes running north-to-south and east-to-west

Due to site complexity, development may be limited to **larger lots**. The team is still determining the best approach, which could be:

- A traditional subdivision, or
- A **Planned Unit Development (PUD)**, which would allow more flexibility with setbacks, lot size, and configuration while maintaining R7 zoning standards

A PUD could also support preservation and enhancement of natural areas without compromising home quality.

Transportation & Access

- The City of West Linn has a **master transportation plan** that governs access and future connections
- Site access is planned from **Deerhill to Roxbury**, with additional access off **Parker 3**
- The goal is to avoid routing all traffic through Deerhill or Roxbury by adding an additional road connection from Parker 3
- Long-term plans include eventual connection to **Ridge Lane**

Wetlands & Environmental Review

- Wetlands will have a major impact on development design
- A **wetland biologist** will determine:
 - Classification
 - Buffer requirements
 - Whether streams are **perennial or intermittent**

Buffer Requirements:

- Perennial stream: 60' buffer on each side (potentially reducible through land use approval)
- Intermittent stream: 15' buffer on each side

Plans will evolve as more environmental data becomes available.

If a perennial stream is confirmed, this could trigger review by the **Army Corps of Engineers**, adding **12–18 months** to the process and potentially affecting Parker 3 development.

Utilities & Infrastructure

- Utilities will be handled through Public Works and are considered straightforward
- **Stormwater detention:**
 - Parker 1 will utilize the existing City-owned detention facility at the end of Deerfield
 - Enhancements will be made to ensure adequate capacity
- Fire hydrants and street lighting will be installed per City code
- Sidewalks, curbs, and streetlights are planned

Stormwater & Water Pressure

- Neighbors expressed concerns about stormwater runoff and past flooding issues during Deerfield development
- The development team will engage engineers and biologists to ensure stormwater systems are designed and installed correctly

Water pressure concerns were also raised, particularly by neighbors near Parker 3. This will be reviewed further with utilities.

Construction Impacts

- Construction parking will occur **on-site**
- A temporary “ankle-breaker” construction entrance will be installed to reduce mud and debris on public roads
- Temporary access roads are being explored as an option

Neighborhood Concerns Raised & Discussed

- Density and road coverage
- Narrow streets and limited parking on Deerhill
- Construction truck access
- Wetland Mitigation
- Minimum and maximum spacing distance between access roads (to be confirmed)
- Ability to consider alternative access roads

These concerns were discussed in the context of existing City plans, zoning, and infrastructure limitations.

HOA & Ongoing Communication

- HOA leadership will play a key role in ongoing communication
- A primary point of contact (likely one representative from Deerfield/HOA) will coordinate with the development team
- Discussion included potential **deed restrictions** in lieu of a formal HOA

Additional Notes

- A Planned Unit Development could include **enhancements to wetland areas**, such as walking paths, benches, and passive-use amenities
- Anticipated home values: **\$1.3M–\$1.5M**, approximately **3,200–3,400 SF**, with larger homes on larger lots

About the Development Team

BP Homes

- Boutique luxury home builder
- Strong architectural roots
- Each home is uniquely designed and not a production model



NEIGHBORHOOD MEETING

PROPOSAL: The property owner proposes a six lot subdivision at Tax Lot #21E25CC00300 (No address assigned)

MEETING: Tuesday, January 13, 2026 at 6:15 pm

LOCATION: The meeting will be held at the West Linn Adult Community Center located at 1180 Rosemont Road, West Linn

FOR MORE INFORMATION, CONTACT THE OWNER'S REPRESENTATIVE:

Jeff Vanderdasson

(503) 407-2228

vandodevelopment@gmail.com

Name of applicant Blue Palouse Properties

Pre-App. No. PA-25-11

Subject Property: Tax Lot[s] 300

Tax Map[s] 21E25CC

Address or General Location: Western terminus of Roxbury Drive

AFFIDAVIT OF POSTING NOTICE

I, Tracy Peterson, do swear or affirm that I am [represent] the party initiating interest in a proposed

Subdivision affecting the land located at

21E25CC00300, and that pursuant to LOC 50.07.003.1.f, did on the 19

day of December, 2025 personally post the notice indicating that the site may be proposed

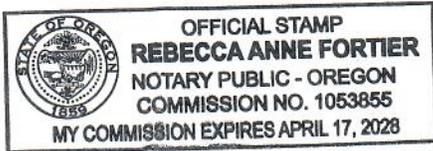
for a Subdivision Land Use application.

The sign was posted at Eastern property line at the westerly terminus of Roxbury Drive
[state location on property]

This ^{23rd}~~19~~ day of December, 2025

Signature [Handwritten Signature]

Subscribed and sworn to, or affirmed, before me this 23rd day of Dec, 2025.



[Handwritten Signature]
Notary Public for the State of Oregon
My Commission Expires 4/17/2028



NEIGHBORHOOD MEETING

PROPOSAL: The property owner proposes a six lot subdivision at Tax Lot #21E25CC00300 (No address assigned)

MEETING: Tuesday, January 13, 2026 at 6:15 pm

LOCATION: The meeting will be held at the West Linn Adult Community Center located at 1180 Rosemond Road, West Linn

FOR MORE INFORMATION, CONTACT THE OWNER'S REPRESENTATIVE:

Jeff Vandendasson
(503) 407-2228
vandodevelopment@gmail.com

NEIGHBORHOOD MEETING

PROPOSAL: The property owner proposes An approximately
20-lot Subdivision at 3637 & 3939 Parker Road
21E25CB00300 Tax Lots 3500 & 3600

MEETING: Tuesday, January 13, 2026 at 6:15 pm

LOCATION: The meeting will be held at the West Linn Adult Community
Center located at 1180 Rosemont Road, West Linn

**FOR MORE INFORMATION, CONTACT THE
OWNER'S REPRESENTATIVE:**

Jeff Vanderdasson
(503) 407-2228
vandodevelopment@gmail.com

NEIGHBORHOOD MEETING
The property owner proposes an approximately
100' x 100' area of 100' x 100' for a
neighborhood meeting. The meeting will be held on the
property. The meeting will be held on the property.
FOR MORE INFORMATION, CONTACT THE
OWNER'S REPRESENTATIVE:
1000 1000 1000
1000 1000 1000

AFFIDAVIT OF MAILING

STATE OF OREGON]
] SS
County of Clackamas]

I, Jeff Vanderdasson, being duly sworn, depose and say that on
December 19, 2025, I caused to have mailed to each of the persons on the attached
list a notice of a meeting to discuss a proposed development at 21E25CC00300, a
copy of which notice so mailed is attached hereto and made a part of hereof.

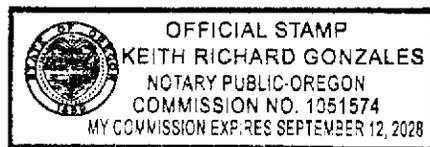
I further state that said notices were enclosed in envelopes plainly addressed to said persons and were deposited
on the date indicated above in the United States Post Office with postage prepaid thereon.

[Handwritten Signature]
Signature

Subscribed and sworn to, or affirmed, before me this 19th day of December, 2025.

[Handwritten Signature]
Notary Public for the State of Oregon
My Commission Expires 09/12/28

Pre-App. No.: PA-25-11



Morgan, Christopher J Trustee
3800 Ridge Ln
West Linn OR 97068

Royce & Tianna Sigloh
1400 Rosemont Rd
West Linn OR 97068

Jesse Allen
3303 Ridge Ln
West Linn OR 97068

Gary Randall
4201 W Bolton Rd,
Eagle ID, 83616

Kenneth & Amanda Mason
3940 Ridge Ln
West Linn OR 97068

Julie Anne Decker Trust
4000 Ridge Ln
West Linn OR 97068

Guest, Claudia B Trustee
4027 S Ridge Ln
West Linn OR 97068

Smith, Annalisa Taylor Trustee
4025 Ridge Ln
West Linn OR 97068

Timothy & Amy Murphy
4960 Ireland Ln
West Linn OR 97068

Matthew & Shona Huget
4722 Ireland Ln
West Linn OR 97068

Parson, Richard A Trustee
4880 S Ireland Ln
West Linn OR 97068

Paul And Melody Aanderud Trust
1430 Rosemont Rd
West Linn OR 97068

Krandel, Steven T Trustee
4001 Wild Rose Dr
West Linn OR 97068

Winther, Glenn Douglas Trustee
3676 Landis St
West Linn OR 97068

Tammy & Jeffrey Archuleta
4042 Ridge Ct
West Linn OR 97068

David Balsbough & Dana Allhands
4057 Ridge Ct
West Linn OR 97068

Karen & Travis Weis
4035 Ridge Ct
West Linn OR 97068

Strahm, Jason R Trustee
4003 Ridge Ct
West Linn OR 97068

Falconer, John S Trustee
3046 Ridge Ln
West Linn OR 97068

James Pell II
3052 Ridge Ln
West Linn OR 97068

Little, Patrick E Trustee
3054 Ridge Ln
West Linn OR 97068

Jeffrey & Michele Beyer
3058 Ridge Ln
West Linn OR 97068

Locke, Steven E Trustee
3062 Ridge Ln
West Linn OR 97068

Hung & Thusuong Tran
3066 S Ridge Ln
West Linn OR 97068

City Of West Linn
22500 Salamo Rd #600
West Linn OR 97068

City Of West Linn
22500 Salamo Rd #600
West Linn OR 97068

Rogge, Barry G Trustee
3076 Roxbury Dr
West Linn OR 97068

North Jessica M & Christa L
3074 Roxbury Ct
West Linn OR 97068

Andrew Thiel & Kira Romashko-Thiel
3072 Roxbury Ct
West Linn OR 97068

Kartika & Eric Thornbrew
345 N Wildrose
Mesa AZ 85207

Adamcyk Thomas F Co-Trustee
510 Spyglass Dr
Eugene OR 97401

Paul & Kris Franzen
3064 Roxbury Ct
West Linn OR 97068

Aditi Martin
3060 Roxbury Dr
West Linn OR 97068

Josh & Paris Nashed
3056 Roxbury Dr
West Linn OR 97068

James & Sarah Carter
3050 Roxbury Dr
West Linn OR 97068

Aitchison Thomas P Co-Trustee
3048 S Roxbury Dr
West Linn OR 97068

Eric & Brittany Sproch
3044 Roxbury Dr
West Linn OR 97068

Robert & Nancy Sorenson
3042 Roxbury Dr
West Linn OR 97068

Matthew & Shannon Eckmann
3049 Roxbury Dr
West Linn OR 97068

Kilgore, James A Trustee
3051 Roxbury Dr
West Linn OR 97068

Dirk & Kristin Muessig
3053 Roxbury Dr
West Linn OR 97068

Matviyenko Yana Trustee
3055 Roxbury Dr
West Linn OR 97068

Andrew Bavin
3059 Roxbury Dr
West Linn OR 97068

Monahan, Joseph Trustee
3063 Roxbury Dr
West Linn OR 97068

Ethan & Robin Hopkins
3067 Roxbury Dr
West Linn OR 97068

Brandon Barnes
3071 Roxbury Dr
West Linn OR 97068

Gregory Stein & Amanda Ellis
3075 Roxbury Dr
West Linn OR 97068

City Of West Linn
22500 Salamo Rd #600
West Linn OR 97068

Kelly Hannigan
21685 Willamette Dr
West Linn OR 97068

Katrina Myers
3228 Sabo Ln
West Linn OR 97068

Sabo, Damon Trustee
3232 Sabo Ln
West Linn OR 97068

Gregory Garcia & Julie Yu
2397 Taylor Dr
West Linn OR 97068

C Neithardt & E Latronico-Neithardt
117 Tierra Planoe
Rancho Santa Margarita CA 92688

Jared & Nicole Goff
3244 Sabo Ln
West Linn OR 97068

Kerrie Bonner
3248 Sabo Ln
West Linn OR 97068

Karen Compton & James Compton II
3250 Sabo Ln
West Linn OR 97068

City Of West Linn
22500 Salamo Rd #600
West Linn OR 97068

Chan King Yiu Trustee
4762 Coho Ln
West Linn OR 97068

Chattopadhyay Chaitali Co-Trustee
4748 Gardner Ln
West Linn OR 97068

Renata Harrod
4744 Gardner Ln
West Linn OR 97068

Peng, Nisse Trustee
4740 Gardner Ln
West Linn OR 97068

Ryan & Kerry Tinsley
4730 Gardner Ln
West Linn OR 97068

Kara & Marcus Cassar
4734 Gardner Ln
West Linn OR 97068

City Of West Linn
22500 Salamo Rd #600
West Linn OR 97068

Rosemont Pointe Homeowners Assn
PO Box 230099
Tigard, OR 97281

Matthew & Jenise Smith
3155 Winkel Way
West Linn OR 97068

Darrel & Elizabeth Ferchland
4543 Damon Dr
West Linn OR 97068

Diane Pohl
4539 Damon Dr
West Linn OR 97068

Richard & Carolyn Martinson
4501 Damon Dr
West Linn OR 97068

Danielle & C Peterson
4500 Damon Dr
West Linn OR 97068

Dawn Brunage
3263 Winkel Way
West Linn OR 97068

Cary & Alicia Harding
3264 Winkel Way
West Linn OR 97068

Benjamin & Carolyn Gilbert
3260 Winkel Way
West Linn OR 97068

Jacob & Leslie Osborne
1338 Evah Ln
West Linn OR 97068

Steven & Beth Maxwell
3238 Winkel Way
West Linn OR 97068

Richard & Mary Ransome
3226 Winkel Way
West Linn OR 97068

Leaptrott, Jeffrey Ryan Trustee
3202 Winkel Way
West Linn OR 97068

Crystal Zellick
3178 Winkel Way
West Linn OR 97068

Wen Zhao
3166 Winkel Way
West Linn OR 97068

Colletta Dominic George Trustee
3154 Winkel Way
West Linn OR 97068

Guy & Heather Tasaka
3128 Winkel Way
West Linn OR 97068

Tianting & J Zhuge
3120 Winkel Way
West Linn OR 97068

Debra Viegas
3116 Winkel Way
West Linn OR 97068

Stacy & Matthew Schoenecker
3110 Winkel Way
West Linn OR 97068

Wise, Pamela Anne Trustee
3102 Winkel Way
West Linn OR 97068

Ahlers, Charles Winston Trustee
3040 Winkel Way
West Linn OR 97068

Durdan Luanne Trustee
3036 Winkel Way
West Linn OR 97068

Noah & Zoe Rolland
3032 Winkel Way
West Linn OR 97068

Lindsay Borg
3024 Winkel Way
West Linn OR 97068

Rosenlof, Janis J Trustee
3020 Winkel Way
West Linn OR 97068

Davis, Joe D Trustee
3014 Winkel Way
West Linn OR 97068

Donald Pierce & Shanie Webb-
Pierce
3010 Winkel Way
West Linn OR 97068

Russel & Kimberley Williams
3015 Winkel Way
West Linn OR 97068

Summit Suites LLC
2851 Beacon Hill Dr
West Linn OR 97068

Waltuch Gary S Co-Trustee
3021 Winkel Way
West Linn OR 97068

Matthew & Lauren Hunter
3025 Winkel Way
West Linn OR 97068

William & Christina Schuh
3027 Winkel Way
West Linn OR 97068

Melissa Martin
3029 Winkel Way
West Linn OR 97068

Thomas & Amanda Martino
3037 Winkel Way
West Linn OR 97068

Milliron, James C Trustee
4515 Maxfield Dr
West Linn OR 97068

Virginia Lutze
3041 Winkel Way
West Linn OR 97068

Moore, Mary Ellen Trustee
4512 Maxfield Dr
West Linn OR 97068

Brendan & Kaylie Klein
4524 Maxfield Dr
West Linn OR 97068

Staci Tone
3103 Winkel Way
West Linn OR 97068

Fay, Richard R Trustee
3109 Winkel Way
West Linn OR 97068

Jori & Jana McCuskey
3125 Winkel Way
West Linn OR 97068

Diablo, Debra R Trustee
3133 Winkel Way
West Linn OR 97068

Maxfield Owners Assn
PO Box 3258
Portland OR 97208

City Of West Linn
22500 Salamo Rd #600
West Linn OR 97068

City Of West Linn
22500 Salamo Rd #600
West Linn OR 97068

Us Bank Na Trustee
PO Box 64142
St Paul MN 55164

Rebecca Trujillo
2997 Winkel Way
West Linn OR 97068

Rebecca & Nicholas Alexander
4701 Chinook Ct
West Linn OR 97068

Jeffrey Unruh
4709 Chinook Ct
West Linn OR 97068

Brian & Heather Goodrich
4725 Chinook Ct
West Linn OR 97068

Anthony & Rachel Strachan
4737 Chinook Ct
West Linn OR 97068

Anthony & Shanna Zoppo
4743 Chinook Ct
West Linn OR 97068

Victoria & Michael Kroeger
4751 Chinook Ct
West Linn OR 97068

City Of West Linn
22500 Salamo Rd #600
West Linn OR 97068

City Of West Linn
22500 Salamo Rd #600
West Linn OR 97068

Deborah & James Frierson
3499 Parkway Dr
Medford OR 97504

Scott & Julia Speer
2110 Deerhill Ln
West Linn OR 97068

Kyle Naismith
2116 Deerhill Ln
West Linn OR 97068

Burkey, James H Jr Trustee
2015 Roxbury Dr
West Linn OR 97068

Alexander & Helen Rainey
2011 Roxbury Dr
West Linn OR 97068

David & Nancy Baker
2007 Roxbury Dr
West Linn OR 97068

Nigel Blackhall & Reyna Kerr
2005 Roxbury Dr
West Linn OR 97068

Matthiessen Conrad W Trustee
2001 Roxbury Dr
West Linn OR 97068

Timothy Fianza
2119 Deerhill Ln
West Linn OR 97068

Rex Ritter & Sarah Livingstone
2113 Deerhill Ln
West Linn OR 97068

Dana Monaghan & Gaetano Tinat
2107 Deerhill Ln
West Linn OR 97068

Stephanie & Matthew Brown
2101 Deerhill Ln
West Linn OR 97068

City Of West Linn
22500 Salamo Rd #800
West Linn OR 97068

Vando Development
915 SW Rimrock Way Ste 201-230
Redmond, OR 97756

PORTLAND OR RPDC 972
20 DEC 2025 PM 5 L



*Rosemont Point Homeowners Assoc
PO Box 230099
TIGARD, OR*

NIXIE 971 FE 1 0012/27/25

RETURN TO SENDER
ATTEMPTED - NOT KNOWN
UNABLE TO FORWARD

ANK 972047-089393 0 BC: 97756257099 *2304-04335-20-37

Vando Development
915 SW Rimrock Way Ste 201-230
Redmond, OR 97756

PORTLAND OR RPDC 972
20 DEC 2025 PM 2 L



Kelly Hamilton
21685 Willamette Ct
West Linn OR 97068

NIXIE 971 FE 1 0012/25/25

RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD

UTF 970887-56234580 BC: 97756257099 *0449-08762-20-37

Vando Development
915 SW Rimrock Way Ste 201-230
Redmond, OR 97756

PORTLAND OR RPDC 972

20 DEC 2025 PM 5 L

C Neithardt & E Latronico-Neithardt
117 Tierra Planoe
Rancho Santa Margarita CA 92688

NIXIE 971 NFE 1 25I0012/22/25
RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNABLE TO FORWARD

92699-322917
INT

8C: 97756257099 *2304-00212-20-39



EXHIBIT H – TRAFFIC STUDY



21370 SW Langer Farms Pkwy
Suite 142, Sherwood, OR 97140



RENEWS: 12/31/2025

Technical Memorandum

To: Rob Matthews,
Blue Palouse Properties

From: Michael Ard, PE

Date: August 18, 2025

Re: Parker Road Annexation Traffic Impact Analysis Memo

This memorandum is written to provide information regarding the potential traffic impacts associated with a proposed annexation of tax lot 21E25CC00300 into the City of West Linn and an accompanying zone change from Clackamas County FU-10 zoning to City of West Linn R7 zoning.

Property Description

The subject property is located on the north side of Parker Road west of Deerhill Lane and has a gross area of approximately 1.39 acres. Although Parker Road abuts the south side of the subject property, it is anticipated that future site access will be via Deerhill Lane and an extension of Roxbury Drive, which currently stubs to the east side of the property.

To assess the potential transportation impacts of the proposed change in zoning, estimates of the trips that could be generated under the “reasonable worst case” development scenarios were prepared for both the current Clackamas County FU-10 zoning and the proposed City of West Linn R7 zoning. The resulting change in trips between the two scenarios represents the change in traffic which could result from the proposed zone change.

Background Clackamas County FU-10 Zoning Description

Currently, the property is outside the city limits of the City of West Linn and is zoned FU-10 (Future Urban 10-acre) by Clackamas County. Uses permitted in the FU-10 zone include farming- and forestry-related uses as well as government owned parks and places of worship. However, the most likely reasonable, permitted use of the property under the FU-10 zoning would be construction of a single-family home or duplex on the property.

Proposed City of West Linn R7 Zoning Description

Upon annexation into the City of West Linn, it is proposed that R7 residential zoning be applied to the subject property. This zoning allows development with single-family homes, duplex, triplex and quadplex units, cottage clusters, townhomes, and community recreation. Family day care facilities are also permitted; however, certified child-care centers require a conditional use permit in this zone.



The minimum lot sizes in the R7 zone are 7,000 square feet for single-family detached housing, 5,500 square feet per unit for single-family attached housing, and 1,500 square feet per townhouse unit.

Based on the size of the property plus the expectation that Roxbury Drive will be extended through the site and sufficient right-of-way for the eastern half of a new north/south roadway will need to be dedicated along the west side of the property consistent with the city’s Transportation System Plan, the net developable area of the site is expected to be approximately 43,700 square feet or less.

When preparing a transportation analysis for a zone change, Oregon’s Transportation Planning Rule requires that we analyze not just the proposed site use, but the highest intensity use which can reasonably be permitted within the zone. The City of West Linn allows development of townhomes with a minimum average lot size of 1,500 square feet. Accordingly, the 43,700 square feet of developable land area could accommodate a maximum of 29 townhome dwelling units on the subject property.

It should be noted that the actual development proposed on the subject property will consist of 6 lots, accommodating 6 single-family dwellings. To provide meaningful projections of future traffic and comply with the requirements of Oregon’s Transportation Planning Rule, analysis of both the worst-case development scenario (31-townhomes) and the actual proposed development scenario (6 single-family homes) is provided herein.

Trip Generation

To determine the potential increase in traffic attributable to the change from FU-10 to R7 zoning, a trip generation analysis was prepared using data from the Institute of Transportation Engineer’s Trip Generation Manual, 10th Edition. The data used was for land use code 215, *Single Family Attached Housing*, and is based on the number of dwelling units.

Based on the analysis, the proposed annexation and zone change could result in a maximum increase of 13 trips during the morning peak hour, 16 trips during the evening peak hour, and 194 daily trips. A summary of the trip generation calculations is provided in Table 1 below. Detailed trip generation worksheets are also provided in the attached technical appendix.

Table 1 - "Reasonable Worst Case" Trip Generation Calculation Summary

	Morning Peak Hour			Evening Peak Hour			Daily Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
29 Townhome Dwellings	4	10	14	10	7	17	104	104	208
- 2 Duplex Dwelling Units	0	-1	-1	-1	0	-1	-7	-7	-14
Net Increase in Site Trips	4	9	13	9	7	16	97	97	194

Based on the trip generation analysis for the “reasonable worst case” development scenario, even if the site is developed with the most intense use permitted in the R7 zone the site will generate just 194 daily site trips (an increase of 201 daily trips when compared to the allowed uses in the existing Clackamas County



FU-10 zoning.) The City of West Linn requires a full traffic impact analysis when a development would generate 250 or more daily trips. As such, the transportation impacts of even the worst-case development fall below the threshold at which a detailed operational analysis is required.

It should be further noted that the actual development proposed on the subject property consists of six single-family homes. This likely development scenario was also compared to the allowed uses under the existing FU-10 zoning to determine the actual expected transportation impact of the proposed annexation, zone change, and subsequent site development.

Again, the trip generation analysis was prepared using data from the Institute of Transportation Engineer's Trip Generation Manual, 10th Edition. The data used was for land use codes 210, *Single Family Detached Housing*, and 215, *Single Family Attached Housing*. For both land use categories the trip generation estimates are based on the number of dwelling units.

Based on the analysis, the actual proposed development within the site would result in an increase of 3 trips during the morning peak hour, 5 trips during the evening peak hour, and 42 daily trips. A summary of the trip generation calculations is provided in Table 2 below. Detailed trip generation worksheets are again provided in the attached technical appendix.

Table 2 - Proposed Development Trip Generation Calculation Summary

	Morning Peak Hour			Evening Peak Hour			Daily Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
6 Single-Family Homes	1	3	4	4	2	6	28	28	56
- 2 Duplex Dwelling Units	0	-1	-1	-1	0	-1	-7	-7	-14
Net Increase in Site Trips	1	2	3	3	2	5	21	21	42

Safety

To evaluate motor vehicle safety, crash data was obtained from the Oregon Department of Transportation's Crash Analysis and Reporting Unit for the intersection of Parker Road at Deerhill Lane as well as the full lengths of Deerhill Lane and Roxbury Drive. The data obtained was for the most recent five years available, from January 2019 through December 2023.

There were no reported crashes at the intersection of Parker Road and Deerhill Lane or along Deerhill Lane or Roxbury Drive during the five-year analysis period. Based on the analysis, the transportation system is currently operating safely in the site vicinity. No safety mitigations are necessary or recommended in conjunction with the proposed annexation and zone change.



Transportation Planning Rule Analysis

To approve the requested zone change on the subject property, the City of West Linn must find that the requirements of Oregon's Transportation Planning Rule (OAR 660-012-0060) are met. This rule provides guidance regarding whether and how the transportation impacts of a plan amendment must be mitigated. The relevant portions of the Transportation Planning Rule are quoted below, along with responses specific to the proposed zone change.

660-012-0060

Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

No changes are proposed to the functional classification of existing or planned transportation facilities as part of this project.

(b) Change standards implementing a functional classification system; or

No changes are proposed to the standards implementing the functional classification system as part of this project.

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Under the reasonable worst case development scenario, the proposed annexation and zone change from FU-10 to R7 zoning would result in a net increase of just 194 daily trips, and 16 or fewer trips during the



morning and evening peak hours. Such increases fall below the level at which the City of West Linn requires a full traffic study, since the net increase will have a de minimis impact on operation of area roadways and intersections. Additionally, since the R7 zoning is for residential development, the types of vehicles that will be added are consistent with those currently traveling on Roxbury Drive, Deerhill Lane, and the surrounding street network. Accordingly, the proposed annexation and zone change will not result in any of the effects listed.

Again, it should be noted that the actual anticipated development within the site will generate fewer trips than the worst-case development scenario. As such, the requirements of the Transportation Planning Rule are met for both development scenarios. The proposed zone change will not result in a significant effect on the transportation system, and no mitigation is necessary or recommended in conjunction with the proposed change from FU-10 to R7 zoning.

Conclusions

Based on the analysis, the proposed annexation and zone change would have no significant negative safety or operational impacts on the surrounding street network and would help facilitate future local street connections anticipated in the City's Transportation System Plan. No mitigations are recommended in conjunction with the proposed annexation and zone change, and the proposal complies with the requirements of Oregon's Transportation Planning Rule.

If you have any questions regarding this analysis, please feel free to contact me at (503)537-8511 or at mike.ard@gmail.com.

Appendix

Trip Generation Calculation Worksheet



Land Use Description: Single-Family Attached Housing
ITE Land Use Code: 215
Independent Variable: Dwelling Units
Quantity: 29 Dwelling Units
Setting: General Urban/Suburban and Rural

Summary of ITE Trip Generation Data

AM Peak Hour of Adjacent Street Traffic

Trip Rate: 0.48 trips per dwelling unit
Directional Distribution: 31% Entering 69% Exiting

PM Peak Hour of Adjacent Street Traffic

Trip Rate: 0.57 trips per dwelling unit
Directional Distribution: 57% Entering 43% Exiting

Total Weekday Traffic

Trip Rate: 7.2 trips per dwelling unit
Directional Distribution: 50% Entering 50% Exiting

Site Trip Generation Calculations

29 Dwelling Units

	Entering	Exiting	Total
AM Peak Hour	4	10	14
PM Peak Hour	10	7	17
Weekday	104	104	208

Trip Generation Calculation Worksheet



Land Use Description: Single-Family Attached Housing
ITE Land Use Code: 215
Independent Variable: Dwelling Units
Quantity: 2 Dwelling Units
Setting: General Urban/Suburban and Rural

Summary of ITE Trip Generation Data

AM Peak Hour of Adjacent Street Traffic

Trip Rate: 0.48 trips per dwelling unit
Directional Distribution: 31% Entering 69% Exiting

PM Peak Hour of Adjacent Street Traffic

Trip Rate: 0.57 trips per dwelling unit
Directional Distribution: 57% Entering 43% Exiting

Total Weekday Traffic

Trip Rate: 7.2 trips per dwelling unit
Directional Distribution: 50% Entering 50% Exiting

Site Trip Generation Calculations

2 Dwelling Units

	Entering	Exiting	Total
AM Peak Hour	0	1	1
PM Peak Hour	1	0	1
Weekday	7	7	14

Trip Generation Calculation Worksheet



Land Use Description: Single-Family Detached Housing
ITE Land Use Code: 210
Independent Variable: Dwelling Units
Quantity: 6 Dwelling Units
Setting: General Urban/Suburban and Rural

Summary of ITE Trip Generation Data

AM Peak Hour of Adjacent Street Traffic

Trip Rate: 0.70 trips per dwelling unit
Directional Distribution: 26% Entering 74% Exiting

PM Peak Hour of Adjacent Street Traffic

Trip Rate: 0.94 trips per dwelling unit
Directional Distribution: 63% Entering 37% Exiting

Total Weekday Traffic

Trip Rate: 9.43 trips per dwelling unit
Directional Distribution: 50% Entering 50% Exiting

Site Trip Generation Calculations

6 Dwelling Units

	Entering	Exiting	Total
AM Peak Hour	1	3	4
PM Peak Hour	4	2	6
Weekday	28	28	56

OREGON... DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPING DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CDS380
07/24/2025

URBAN NON-SYSTEM CRASH LISTING

PARKER RD and Intersectional Crashes at PARKER RD, City of West Linn, Clackamas County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2015 to 12/31/2024

1 - 6 of 14 Crash records shown.

SER#	P R J S W DATE	CLASS	CITY STREET	INT-TYPE	RD CHAR	INT-REL	OFFERD	WTHR	CRASH	SPLC USE	MOVE	A S	PRTC	INJ	G E LICNS	PED	CAUSE				
UNLOC?	D C S V L K LAT	LONG	FRS	(#LANES)	LOCTN	CONTL	DRVMY	LIGHT	SVRTY	VH TYPE	TO	E X RES	P# TYPE	SVRTY	E X RES	LOC	ERROR	ACT EVENT			
00534	Y N N N N 02/09/2017	17	DILLON LN	3-LEG	INTER	N	Y	UNK	FIX OBJ	01 NONE	9	STRGHT	01 DRVR	NONE	00	Unk UNK	000	000	062	30,32	
CITY	TH	0	PARKER RD	UNKNOWN	S		N	WET	FIX	N/A	W -E					Unk UNK	000	000	000	00	
N	8P	-122.38			06		N	DLIT	PDO	PSNGR CAR						Unk UNK	000	000	000	00	
N	45 21 54.77	-122.38														Unk UNK	000	000	000	00	
N	34.29															Unk UNK	000	000	000	00	
00858	Y N N N N 03/12/2019	17	PARKER RD	(NONE)	STRGHT	N	N	CLD	O-STRGHT	01 NONE	9	STRGHT	01 DRVR	NONE	00	Unk UNK	000	000	000	05	
CITY	TU	50	DILLON LN	(NONE)	W		N	DRY	SS-M	N/A	W -E					Unk UNK	000	000	000	00	
Y	2P	-122.38			05		N	DAY	PDO	PSNGR CAR						Unk UNK	000	000	000	00	
N	45 21 55	-122.38														Unk UNK	000	000	000	00	
N	34.92															Unk UNK	000	000	000	00	
01423	N N N N 05/14/2022	17	LANCASTER ST	3-LEG	INTER	N	Y	CLR	FIX OBJ	01 NONE	0	STRGHT	01 DRVR	NONE	34	M	OR-Y	000	028	121,091	17
CITY	SA	0	PARKER RD	UNKNOWN	NW		N	DRY	FIX	PRVTE	SE-NW					OR<25	088	121,091	000	000	
N	11A	-122.38			05		N	DAY	INJ	PSNGR CAR						OR<25	000	028	000	17	
N	45 21 38.84	-122.38														OR<25	000	028	000	17	
N	.25															OR<25	000	028	000	17	
02508	Y N N N N 07/25/2023	17	NOBLE LN	3-LEG	INTER	N	Y	CLR	FIX OBJ	01 NONE	9	TURN-R	01 DRVR	NONE	00	Unk UNK	000	000	059	01,22	
CITY	TU	0	PARKER RD	NONE	N		N	DRY	FIX	N/A	NE-N					Unk UNK	000	000	000	00	
N	8P	-122.38			06		N	DUSK	PDO	PSNGR CAR						Unk UNK	000	000	000	00	
N	45 21 53.68	-122.38														Unk UNK	000	000	000	00	
N	43.4															Unk UNK	000	000	000	00	
00865	N N N N N 03/23/2022	17	NOBLE LN	3-LEG	INTER	N	N	CLR	O-1 L-TURN	01 NONE	9	STRGHT	01 DRVR	NONE	00	Unk UNK	000	000	000	02	
NONE	WE	0	PARKER RD	STOP SIGN	CN		N	WET	TURN	N/A	NE-SW					Unk UNK	000	000	000	00	
N	6P	-122.38			02		N	DAY	PDO	PSNGR CAR						Unk UNK	000	000	000	00	
N	45 21 53.68	-122.38														Unk UNK	000	000	000	00	
N	43.4															Unk UNK	000	000	000	00	
00022	N N N N N 01/03/2018	17	PARKER RD	CROSS	INTER	N	N	CLD	PED	01 NONE	0	STRGHT	01 DRVR	NONE	13	M	I XWLK	054,028	034	19,02	
CITY	WE	0	SALAMO RD	STOP SIGN	SW		N	UNK	PED	PRVTE	NE-SW					Unk UNK	015	000	000	00	
N	7P	-122.38			05		N	DLIT	INJ	PSNGR CAR						OR-Y	000	000	000	00	
N	45 21 54.81	-122.38														OR<25	000	000	000	00	
N	53.4															OR<25	000	000	000	00	

Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

OREGON... DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CDS380
07/24/2025

URBAN NON-SYSTEM CRASH LISTING
PARKER RD and Intersectional Crashes at PARKER RD, City of West Linn, Clackamas County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2015 to 12/31/2024

CITY OF WEST LINN, CLACKAMAS COUNTY
7 - 11 of 14 Crash records shown.

SER#	P R J S W DATE	CLASS	CITY STREET	INT-TYPE	RD CHAR	INT-REL	OFFERD	WTHR	CRASH	SPLC USE	MOVE	FROM	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE
04903	N N N N N 11/19/2015	17	PARKER RD	CROSS	N	N	RAIN	ANGL-OTH	01 NONE	0	TURN-L	SE-SW	01	DRVR	NONE	27	M	OR-Y	OR<25	028	000	000	02	02
	CITY	TH	0	SALAMO RD	CN	02	0	DAY	PDO	PSNGR CAR	PRVTE	PSNGR CAR	02	DRVR	NONE	34	M	OR-Y	OR<25	000	000	000	00	00
	N	7A	45 21 54.81	-122 38																				
	N		53.4																					
02265	N N N N N 08/04/2021	16	PARKER RD	CROSS	N	N	CLR	BIKE	TURN	0	TURN-R	E -N	01	DRVR	NONE	58	M	OR-Y	OR<25	027,016	000	000	129	27,02
	CITY	WE	0	SALAMO RD	CN	02	0	DAY	INJ	PSNGR CAR	PRVTE	PSNGR CAR	02	DRVR	NONE	15	M	OR-Y	OR<25	000	000	000	00	00
	N	4P	45 21 54.81	-122 38																				
	N		53.4																					
05102	N N N N N 11/04/2016	17	PARKER RD	ALLEY	N	N	CLR	OVERTURN	01 NONE	0	STRGHT	W -E	01	DRVR	NONE	22	M	OR-Y	OR<25	080	000	000	00	26
	CITY	FR	330	SALAMO RD	SE	(NONE)	UNKOWN	DRY	NCOL	PRVTE	STRGHT	W -E	01	DRVR	NONE	36	M	OR-Y	OR<25	000	000	000	00	26
	N	7A	45 21 53.77	-122 38																				
	N		48.45																					
01382	N N N N N 04/17/2015	17	PARKER RD	CROSS	N	N	CLR	O-1 L-TURN	01 NONE	0	STRGHT	E -W	01	DRVR	NONE	36	M	OR-Y	OR<25	000	000	000	00	02,08
	CITY	FR	0	WILD ROSE DR	CN	02	0	DAY	INJ	PSNGR CAR	PRVTE	PSNGR CAR	02	DRVR	NONE	77	F	OR-Y	OR<25	028,004	000	000	00	00
	N	3P	45 21 53.01	-122 38																				
	N		29.4																					
04052	N N N N N 11/15/2019	17	PARKER RD	CROSS	N	N	UNK	ANGL-OTH	01 NONE	9	STRGHT	S -N	01	DRVR	NONE	00	Unk	UNK	UNK	000	000	000	00	00
	CITY	FR	0	WILD ROSE DR	CN	02	0	WET	ANGL	N/A	STRGHT	S -N	01	DRVR	NONE	00	Unk	UNK	UNK	000	000	000	00	00
	N	6P	45 21 53.01	-122 38																				
	N		29.4																					

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OREGON... DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

PARKER RD and Intersectional Crashes at PARKER RD, City of West Linn, Clackamas County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2015 to 12/31/2024

12 - 14 of 14 Crash records shown.

SER#	P R J S W DATE	CLASS	CITY STREET	INT-TYPE	RD CHAR	INT-REL	OFFERD	WTHR	CRASH	SPLC USE	MOVE	A S	PRTC	INJ	G E LICNS	PED	CAUSE						
UNLOC?	D C S V L K LAT	LONG	LRS	(#LANES)	LOCTN	CONTL	DRVMY	LIGHT	SVRTY	VH TYPE	TO	E X RES	P# TYPE	SVRTY	E X RES	LOC	ERROR	ACT EVENT					
00119	N N N N N 01/10/2020	17	PARKER RD	CROSS	INTER	N	N	RAIN	ANGL-OTH	01 NONE	0	0	01	DRVR	INJ	B	M	OR-Y	OR<25	000	000	00	
CITY	FR	0	WILD ROSE DR	CN	CN	STOP SIGN	N	WET	ANGL	PRVTE	E -W												
N	8A																						
N	45 21 53.01	-122 38 29.4		0	01		N	DAY	INJ	PSNGR CAR			01	DRVR	INJ	B	M	OR-Y	OR<25	000	000	00	
00090	N N N N N 01/09/2022	17	PARKER RD	CROSS	INTER	N	N	CLR	ANGL-OTH	01 NONE	0	0	01	DRVR	INJ	C	F	OR-Y	OR<25	000	000	00	
NO RPT	SU	0	WILD ROSE DR	CN	CN	STOP SIGN	N	DRY	ANGL	PRVTE	SE-NW												
N	12P																						
N	45 21 53.01	-122 38 29.4		0	01		N	DAY	INJ	PSNGR CAR			01	DRVR	INJ	C	F	OR-Y	OR<25	000	000	00	
02288	N N N N N 08/07/2021	18	PARKER RD	CROSS	INTER	N	N	CLR	FIX OBJ	01 NONE	9	9	01	DRVR	NONE			31	F	OTH-Y	028	000	02
CITY	SA	13	WILD ROSE DR	(RSDMD)	E	MEDIAN BAR	N	DRY	FIX	N/A	N -E												
N	7A																						
N	45 21 53.34	-122 38 29.18		(02)	05		N	DAY	PDO	PSNGR CAR			01	DRVR	NONE			00	UNK	UNK	000	000	00

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

ROXBURY DR and Intersectional Crashes at ROXBURY DR, City of West Linn, Clackamas County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2015 to 12/31/2024

CITY OF WEST LINN, CLACKAMAS COUNTY

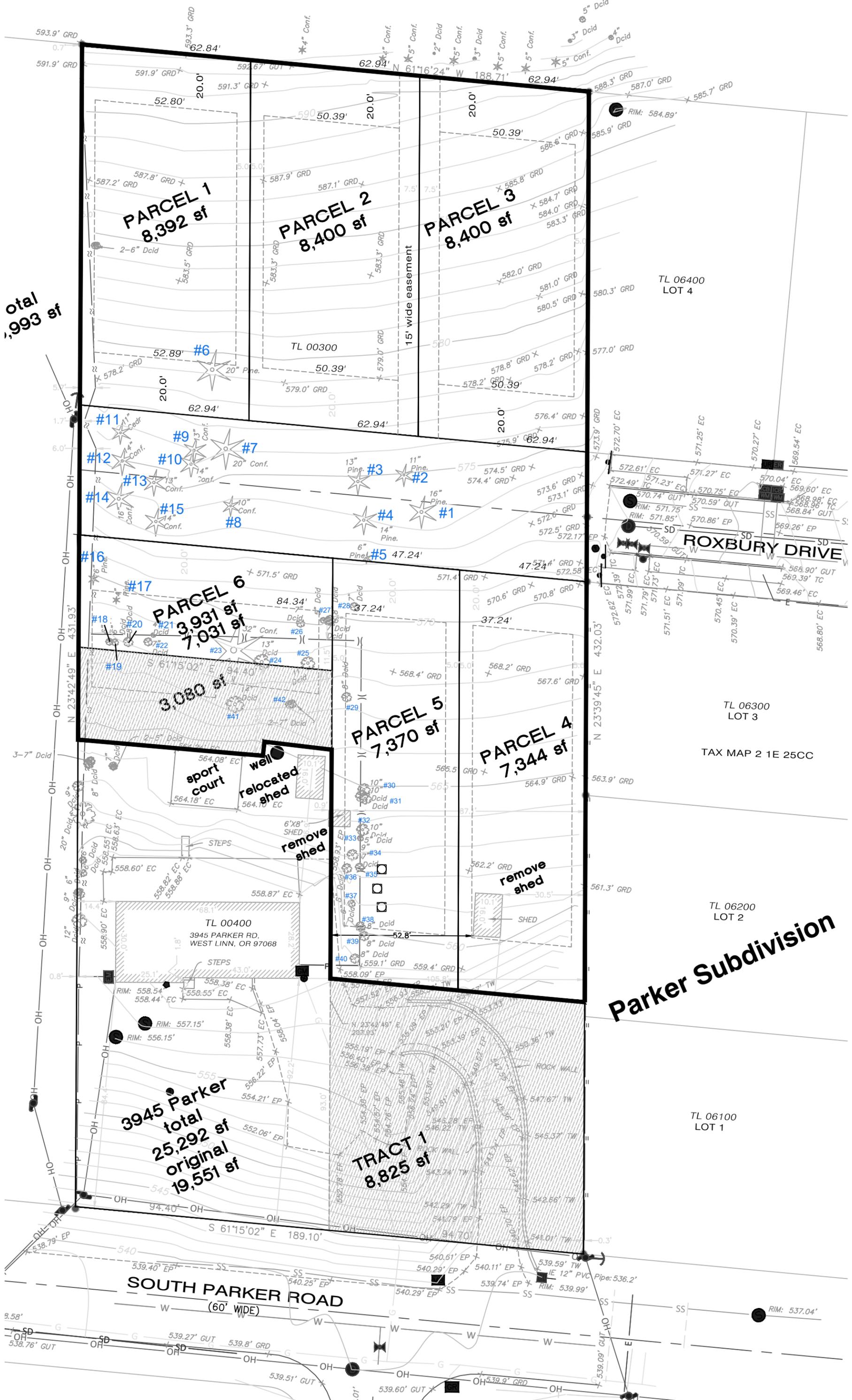
SER#	P	R	J	S	W	D	M	CLASS	CITY STREET	INT-TYPE	OFFERD	WTHR	CRASH	SPCL USE	MOVE	FROM	TO	P#	TYPE	SVRTY	E	X	RES	LOC	ERROR	ACT	EVENT	CAUSE
INVEST	E	A	U	I	C	O	D	DIST	FIRST STREET	(MEDIAN)	INT-REL	RNDBT	SURF	COLL	TRLR QTY	OWNER	VE TYPE	PRTC	INJ	G	E	LICNS	PED					
RD DPT	E	L	G	N	H	R	T	FROM	SECOND STREET	LEGS	TRAF-	DRVMY	LIGHT	SVRTY														
UNLOC?	D	C	S	V	L	K	L	LONG	LRS	(#LANES)	CONTL	LOCTN	RD CHAR	DIRECT	LOCTN													

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EXHIBIT I – TREE INVENTORY



Tree ID	Species	Scientific Name	DBH	Health Condition	Notes
1	Ponderosa pine	<i>Pinus ponderosa</i>	16"	Fair	
2	Ponderosa pine	<i>Pinus ponderosa</i>	11"	Fair	
3	Ponderosa pine	<i>Pinus ponderosa</i>	13"	Fair	
4	Ponderosa pine	<i>Pinus ponderosa</i>	14"	Fair	
5	Ponderosa pine	<i>Pinus ponderosa</i>	6"	Fair	
6	Ponderosa pine	<i>Pinus ponderosa</i>	20"	Fair	
7	Douglas-fir	<i>Pseudotsuga menziesii</i>	20"	Good	
8	Grand fir	<i>Abies grandis</i>	10"	Dead	Recommend Removal
9	Douglas-fir	<i>Pseudotsuga menziesii</i>	13"	Fair	
10	Douglas-fir	<i>Pseudotsuga menziesii</i>	14"	Fair	
11	Western red cedar	<i>Thuja plicata</i>	11"	Fair	
12	Douglas-fir	<i>Pseudotsuga menziesii</i>	14"	Fair	
13	Douglas-fir	<i>Pseudotsuga menziesii</i>	13"	Fair	
14	Douglas-fir	<i>Pseudotsuga menziesii</i>	16"	Fair	
15	Douglas-fir	<i>Pseudotsuga menziesii</i>	14"	Fair	
16	Ponderosa pine	<i>Pinus ponderosa</i>	6"	Fair	
17	Ponderosa pine	<i>Pinus ponderosa</i>	4"	Fair	
18	Sweet cherry	<i>Prunus avium</i>	6"	Fair	
19	Sweet cherry	<i>Prunus avium</i>	6"	Fair	
20	Sweet cherry	<i>Prunus avium</i>	8"	Fair	
21	Sweet cherry	<i>Prunus avium</i>	4"	Fair	
22	Sweet cherry	<i>Prunus avium</i>	7"	Fair	
23	Douglas-fir	<i>Pseudotsuga menziesii</i>	32"	Good	Codominant
24	Sweet cherry	<i>Prunus avium</i>	13"	Fair	
25	Sweet cherry	<i>Prunus avium</i>	11"	Fair	
26	Sweet cherry	<i>Prunus avium</i>	7"	Fair	
27	Sweet cherry	<i>Prunus avium</i>	13"	Fair	Codominant, marked as multiple trees
28	Sweet cherry	<i>Prunus avium</i>	7"	Fair	
29	Sweet cherry	<i>Prunus avium</i>	8"	Fair	
30	Sweet cherry	<i>Prunus avium</i>	10"	Fair	
31	Sweet cherry	<i>Prunus avium</i>	10"	Fair	
32	Sweet cherry	<i>Prunus avium</i>	10"	Fair	
33	Sweet cherry	<i>Prunus avium</i>	5"	Fair	
34	Sweet cherry	<i>Prunus avium</i>	9"	Fair	
35	Sweet cherry	<i>Prunus avium</i>	7"	Fair	
36	Sweet cherry	<i>Prunus avium</i>	8"	Fair	
37	Norway maple	<i>Acer platanoides</i>	6"	Fair	
38	Norway maple	<i>Acer platanoides</i>	8"	Fair	
39	Norway maple	<i>Acer platanoides</i>	8"	Fair	
40	Norway maple	<i>Acer platanoides</i>	8"	Fair	
41	Apple	<i>Malus spp.</i>	14"	Fair	
42	Apple	<i>Malus spp.</i>	10"	Fair	



PARCEL 1
8,392 sf

PARCEL 2
8,400 sf

PARCEL 3
8,400 sf

PARCEL 6
3,931 sf
7,031 sf

PARCEL 5
7,370 sf

PARCEL 4
7,344 sf

TRACT 1
8,825 sf

3945 Parker
total
25,292 sf
original
19,551 sf

total
19,993 sf

Parker Subdivision

ROXBURY DRIVE

SOUTH PARKER ROAD
(60' WIDE)

TL 06400
LOT 4

TL 06300
LOT 3

TAX MAP 2 1E 25CC

TL 06200
LOT 2

TL 06100
LOT 1

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