George Fox University
Partition

Date: December 2022 (Updated March 2023)

Submitted to:
City of Newberg
Community Development Department
414 E First Street
Newberg, OR 97132

Applicant:
George Fox University
Attn: Jeremiah Horton
414 N Meridian Street
Newberg, OR 97132

AKS Job Number: 8583

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Exhibits

George Fox University
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Submitted to:	City of Newberg Community Development Department 414 E First Street Newberg, OR 97132
Applicant/Property Owner:	George Fox University Attn: Jeremiah Horton 414 N Meridian Street Newberg, OR 97132
Applicant's Consultant:	AKS Engineering & Forestry, LLC 12965 SW Herman Road, Suite 100 Tualatin, OR 97062 Contact: Melissa Slotemaker, AICP Email: slotemakerm@aks-eng.com Phone: (503) 563-6151
Site Location:	1013 E Crestview Drive, Newberg, OR
Yamhill County Assessor's Map:	3 2 17; Tax Lot 1905
Site Size:	±20.27 Acres
Land Use District:	Institutional (I)

I. Executive Summary

George Fox University (Applicant) is submitting this application for a partition to divide a ±20.27-acre parcel into two parcels with areas of ±9.67 acres and ±10.60 acres. This application involves the division of the sports complex and the vacant portion of the subject site into separate parcels that will hereafter be referred to as Parcel 1 and Parcel 2, respectively. The property was included in a recent property line adjustment (ADJP22-0001) and is located at 1013 E Crestview Drive in Newberg, Oregon, near the intersection of E Crestview Drive and N Villa Road (Yamhill County Assessor's Map 3 2 17, Tax Lot 1905). The partition intends to separate the sports complex from the vacant portion of the property, which will be sold and improved with a different use.

The planned partition sets the stage for future development of Parcel 2, which will remain vacant following the partition. Public street improvements related to the development of Parcel 2, including street trees and sidewalks, are not included with this application but can be provided if necessary. Public utility connections (such as water and sanitation systems) are anticipated to be installed when Parcel 2 is developed and are therefore not included in this application. The inclusion of utility connections as part of this application would be detrimental to future development as it is unknown where connections should be best located to serve future development. Therefore, this application defers public utility connections until the time at which Parcel 2 is developed.

This application includes the City of Newberg application forms, written materials, and preliminary plans necessary for City staff to review and determine compliance with the applicable approval criteria. The evidence is substantial and supports the City's approval of the application.

II. Site Description/Setting

The ±20.27-acre site consists of one tax lot (Yamhill County Assessor's Map 3 2 17, Tax Lot 1905) and is located within the City of Newberg. The site is within the Institutional (I) zoning district and designated Public/Quasi- Public (PQ) by the Newberg Comprehensive Plan. The property is an irregular rectangular shape and is bordered by N Villa Road to the east, E Crestview Drive to the south, N Center Street to the west, and Joan Austin Elementary School and Northwest Christian Church Newberg Campus to the north. According to the City's Transportation System Plan (TSP), N Villa Road is classified as a Major Collector, E Crestview Drive as a Minor Collector, and N Center Street as a Local/Residential roadway. The site contains a sports complex on the western portion, including a tennis facility, soccer field, and parking lot, while the eastern portion of the site is vacant.

III. Applicable Review Criteria

NEWBERG MUNICIPAL CODE – TITLE 15 DEVELOPMENT CODE

DIVISION 15.200 LAND USE APPLICATIONS

Chapter 15.235 LAND DIVISIONS

15.235.020 General Requirements

A. Subdivision and Partition Approval through a Two-Step Process. Applications for subdivision or partition approval shall be processed by means of a preliminary plat evaluation and a final plat evaluation, according to the following two steps:

1. The preliminary plat must be approved before the final plat can be submitted for approval consideration; and

2. The final plat must demonstrate compliance with all conditions of approval of the preliminary plat.

Response: This application is for a partition. A preliminary plat is included in the application materials (Exhibit A). It is understood that the final plat must demonstrate compliance with all conditions associated with the preliminary plat. This criterion will be met.

B. Property line adjustments and lot consolidation requests (i.e., no new lot is created) are subject to Chapter 15.230 NMC; they are not subject to this section.

Response: This application does not include a property line adjustment or lot consolidation request. This criterion does not apply.

C. Compliance with ORS Chapter 92. All subdivision and partition proposals shall conform to state regulations in ORS Chapter 92, Subdivisions and Partitions.

Response: This criterion is understood. This narrative and the application materials demonstrate that the planned partition will conform to ORS Chapter 92.

D. Adequate Utilities. All lots created through land division shall have adequate public utilities and facilities such as streets, water, wastewater, gas, and electrical systems, pursuant to Chapters 15.430 and 15.505 NMC.

Response: The preliminary plans included with this application (Exhibit A) demonstrate that adequate utilities are or can be provided to the lots resulting from this partition application. This criterion is met.

E. Adequate Drainage. All subdivision and partition proposals shall have adequate surface water drainage facilities that reduce exposure to flood damage and improve water quality. Water quality or quantity control improvements may be required, pursuant to NMC 15.505.050.

Response: The preliminary plans included in this application (Exhibit A) demonstrate that adequate drainage is provided to the lots resulting from this application. This criterion is met.

F. Adequate Access. All lots created or reconfigured shall have adequate vehicle access and parking, as may be required, pursuant to Chapter 15.440 NMC and NMC 15.505.030.

Response: The preliminary plans (Exhibit A) demonstrate that the lots created and reconfigured by this application have or will have adequate vehicle access and parking. This criterion is met.

15.235.030 Preliminary Plat Approval Process

A. Review of Preliminary Plat. All preliminary plats are subject to the approval criteria in NMC 15.235.050. Preliminary plats shall be processed using the Type II procedure under Chapter 15.100 NMC, except that subdivisions with any of the following conditions present shall be processed using the Type III procedure under Chapter 15.100 NMC:

1. The land is not fully within the city limits or urban growth boundary;

2. The land contains Goal 5 resources which are mapped and designated in the comprehensive plan and land use regulations. These resources include but are not limited to open spaces, scenic and historic areas and natural resources;

3. The proposed land division does not comply with the minimum street connectivity standards identified in NMC 15.505.030;

4. The proposed land division does not provide enough lots or parcels to allow building residential units at 80 percent or more of the maximum net density permitted in the zoning designation for the site;

5. The applicant requests, in writing and at the time of application, that the proposal be referred to the planning commission for a decision; or

6. A written request for the application to be heard by the planning commission is submitted by a member of the public during the 14-day public comment period provided for in NMC 15.100.200 et seq.

Response: This project involves a partition creating two parcels. This application does not include a subdivision. Therefore, this application will be processed using a Type II procedure.

B. Preliminary Plat Approval Period. Preliminary plat approval shall be effective for a period of two years from the date of approval. The preliminary plat shall lapse if a final plat has not been submitted or other assurance provided, pursuant to NMC 15.235.070. Phased subdivisions may be approved, pursuant to subsection (E) of this section, with an overall time frame of not more than two years between preliminary plat and final plat approvals. In no case shall phased subdivision approval extend for more than five years from the approval date.

Response: The Applicant understands that the preliminary plat approval is effective for two years after the date of approval.

C. Extensions. The original approval body may, upon written request by the applicant and payment of the required fee, grant a one-time extension of the approval period for an additional one year. Extension approval will require written findings to the following criteria:

1. The applicant has submitted written intent to file a final plat within the one-year extension period;

2. An extension of time will not prevent the lawful development of abutting properties;

3. There have been no changes to the applicable code provisions on which the approval was based. If such changes have occurred, a new preliminary plat application shall be required; and

4. The extension request is made before expiration of the original approved plan.

Response: The Applicant understands that a one-time extension of the approval period for one additional year is available upon written request and payment of the required fee.

D. Modifications to Approved Preliminary Plats. The applicant may request changes to the approved preliminary plat or conditions of approval. Modification requests may either be deemed minor modifications or major modifications, according to the following criteria and at the determination of the director:

1. Minor Modifications. Minor modifications are reviewed through the Type I procedure, pursuant to NMC 15.100.020. Minor modifications retain consistency with the general layout and pattern of the approved plan and do not modify an element of the approved plan by

a quantifiable standard of greater than 10 percent. Minor modifications may include the following:

a. Relocations of property lines, streets, walkways, and alleys;

b. Changes to the site utilities;

c. Changes which increase or decrease the number of lots; and

d. Modifications to the conditions of approval where an alternate method will derive the same result intended by the condition, or where a condition is deemed to be met in a different way than specified in the staff report.

2. Major Modifications. Major modifications are reviewed through the same procedure as the original approval procedure. Major modifications are any proposed changes to elements of the approved plan or conditions of approval not meeting the thresholds in subsection (D)(1) of this section.

Response: The Applicant understands that changes may be requested to an approved preliminary plat or conditions of approval via a minor and/or major modification application process.

E. Phased Subdivision. The city may approve a phased subdivision, provided the applicant proposes a phasing schedule that meets all of the following criteria:

1. In no case shall the construction time period (i.e., for required public improvements, utilities, streets) for the first subdivision phase be more than one year;

2. Public facilities shall be constructed in conjunction with or prior to each phase;

3. The phased development shall not result in requiring the city or a third party (e.g., owners of lots) to construct public facilities that are required as part of the approved development proposal;

4. The proposed time schedule for phased development approval shall be reviewed concurrently with the preliminary subdivision plat application; and

5. Modifications to the phasing schedule or phasing elements will be processed in accordance with subsection (D) of this section.

Response: This project does not involve a subdivision. These criteria do not apply.

15.235.040 Preliminary Plat Submission Requirements

Applications for preliminary plat approval shall contain all of the following information:

A. General Submission Requirements.

1. Information required for a Type II application.

2. Traffic Analysis. A traffic analysis shall be submitted for any project that generates in excess of 40 trips per p.m. peak hour. A traffic analysis may be required for projects below the 40 trips per p.m. peak hour threshold when the development's location or traffic characteristics could affect traffic safety, access management, street capacity or a known traffic problem or deficiency. The traffic analysis shall be scoped in conjunction with the city and any other applicable roadway authority.

3. **Public Utilities Analysis. The public facilities analysis shall be scoped with the city, and shall address the impact of the proposed development on the public wastewater and water systems. The analysis shall identify any mitigation or improvements necessary to the public facilities to adequately serve the development per city standards under adopted ordinances and master plans.**

4. **Stormwater Analysis. The stormwater analysis shall address the criteria listed in Chapter 13.25 NMC.**

Response: This narrative and the included materials provide all required information for a Type II application. This application does not meet the criteria for a traffic analysis, and it is understood that a traffic analysis may be required for future improvements on Parcel 2. Public utility connections for Parcel 2 will be installed when needed for future improvements and are accessible via connections on N Villa Road, as shown in Exhibit A. The *GFU Austin Sports Complex Stormwater Report*, dated July 2017, for Parcel 1 (Exhibit F) demonstrates that stormwater runoff from Parcel 1 can be accommodated by Parcel 2 via utility easements, which are included in the preliminary plans (Exhibit A). The applicant understands that additional stormwater facilities will be required on Parcel 2 when future improvements occur on the site. These criteria are met.

5. **Wetland Delineation Approved by the Department of State Lands (DSL). An approved wetland delineation shall be submitted for any property listed in the National Wetlands Inventory (NWI) or that is located within the city's mapped stream corridor.**

Response: There are no delineated wetlands on the site. This criterion does not apply.

6. **Future Streets Concept Plan. The future streets concept shall show all existing subdivisions, streets, and unsubdivided land surrounding the subject property and show how proposed streets may be extended to connect with existing streets. At a minimum, the plan shall depict future street connections for land within 400 feet of the subject property.**

Response: There are no streets proposed in this application. This criterion does not apply.

B. **Preliminary Plat Information. In addition to the general information described in subsection (A) of this section, the preliminary plat application shall consist of drawings and supplementary written material (i.e., on forms and/or in a written narrative) adequate to provide all of the following information, in quantities required by the director:**

1. **General Information**

a. **Name of subdivision (partitions are named by year and file number). This name shall not duplicate the name of another land division in Yamhill County;**

b. **Date, north arrow, and scale of drawing;**

c. **Location of the development sufficient to define its location in the city, boundaries, and a legal description of the site;**

d. **Zoning of tract to be divided, including any overlay zones;**

e. **A title block including the names, addresses and telephone numbers of the owners of the subject property and, as**

applicable, the name of the engineer and surveyor, and the date of the survey; and

f. Identification of the drawing as a "preliminary plat."

Response: The preliminary plat included in the application materials (Exhibit A) demonstrates this information. These criteria are met.

2. Existing Conditions. Except where the director deems certain information is not relevant, applications for preliminary plat approval shall contain all of the following information on existing conditions of the site:

a. Streets. Location, name, and present width of all streets, alleys and rights-of-way on and abutting the site;

b. Easements. Width, location and purpose of all existing easements of record on and abutting the site;

c. Public Utilities. Location and identity of all public utilities on and abutting the site. If water mains, stormwater mains, and wastewater mains are not on or abutting the site, indicate the direction and distance to the nearest utility line and show how utilities will be brought to standard;

d. Private Utilities. Location and identity of all private utilities serving the site, and whether the utilities are above or underground;

e. Existing Structures. Show all structures on the project site and adjacent abutting properties;

f. Ground elevations shown by contour lines at a minimum two-foot vertical interval for slopes up to 10 percent and five feet for slopes over 10 percent. Show elevations for the subject property and within 100 feet of the subject property. Such ground elevations shall be related to some established benchmark or other datum approved by the county surveyor; the city engineer may waive this standard for partitions when grades, on average, are less than six percent;

g. The location and elevation of the closest benchmark(s) within or adjacent to the site (i.e., for surveying purposes);

h. Wetlands and stream corridors;

i. The base flood elevation, per FEMA Flood Insurance Rate Maps, as applicable;

j. North arrow and scale; and

k. Other information, as deemed necessary by the director for review of the application. The city may require studies or exhibits prepared by qualified professionals to address specific site features and code requirements.

Response: The preliminary plat included in the application materials (Exhibit A) demonstrates this information as applicable. These criteria are met.

3. Proposed Development. Except where the director deems certain information is not relevant, applications for preliminary plat approval shall contain all of the following information on the proposed development:

a. Proposed lots, streets, tracts, open space and park land (if any); location, names, right-of-way dimensions, approximate radius of street curves; and approximate finished street centerline grades. All tracts that are being held for private use and all reservations and restrictions relating to such private tracts shall be identified;

b. Easements. Location, width and purpose of all proposed easements;

c. Lots and private tracts (e.g., private open space, common area, or street) with approximate dimensions, area calculation (e.g., in square feet), and identification numbers. Through lots shall be avoided except where necessary to provide separation of residential development from major traffic routes, adjacent nonresidential activities, or to overcome specific issues with topography or orientation;

d. Proposed uses of the property, including total number and type of dwellings proposed, all existing structures to remain, areas proposed to be dedicated as public right-of-way or preserved as open space for the purpose of stormwater management, recreation, or other use;

e. Proposed grading;

f. Proposed public street improvements, pursuant to NMC 15.505.030, including street cross sections;

g. Information demonstrating that proposed lots can reasonably be accessed and developed without the need for a variance and in conformance with applicable setbacks and lot coverage requirements;

h. Preliminary design for extending city water and wastewater service to each lot, per NMC 15.505.040;

i. Proposed method of stormwater drainage and treatment, if required, pursuant to NMC 15.505.050;

j. The approximate location and identity of other utilities, including the locations of street lighting fixtures, as applicable;

k. Evidence of compliance with applicable overlay zones; and

l. Evidence of contact with the applicable road authority for proposed new street connections.

Response: The preliminary plat included in the application materials (Exhibit A) demonstrates this information as it pertains to this application. These criteria are met.

15.235.050 Preliminary Plat Approval Criteria

A. Approval Criteria. By means of a Type II procedure for a partition, or a Type II or III procedure for a subdivision per NMC 15.235.030(A), the applicable review body shall approve, approve with conditions, or deny an application for a preliminary plat. The decision shall be based on findings of compliance with all of the following approval criteria:

1. The land division application shall conform to the requirements of this chapter;

2. **All proposed lots, blocks, and proposed land uses shall conform to the applicable provisions of NMC Division 15.400, Development Standards;**

Response: This application is for a two-parcel partition and can be processed using a Type II procedure. This narrative addresses the requirements of this section as they pertain to the planned partition. Newberg Municipal Code (NMC) Division 15.400, Development Standards, are also addressed in this narrative. These criteria are met.

3. **Access to individual lots, and public improvements necessary to serve the development, including but not limited to water, wastewater, stormwater, and streets, shall conform to NMC Division 15.500, Public Improvement Standards;**

Response: The planned partition, as described in this narrative, complies with NMC Division 15.500, Public Improvement Standards. Any improvements to Parcel 2 that are not included in this application will be evaluated with future land use applications when development occurs on Parcel 2. This criterion is met as applicable.

4. **The proposed plat name is not already recorded for another subdivision, and satisfies the provisions of ORS Chapter 92;**

Response: This application involves a two-parcel partition, and a subdivision is not included in this application. This criterion does not apply.

5. **The proposed streets, utilities, and stormwater facilities are adequate to serve the proposed development at adopted level of service standards, conform to city of Newberg adopted master plans and applicable Newberg public works design and construction standards, and allow for transitions to existing and potential future development on adjacent lands. The preliminary plat shall identify all proposed public improvements and dedications;**

Response: This application involves a two-parcel partition. The existing streets adjacent to the site (N Center Street, N Villa Road, and E Crestview Drive) are fully developed and can adequately serve both parcels. The *GFU Austin Sports Complex Stormwater Report*, dated July 2017, for Parcel 1 (Exhibit F) demonstrates that stormwater runoff from Parcel 1 can be accommodated by Parcel 2 via utility easements, which are included in the preliminary plans (Exhibit A). The applicant understands that additional stormwater facilities will be required on Parcel 2 when future improvements occur on the site. Parcel 1 contains an existing sports complex and is adequately served by existing utilities. Existing utility facilities along N Villa Road can adequately serve Parcel 2 when structural improvements occur on that parcel. The preliminary plans (Exhibit A) show existing streets, utilities, and stormwater facilities, as well as how existing facilities can adequately serve Parcel 2 in the future. This criterion is or can be met.

6. **All proposed private common areas and improvements, if any, are identified on the preliminary plat and maintenance of such areas is assured through the appropriate legal instrument;**

Response: There are no private common areas or improvements included in this application. This criterion does not apply.

7. Evidence that any required state and federal permits, as applicable, have been obtained or can reasonably be obtained prior to development; and

Response: The Applicant understands that any state or federal permits required for this application must be obtained or demonstrated to be reasonably obtainable as part of this application.

8. Evidence that improvements or conditions required by the city, road authority, Yamhill County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met.

Response: The Applicant understands that any permits required for this application must be obtained or demonstrated to be reasonably obtainable as part of this application.

B. Conditions of Approval. The city may attach such conditions as are necessary to carry out provisions of this code, and other applicable ordinances and regulations.

Response: The Applicant understands that conditions of approval may be included in the City's decision on this application.

15.235.060 Land Division Related Code Adjustments and Variances

Code adjustments and variances shall be processed in accordance with Chapters 15.210 and 15.215 NMC. Applications for code adjustments and variances related to the proposed land division shall be submitted at the same time an application for land division is submitted; the applications shall be reviewed concurrently.

Response: This project does not involve a code adjustment or variance. This criterion does not apply.

15.235.070 Final Plat Submission Requirements and Approval Criteria

Final plats require review and approval by the director prior to recording with Yamhill County. The final plat submission requirements, approval criteria, and procedure are as follows:

A. Submission Requirements. The applicant shall submit the final plat within two years, or as otherwise provided for in NMC 15.235.030. The format of the plat shall conform to ORS Chapter 92. The final plat application shall include the following items:

1. One original and one identical copy of the final plat for signature. The plat copies shall be printed on mylar, and must meet the requirements of the county recorder and county surveyor. The plat must contain a signature block for approval by the city recorder and community development director, in addition to other required signature blocks for county approval. Preliminary paper copies of the plat are acceptable for review at the time of final plat application.

2. Written response to any conditions of approval assigned to the land division.

3. A title report for the property, current within six months of the final plat application date.

4. Copies of any required dedications, easements, or other documents.

5. Copies of all homeowner's agreements, codes, covenants, and restrictions, or other bylaws, as applicable. This shall include documentation of the formation of a homeowner's association, including but not limited to a draft homeowner's association

agreement regarding the maintenance of planter strips adjacent to the rear yard of proposed through lots.

6. Copies of any required maintenance agreements for common property.

7. A bond, as approved by the city engineer, for public infrastructure improvements, if the improvements are not substantially complete prior to the final plat.

8. Any other item required by the city to meet the conditions of approval assigned to the land division.

Response: The Applicant understands that the final plat is required to include these criteria as well as any additional items required as part of the conditions of approval of this application.

B. Approval Process and Criteria. By means of a Type I procedure, the director shall review and approve, or deny, the final plat application based on findings of compliance or noncompliance with the preliminary plat conditions of approval.

Response: The Applicant understands that a Type I application procedure is required for the final plat submittal.

15.235.080 Filing and Recording

A new lot is not a legal lot for purposes of ownership (title), sale, lease, or development/land use until a final plat is recorded for the subdivision or partition containing the lot. The final plat filing and recording requirements are as follows:

A. Filing Plat with County. Within 60 days of the city approval of the final plat, the applicant shall submit the final plat to Yamhill County for signatures of county officials as required by ORS Chapter 92.

B. Proof of Recording. Upon final recording with the county, the applicant shall submit to the city a paper copy of all sheets of the recorded final plat. This shall occur prior to the issuance of building permits for the newly created lots.

C. Prerequisites to Recording the Plat.

1. No plat shall be recorded unless all ad valorem taxes and all special assessments, fees, or other charges required by law to be placed on the tax roll have been paid in the manner provided by ORS Chapter 92;

2. No plat shall be recorded until the county surveyor approves it in the manner provided by ORS Chapter 92.

Response: The Applicant understands that a new lot is not a legal lot until a final plat is recorded for the partition containing the lot, and that the above information constitutes the filing and recording requirements for the final plat.

DIVISION 15.400 DEVELOPMENT STANDARDS

Chapter 15.405 LOT REQUIREMENTS

15.405.010 Minimum and Maximum Lot Area

A. In the following districts, each lot or development site shall have an area as shown below except as otherwise permitted by this code:

[…]

4. Institutional districts shall have a minimum size of five contiguous acres in order to create a large enough campus to support institutional uses; however, additions to the district may be made in increments of any size.

Response: The Preliminary Plat in Exhibit A and executive summary above demonstrate that both parcels created by the planned partition are greater than five contiguous acres in size. This criterion is met.

15.405.030 Lot Dimensions and Frontage

A. Width. Widths of lots shall conform to the standards of this code.

B. Depth to Width Ratio. Each lot and parcel shall have an average depth between the front and rear lines of not more than two and one-half times the average width between the side lines. Depths of lots shall conform to the standards of this code. Development of lots under 15,000 square feet are exempt from the lot depth to width ratio requirement.

Response: The Preliminary Plat in Exhibit A demonstrates that the planned partition meets the minimum lot size and width standards of this section. These criteria are met.

C. Area. Lot sizes shall conform to standards set forth in this code. Lot area calculations shall not include area contained in public or private streets as defined by this code.

Response: The Preliminary Plat in Exhibit A demonstrates that the planned partition meets the lot size standards of the I zoning district. This criterion is met.

D. Frontage.

1. No lot or development site shall have less than the following lot frontage standards:

a. Each lot or development site shall have either frontage on a public street for a distance of at least 25 feet or have access to a public street through an easement that is at least 25 feet wide. No new private streets, as defined in NMC 15.05.030, shall be created to provide frontage or access except as allowed by NMC 15.240.020(L)(2).

Response: The Preliminary Plat in Exhibit A demonstrates that both lots created by the planned partition will have public street frontage of at least 25 feet. This criterion is met.

2. The above standards apply with the following exceptions:

a. Lots for townhouse dwellings in any zone where they are permitted shall have a minimum frontage on a public street for a distance of at least 20 feet, shall have a minimum width of 20 feet at the front building line and shall have access meeting the provisions of NMC 15.415.050(B).

b. Legally created lots of record in existence prior to the effective date of the ordinance codified in this code.

c. Lots or development sites which, as a process of their creation, were approved with sub-standard widths in accordance with provisions of this code.

d. Existing private streets may not be used for new dwelling units, except private streets that were created prior to March 1, 1999, including paving to fire access roads standards and

installation of necessary utilities, and private streets allowed in the airport residential and airport industrial districts. However, existing single-family detached dwellings on existing private streets may be converted to duplex, triplex, or quadplex dwellings.

Response: This application is for a partition and does not require an exception to the lot frontage standards of this section. This application also does not involve any of the exceptions above. These criteria do not apply.

15.405.040 Lot Coverage and Parking Coverage Requirements

[…]

C. All other districts and uses not listed in subsection (B) of this section shall not be limited as to lot coverage and parking coverage except as otherwise required by this code.

Response: The subject property is within the I zoning district, which is not listed in subsection (B) of this section. Therefore, the lot coverage and parking coverage requirements of this section do not apply.

Chapter 15.410 YARD SETBACK REQUIREMENTS

15.410.020 Front Yard Setback

[…]

D. Institutional and Community Facility. All lots or development sites in the I and CF district shall have a front yard of 25 feet. Outdoor activity facilities, such as pools, basketball courts, tennis courts, or baseball diamonds, including any accessory structures and uses, are not permitted within the required setback.

Response: Parcel 1 is currently occupied by a sports complex. As demonstrated by the preliminary plans (Exhibit A), following the planned partition, the front yard for this complex will remain greater than 25 feet. No structural development is proposed on Parcel 2 as part of this application. The Applicant understands that future improvements on Parcel 2 will be required to meet this standard. Therefore, this criterion is met.

15.410.030 Interior Yard Setback

[…]

D. Institutional and Community Facility. All lots or development sites in the I and CF district shall have interior yards of not less than 10 feet, except outdoor activity facilities, such as pools, basketball courts, tennis courts, or baseball diamonds, including any accessory structures and uses, shall have an interior yard setback of 25 feet when abutting a residential district.

Response: Parcel 1 is currently occupied by a sports complex. As demonstrated by the preliminary plans, following the planned partition, the interior yards for this complex will remain greater than 10 feet. Outdoor activity facilities included in this complex will maintain an interior yard setback greater than 25 feet where abutting a residential district. No structural development is proposed on Parcel 2 as part of this application. The Applicant understands that future improvements on Parcel 2 will be required to meet this standard. Therefore, this criterion is met.

15.410.040 Setback and Yard Restrictions as to Schools, Churches, Public Buildings

A. Building Setback. No buildings shall be erected, used or maintained for a school, church or public or semi-public building or use, institution or similar use under the regulations of this code unless such building is removed at least 25 feet from every boundary line of any property included in any residential district.

Response: As demonstrated by the narrative above, existing structures on Parcel 1 meet and will continue to meet the setback requirements in the Institutional (I) zoning district. No additional structural development is included in this application. No additional structural improvements are included in this application. This criterion is met.

15.410.060 Vision Clearance Setback.

The following vision clearance standards shall apply in all zones (see Appendix A, Figure 9).

A. At the intersection of two streets, including private streets, a triangle formed by the intersection of the curb lines, each leg of the vision clearance triangle shall be a minimum of 50 feet in length.

B. At the intersection of a private drive and a street, a triangle formed by the intersection of the curb lines, each leg of the vision clearance triangle shall be a minimum of 25 feet in length.

C. Vision clearance triangles shall be kept free of all visual obstructions from two and one-half feet to nine feet above the curb line. Where curbs are absent, the edge of the asphalt or future curb location shall be used as a guide, whichever provides the greatest amount of vision clearance.

D. There is no vision clearance requirement within the commercial zoning district(s) located within the riverfront (RF) overlay subdistrict.

Response: The existing private drives serving Parcel 1 meet the vision clearance standards of this section. This application does not include any structural improvements on Parcel 2. The Applicant understands that future improvements on Parcel 2 will be subject to the requirements of this section. This criterion is met.

15.410.070 Yard Exceptions and Permitted Intrusions into Required Yard Setbacks.

The following intrusions may project into required yards to the extent and under the conditions and limitations indicated:

[…]

E. Parking and Service Drives (Also Refer to NMC 15.440.010 through 15.440.080)

4. In the I district, public or private parking areas or parking spaces may be no closer to a front property line than 20 feet, and no closer to an interior property line than five feet.

Response: The existing parking areas and spaces serving the sports complex on Parcel 1 are greater than 20 feet from front property lines and five feet from interior property lines. This application does not include any structural improvements on Parcel 2. The Applicant understands that future improvements on Parcel 2 will be subject to the requirements of this section. This criterion is met.

Chapter 15.420 LANDSCAPING AND OUTDOOR AREAS

15.420.010 Required Minimum Standards

[…]

B. Required Landscaped Area. The following landscape requirements are established for all developments except single-family detached dwellings, duplex dwellings, triplex dwellings, quadplex dwellings, townhouse dwellings and cottage cluster projects:

Response: This application involves a two-parcel partition. No structural development is proposed as part of this application. The Applicant understands that the landscaping requirements of this section will be required for all future developments excluding the listed exceptions.

Chapter 15.430 UNDERGROUND UTILITY INSTALLATION

15.430.010 Underground Utility Installation

A. All new utility lines, including but not limited to electric, communication, natural gas, and cable television transmission lines, shall be placed underground. This does not include surface-mounted transformers, connections boxes, meter cabinets, service cabinets, temporary facilities during construction, and high-capacity electric lines operating at 50,000 volts or above.

B. Existing utility lines shall be placed underground when they are relocated, or when an addition or remodel requiring a Type II design review is proposed, or when a developed area is annexed to the city.

C. The director may make exceptions to the requirement to underground utilities based on one or more of the following criteria:

1. The cost of undergrounding the utility is extraordinarily expensive.

2. There are physical factors that make undergrounding extraordinarily difficult.

3. Existing utility facilities in the area are primarily overhead and are unlikely to be changed.

Response: The Applicant understands that underground utility installation requirements will be enforced when utility installation is needed for the future improvements on Parcel 2. Existing utility connections along N Villa Road can serve Parcel 2 when said installation is required. This criterion can be met when future development occurs.

DIVISION 15.500 PUBLIC IMPROVEMENT STANDARDS

Chapter 15.505 PUBLIC IMPROVEMENT STANDARDS

15.505.020 Applicability

The provision and utilization of public facilities and services within the City of Newberg shall apply to all land developments in accordance with this chapter. No development shall be approved unless the following improvements are provided for prior to occupancy or operation, unless future provision is assured in accordance with NMC 15.505.030(E).

A. Public Works Design and Construction Standards. The design and construction of all improvements within existing and proposed rights-of-way and easements, all improvements to be maintained by the city, and all improvements for which city approval is required shall comply with the requirements of the most recently adopted Newberg public works design and construction standards.

Response: The Applicant understands that all improvements within City jurisdiction must comply with the requirements of the most recently adopted Newberg *Public Works Design and Construction Standards*.

> **B. Street Improvements. All projects subject to a Type II design review, partition, or subdivision approval must construct street improvements necessary to serve the development.**

Response: This application involves a two-parcel partition. Street frontages abutting the site along N Center Street and E Crestview Drive are already improved to the degree necessary to serve the two parcels. N Villa Road has an existing curb but is not fully developed and abuts Parcel 2. Street improvements are not included with this application but can be provided if required by the City. This criterion is and can be met.

> **C. Water. All developments, lots, and parcels within the City of Newberg shall be served by the municipal water system as specified in Chapter 13.15 NMC.**
>
> **D. Wastewater. All developments, lots, and parcels within the City of Newberg shall be served by the municipal wastewater system as specified in Chapter 13.10 NMC.**

Response: This application involves a two-parcel partition. Parcel 1 of this application is currently served by adequate water and wastewater systems. Parcel 2 is currently vacant, and no structural improvements are planned on Parcel 2 at this time. Improving water and wastewater systems as a part of this application to serve Parcel 2 would be detrimental to future development, as improvements may be improperly located or sized. Therefore, water and wastewater system improvements are not included in this application.

> **E. Stormwater. All developments, lots, and parcels within the City of Newberg shall manage stormwater runoff as specified in Chapters 13.20 and 13.25 NMC.**

Response: This application involves a two-parcel partition. Parcel 1 contains an existing sports complex with a stormwater facility. Parcel 2 will be vacant following the proposed partition until it is improved later. The *GFU Austin Sports Complex Stormwater Report*, dated July 2017 (Exhibit F), demonstrates that the existing stormwater facility on Parcel 2 adequately serves Parcel 1. Stormwater runoff for Parcel 2 will be reevaluated with any future improvements to Parcel 2. This criterion is met.

> **F. Utility Easements. Utility easements shall be provided as necessary and required by the review body to provide needed facilities for present or future development of the area.**

Response: This application includes the dedication of utility easements to serve both parcels in the partition. The Preliminary Plat in Exhibit A shows the planned utility easements that will provide stormwater and other facilities for existing development on Parcel 1. Any easements required for Parcel 2 will be addressed with future improvements. This criterion can be met by the recording of these easements.

> **G. City Approval of Public Improvements Required. No building permit may be issued until all required public facility improvements are in place and approved by the director, or are otherwise bonded for in a manner approved by the review authority, in conformance with the provisions of this code and the Newberg Public Works Design and Construction Standards.**

Response: This application involves a two-parcel partition. No structural development is proposed as part of this application. It is understood that all required public facility improvements must be in place or bonded for prior to issuance of building permits for both parcels.

15.505.030 Street Standards

[…]

E. Improvements to Existing Streets.

1. All projects subject to partition, subdivision, or Type II design review approval shall dedicate right-of-way sufficient to improve the street to the width specified in subsection (G) of this section.

Response: The subject site borders three streets: N Villa Road to the east, E Crestview Drive to the south, and N Center Street to the west. These streets are classified as a Major Collector, a Minor Collector, and a Local/Residential Street, respectively. The currently dedicated right-of-way for these streets meets the standards of subsection (G) and is sufficient to improve the streets in areas that have not already been improved. This criterion is met.

2. All projects subject to partition, subdivision, or Type II design review approval must construct a minimum of a three-quarter street improvement to all existing streets adjacent to, within, or necessary to serve the development. The director may waive or modify this requirement where the applicant demonstrates that the condition of existing streets to serve the development meets city standards and is in satisfactory condition to handle the projected traffic loads from the development. Where a development has frontage on both sides of an existing street, full street improvements are required.

3. In lieu of the street improvement requirements outlined in NMC 15.505.040(B), the review authority may elect to accept from the applicant monies to be placed in a fund dedicated to the future reconstruction of the subject street(s). The amount of money deposited with the city shall be 100 percent of the estimated cost of the required street improvements (including any associated utility improvements), and 10 percent of the estimated cost for inflation. Cost estimates used for this purpose shall be based on preliminary design of the constructed street provided by the applicant's engineer and shall be approved by the director.

Response: As part of this application, the City of Newberg requires sidewalk improvements along N Villa Road adjacent to the eastern border of Parcel 2. Improvements to Parcel 2 are not planned as part of this application due to the potential detriment to future development but can be included as conditioned by the City.

F. Improvements Relating to Impacts. Improvements required as a condition of development approval shall be roughly proportional to the impact of the development on public facilities and services. The review body must make findings in the development approval that indicate how the required improvements are roughly proportional to the impact. Development may not occur until required transportation facilities are in place or guaranteed, in conformance with the provisions of this code. If required transportation facilities cannot be put in place or be guaranteed, then the review body shall deny the requested land use application.

Response: Structural development is not included on either parcel as part of this application. It is understood that future development approvals will require improvements that are roughly proportional to the impact of the planned development.

G. Street Width and Design Standards

1. Design Standards. All streets shall conform with the standards contained in Table 15.505.030(G). Where a range of values is listed, the director shall determine the width based on a consideration of the total street section width needed, existing street widths, and existing development patterns. Preference shall be given to the higher value. Where values may be modified by the director, the overall width shall be determined using the standards under subsections (G)(2) through (10) of this section.

Excerpt of Table 15.505.030(G) Street Design Standards

Type of Street	Right-of-Way Width	Curb-to-Curb Pavement Width	Motor Vehicle Travel Lanes	Median Type	Striped Bike Lanes (Both Sides)	On-Street Parking
Collectors						
Major	57-80 feet	36 feet	2 lanes	None*	Yes	No*
Minor	61-65 feet	40 feet	2 lanes	None*	Yes*	Yes*
Local Streets						
Local residential	54-60 feet	32 feet	2 lanes	None	No	Yes

* May be modified with approval of the director. Modification will change overall curb-to-curb and right-of-way width. Where a center turn lane is not required, a landscaped median shall be provided instead, with turning pockets as necessary to preserve roadway functions.

** All standards shall be per ODOT expressway standards.

Response: The subject site borders three streets: N Villa Road to the east, E Crestview Drive to the south, and N Center Street to the west. These streets are classified as a Major Collector, a Minor Collector, and a Local/Residential Street, respectively. Recent frontage improvements to E Crestview Drive and N Center Street brought those roadways into compliance with this section. As demonstrated by the preliminary plans (Exhibit A), the existing streets bordering the subject site meet the minimum requirements of this section. This criterion is met.

[…]

T. Street Trees. Street trees shall be provided for all projects subject to Type II design review, partition, or subdivision. Street trees shall be installed in accordance with the provisions of NMC 15.420.010(B)(4).

Response: This application is for a two-parcel partition. The site is abutted by N Center Street, E Crestview Drive, and N Villa Road. There are existing street trees along N Center Street

and E Crestview Drive. There are no street trees along the portion of N Villa Road abutting the site. Street trees are not included in this application due to the potential detriment to future development but can be provided if required by the city.

15.505.040 Public Utility Standards

A. Purpose. The purpose of this section is to provide adequate services and facilities appropriate to the scale and type of development.

B. Applicability. This section applies to all development where installation, extension or improvement of water, wastewater, or private utilities is required to serve the development or use of the subject property.

C. General Standards.

1. The design and construction of all improvements within existing and proposed rights-of-way and easements, all improvements to be maintained by the city, and all improvements for which city approval is required shall conform to the Newberg public works design and construction standards and require a public improvements permit.

2. The location, design, installation and maintenance of all utility lines and facilities shall be carried out with minimum feasible disturbances of soil and site. Installation of all proposed public and private utilities shall be coordinated by the developer and be approved by the city to ensure the orderly extension of such utilities within public right-of-way and easements.

Response: The Applicant understands that all improvements within public rights-of-way and easements must conform to the Newberg *Public Works Design and Construction Standards* and will require a public improvements permit. Utility lines and facilities will meet the above requirements when public utilities are extended with future improvements.

D. Standards for Water Improvements. All development that has a need for water service shall install the facilities pursuant to the requirements of the city and all of the following standards. Installation of such facilities shall be coordinated with the extension or improvement of necessary wastewater and stormwater facilities, as applicable.

1. All developments shall be required to be linked to existing water facilities adequately sized to serve their intended area by the construction of water distribution lines, reservoirs and pumping stations which connect to such water service facilities. All necessary easements required for the construction of these facilities shall be obtained by the developer and granted to the city pursuant to the requirements of the city.

2. Specific location, size and capacity of such facilities will be subject to the approval of the director with reference to the applicable water master plan. All water facilities shall conform with city pressure zones and shall be looped where necessary to provide adequate pressure and fire flows during peak demand at every point within the system in the development to which the water facilities will be connected. Installation costs shall remain entirely the developer's responsibility.

3. The design of the water facilities shall take into account provisions for the future extension beyond the development to serve adjacent properties, which, in the judgment of the city, cannot be feasibly served otherwise.

4. Design, construction and material standards shall be as specified by the director for the construction of such public water facilities in the city.

Response: This application involves a two-parcel partition. Parcel 1 contains a sports complex and is currently served by existing water service connections. Parcel 2 will be vacant following the planned partition and will not require water service until it is improved. This application does not include any structural improvements on Parcel 2. The Applicant plans to defer water improvements until Parcel 2 is developed. It is understood that water service connections will be required with future improvements and that said connections will need to meet the standards of this section. These criteria can be met when future improvements occur.

E. Standards for Wastewater Improvements. All development that has a need for wastewater services shall install the facilities pursuant to the requirements of the city and all of the following standards. Installation of such facilities shall be coordinated with the extension or improvement of necessary water services and stormwater facilities, as applicable.

1. All septic tank systems and on-site sewage systems are prohibited. Existing septic systems must be abandoned or removed in accordance with Yamhill County standards.

2. All properties shall be provided with gravity service to the city wastewater system, except for lots that have unique topographic or other natural features that make gravity wastewater extension impractical as determined by the director. Where gravity service is impractical, the developer shall provide all necessary pumps/lift stations and other improvements, as determined by the director.

3. All developments shall be required to be linked to existing wastewater collection facilities adequately sized to serve their intended area by the construction of wastewater lines which connect to existing adequately sized wastewater facilities. All necessary easements required for the construction of these facilities shall be obtained by the developer and granted to the city pursuant to the requirements of the city.

4. Specific location, size and capacity of wastewater facilities will be subject to the approval of the director with reference to the applicable wastewater master plan. All wastewater facilities shall be sized to provide adequate capacity during peak flows from the entire area potentially served by such facilities. Installation costs shall remain entirely the developer's responsibility.

5. Temporary wastewater service facilities, including pumping stations, will be permitted only if the director approves the temporary facilities, and the developer provides for all facilities that are necessary for transition to permanent facilities.

6. The design of the wastewater facilities shall take into account provisions for the future extension beyond the development to serve upstream properties, which, in the judgment of the city, cannot be feasibly served otherwise.

7. Design, construction and material standards shall be as specified by the director for the construction of such wastewater facilities in the city.

Response: This application involves a two-parcel partition. Parcel 1 contains a sports complex and is currently served by existing wastewater services. Parcel 2 will be vacant following the planned partition and will not require wastewater services until it is improved. This application does not include structural improvements on Parcel 2, and the Applicant plans to defer wastewater improvements until Parcel 2 is developed. It is understood that wastewater service connections will be required with future improvements and that said connections will need to meet the standards of this section. These criteria can be met when future improvements occur.

F. Easements. Easements for public and private utilities shall be provided as deemed necessary by the city, special districts, and utility companies. Easements for special purpose uses shall be of a width deemed appropriate by the responsible agency. Such easements shall be recorded on easement forms approved by the city and designated on the final plat of all subdivisions and partitions. Minimum required easement width and locations are as provided in the Newberg public works design and construction standards.

Response: This application includes the delineation of utility easements to serve both parcels in the partition. The planned utility easements are shown on the preliminary plat in Exhibit A and meet the minimum required easement width and locations provided in the Newberg *Public Works Design and Construction Standards*. It is understood that these easements will need to be recorded on approved easement forms and designated on the final plat. This criterion is met.

15.505.050 Stormwater System Standards

A. Purpose. The purpose of this section is to provide for the drainage of surface water from all development; to minimize erosion; and to reduce degradation of water quality due to sediments and pollutants in stormwater runoff.

B. Applicability. The provisions of this section apply to all developments subject to site development review or land division review and to the reconstruction or expansion of such developments that increases the flow or changes the point of discharge to the city stormwater system. Additionally, the provisions of this section shall apply to all drainage facilities that impact any public storm drain system, public right-of-way or public easement, including but not limited to off-street parking and loading areas.

C. General Requirement. All stormwater runoff shall be conveyed to a public storm wastewater or natural drainage channel having adequate capacity to carry the flow without overflowing or otherwise causing damage to public and/or private property. The developer shall pay all costs associated with designing and constructing the facilities necessary to meet this requirement.

D. Plan for Stormwater and Erosion Control. No construction of any facilities in a development included in subsection (B) of this section shall be permitted until an engineer registered in the State of Oregon prepares a stormwater report and erosion control plan for the project. This plan shall contain at a minimum:

1. The methods to be used to minimize the amount of runoff, sedimentation, and pollution created from the development both during and after construction.

2. Plans for the construction of stormwater facilities and any other facilities that depict line sizes, profiles, construction specifications,

and other such information as is necessary for the city to review the adequacy of the stormwater plans.

3. Design calculations shall be submitted for all drainage facilities. These drainage calculations shall be included in the stormwater report and shall be stamped by a licensed professional engineer in the State of Oregon. Peak design discharges shall be computed based upon the design criteria outlined in the public works design and construction standards for the city.

E. Development Standards. Development subject to this section shall be planned, designed, constructed, and maintained in compliance with the Newberg public works design and construction standards.

Response: This application involves a two-parcel partition. Parcel 1 contains a sports complex with an existing stormwater facility. Parcel 2 will be vacant following the proposed partition until it is improved later. The *GFU Austin Sports Complex Stormwater Report*, dated July 2017, for Parcel 1 (Exhibit F) demonstrates that stormwater runoff from Parcel 1 can be accommodated by Parcel 2 via utility easements, which are included in the preliminary plans (Exhibit A). The applicant understands that additional stormwater facilities will be required on Parcel 2 when future improvements occur on the site. These criteria are met.

IV. Conclusion

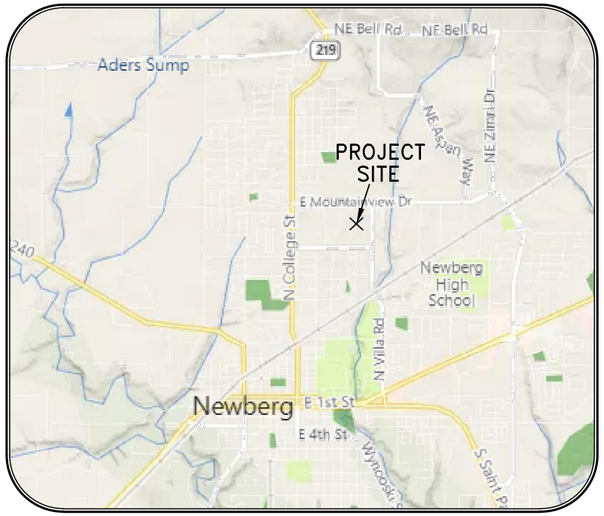
The required findings have been made, and this written narrative and accompanying documentation demonstrate that the application is consistent with the applicable provisions of the City of Newberg Development Code. The evidence in the record is substantial, and the City can rely upon this information in its approval of the application.

Exhibit A: Preliminary Plans (Updated March 2023)

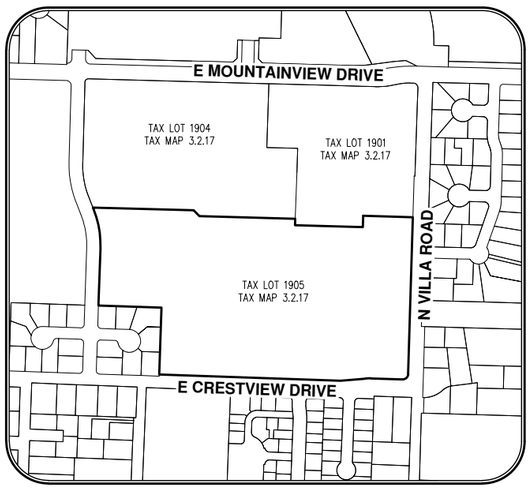
E CRESTVIEW DRIVE

PROPOSED PARTITION PLAT

LOCATED IN THE NORTHWEST 1/4 OF SECTION 17, TOWNSHIP 3 SOUTH, RANGE 2 WEST
WILLAMETTE MERIDIAN, CITY OF NEWBERG, YAMHILL COUNTY, OREGON



VICINITY MAP
NOT TO SCALE



SITE MAP
NOT TO SCALE

APPLICANT:
GEORGE FOX UNIVERSITY
414 N MERIDIAN STREET
NEWBERG, OR 97132

APPLICANT'S CONSULTANT:
AKS ENGINEERING & FORESTRY, LLC.
12965 SW HERMAN ROAD, SUITE 100
TUALATIN, OR 97062
PHONE: (503) 563-6151
FAX: (503) 563-5162
CONTACT: MELISSA SLOTEMAKER AICP

ZONING DISTRICTS: INSTITUTIONAL (I)

WATER DISTRICT: CITY OF NEWBERG

SEWER DISTRICT: CITY OF NEWBERG

PROPERTY DESCRIPTION/ PROPERTY AREA: TAX MAP 3 2 17
TAX LOT 1905
AREA: 20.27 ACRES±

PROJECT PURPOSE: PROPOSED PARTITION PLAT

SHEET INDEX:

LEGEND

DECIDUOUS TREE		STORM SEWER CLEAN OUT	
CONIFEROUS TREE		STORM SEWER CATCH BASIN	
FIRE HYDRANT		STORM SEWER MANHOLE	
WATER BLOWOFF		GAS METER	
WATER METER		GAS VALVE	
WATER VALVE		GUY WIRE ANCHOR	
DOUBLE CHECK VALVE		POWER POLE	
AIR RELEASE VALVE		POWER VAULT	P
SANITARY SEWER CLEAN OUT		POWER JUNCTION BOX	
SANITARY SEWER MANHOLE		POWER PEDESTAL	
SIGN		COMMUNICATIONS VAULT	C
STREET LIGHT		COMMUNICATIONS JUNCTION BOX	
MAILBOX	MB	COMMUNICATIONS RISER	

RIGHT-OF-WAY LINE	
BOUNDARY LINE	
PROPERTY LINE	
CENTERLINE	
CREEK	
CURB	
EDGE OF PAVEMENT	
EASEMENT	
FENCE LINE	
GRAVEL EDGE	
POWER LINE	PWR
OVERHEAD WIRE	OHW
COMMUNICATIONS LINE	COM
FIBER OPTIC LINE	CFO
GAS LINE	GAS
STORM SEWER LINE	STM
SANITARY SEWER LINE	SAN
WATER LINE	WAT

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COVER SHEET
E CRESTVIEW DRIVE
GEORGE FOX UNIVERSITY
NEWBERG, OR

REGISTERED PROFESSIONAL LAND SURVEYOR
REVIEW COPY
OREGON
JANUARY 12, 2016
MICHAEL S. KALINA
89558PLS
RENEWS: 6/30/23

JOB NUMBER:	8583
DATE:	3/10/2023
DESIGNED BY:	
DRAWN BY:	WCB
CHECKED BY:	MSK

01

E MOUNTAINVIEW DRIVE

TAX LOT 1904
TAX MAP 3.2.17

TAX LOT 1901
TAX MAP 3.2.17

N21°20'38"W 9.20'

30'

S88°26'05"E 442.18'

S43°26'05"E 35.36'

107.40'

S88°26'05"E 421.36'

313.96'

S01°33'55"W 28.68'

N01°34'10"E 49.55'

S88°26'05"E 217.93'

S88°26'05"E 297.13'

35'

N VILLA ROAD

C1 L=174.87'

EXISTING 10.00' UNDERGROUND AND GENERAL UTILITIES EASEMENT

S01°51'45"W 350.22'

EXISTING 10.00' UNDERGROUND AND GENERAL UTILITIES EASEMENT

N01°57'27"E 250.06'

N CENTER STREET

EXISTING 20.00' UNDERGROUND AND GENERAL UTILITIES EASEMENT

EXISTING 15.00' PUBLIC WATERLINE EASEMENT

TAX LOT 1905
TAX MAP 3.2.17

S88°26'50"E 177.95'

S88°26'50"E 140.75'

N01°52'13"E 17.17'

PROPOSED PARCEL 1
AREA: 9.67 ACRES±

PROPOSED PARCEL 2
AREA: 10.60 ACRES±

S01°44'15"W 688.50'

30'

N88°02'52"W 277.06'

N01°58'03"E 293.27'

10.00'

PROPOSED UTILITY EASEMENT TO BENEFIT PARCEL 1

S01°44'15"W 370.26'

EXISTING 10.00' UNDERGROUND AND GENERAL UTILITIES EASEMENT

10.00'

PROPOSED UTILITY EASEMENT TO BENEFIT PARCEL 1

EXISTING 10.00' UNDERGROUND AND GENERAL UTILITIES EASEMENT

EXISTING UNDERGROUND UTILITY EASEMENT

66.00'

48.00'

PROPOSED ACCESS EASEMENT TO BENEFIT PARCEL 1

C2 L=39.38'

EXISTING UNDERGROUND UTILITY EASEMENT

579.69'

S85°21'11"W 110.87'

215.85'

35'

30'

37'

N88°00'55"W 795.54'

37'

C3 L=24.92'

N88°00'55"W 134.98'

VAR

E CRESTVIEW DRIVE

N

SCALE: 1"= 80 FEET

80 0 16 40 80

CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	430.00'	23°18'05"	174.87'	N9°41'35"W 173.67'
C2	25.00'	90°14'50"	39.38'	S46°51'40"W 35.43'
C3	215.31'	6°37'54"	24.92'	S88°40'08"W 24.91'

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PRELIMINARY PARTITION PLAT
E CRESTVIEW DRIVE
GEORGE FOX UNIVERSITY
NEWBERG, OR

REGISTERED PROFESSIONAL LAND SURVEYOR

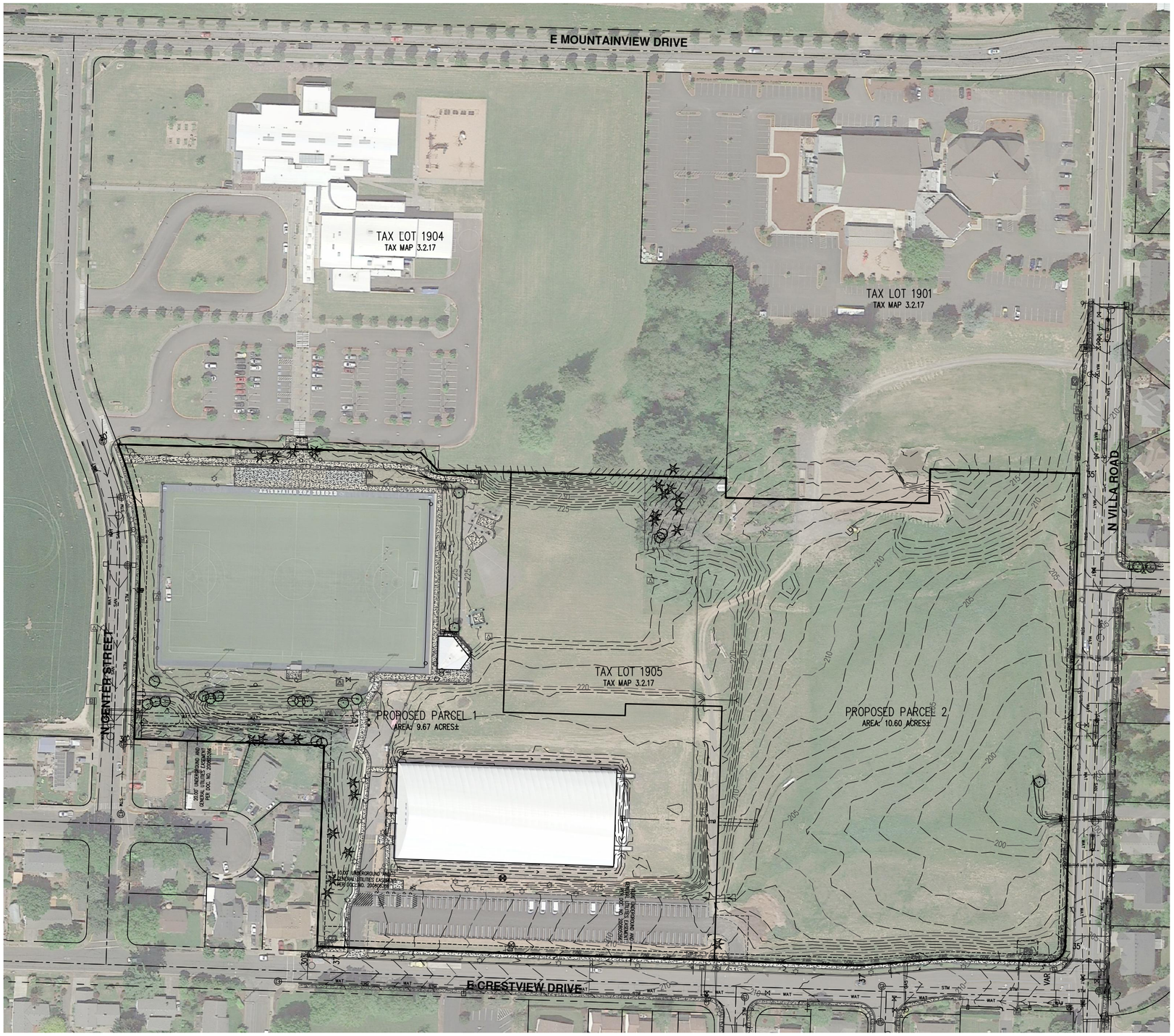
REVIEW COPY

OREGON
JANUARY 12, 2016
MICHAEL S. KALINA
89558PLS
RENEWS: 6/30/23

JOB NUMBER:	8583
DATE:	3/10/2023
DESIGNED BY:	
DRAWN BY:	WCB
CHECKED BY:	MSK

02

AKS DRAWING FILE: 8583 PRELIM PLAT.DWG | LAYOUT: 02



LEGEND

	EXISTING		EXISTING
DECIDUOUS TREE		STORM DRAIN CLEAN OUT	
CONIFEROUS TREE		STORM DRAIN CATCH BASIN	
		STORM DRAIN AREA DRAIN	
FIRE HYDRANT		STORM DRAIN MANHOLE	
WATER BLOWOFF		GAS METER	
WATER METER		GAS VALVE	
WATER VALVE		GUY WIRE ANCHOR	
DOUBLE CHECK VALVE		UTILITY POLE	
AIR RELEASE VALVE		POWER VAULT	P
SANITARY SEWER CLEAN OUT		POWER JUNCTION BOX	
SANITARY SEWER MANHOLE		POWER PEDESTAL	
SIGN		COMMUNICATIONS VAULT	C
STREET LIGHT		COMMUNICATIONS JUNCTION BOX	
MAILBOX	MB	COMMUNICATIONS RISER	

	EXISTING
RIGHT-OF-WAY LINE	
BOUNDARY LINE	
PROPERTY LINE	
CENTERLINE	
DITCH	
CURB	
EDGE OF PAVEMENT	
EASEMENT	
FENCE LINE	
GRAVEL EDGE	
POWER LINE	PWR
OVERHEAD WIRE	OHW
COMMUNICATIONS LINE	COM
FIBER OPTIC LINE	CFO
GAS LINE	GAS
STORM DRAIN LINE	STM
SANITARY SEWER LINE	SAN
WATER LINE	WAT

NOTES:

1. UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS, PROVIDED PER UTILITY LOCATE TICKET NUMBERS 21336481, 21336485, 21336497, 21336499, 21336506, 21336512, 21336513, 21336517, 21336523, 21336527, AND 21336535. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. POWER LINES TO STREET LIGHTS WERE NOT LOCATED AT THIS TIME. LOCATES FOR THE GAS LINE ON THE NORTH SIDE OF CRESTVIEW DRIVE WERE NOT PROVIDED. LOCATION OF GAS LINE IS BASED ON NW NATURAL GAS MAPS.
2. FIELD WORK WAS CONDUCTED OCTOBER 29, NOVEMBER 1, 16–19, 30, AND DECEMBER 1–3, 2021, AND JANUARY 19, 2023.
3. VERTICAL DATUM: ELEVATIONS ARE BASED ON NAVD88 DATUM.
4. THIS IS NOT A PROPERTY BOUNDARY SURVEY TO BE RECORDED WITH THE COUNTY SURVEYOR. BOUNDARIES MAY BE PRELIMINARY AND SHOULD BE CONFIRMED WITH THE STAMPING SURVEYOR PRIOR TO RELYING ON FOR DETAILED DESIGN OR CONSTRUCTION.
5. BUILDING FOOTPRINTS ARE MEASURED TO SIDING UNLESS NOTED OTHERWISE. CONTACT SURVEYOR WITH QUESTIONS REGARDING BUILDING TIES.
6. CONTOUR INTERVAL IS 1 FOOT.
7. TREES WITH DIAMETER OF 6" AND GREATER ARE SHOWN. TREE DIAMETERS WERE DETERMINED BY VISUAL INSPECTION. TREE INFORMATION IS SUBJECT TO CHANGE UPON ARBORIST INSPECTION.

N

SCALE: 1" = 80 FEET

80 0 16 40 80

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EXISTING CONDITIONS PLAN
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DESIGNED BY:	
DRAWN BY:	WCB
CHECKED BY:	MSK

03

AKS DRAWING FILE: 8583 PRELIM PLAT.DWG | LAYOUT: 03

Exhibit B: Application Form and Checklist

TYPE II APPLICATION – LAND USE

File #: _____

TYPES – PLEASE CHECK ONE:

- ☐ **Design review**
- ☑ **Tentative Plan for Partition**
- ☐ **Tentative Plan for Subdivision**
- ☐ **Type II Major Modification**
- ☐ **Variance** _____
- ☐ **Other: (Explain)** _____

APPLICANT INFORMATION:

APPLICANT: George Fox University (Attn: Jeremiah Horton)

ADDRESS: 414 N Meridian Street CITY: Newberg STATE: OR ZIP: 97132

EMAIL ADDRESS: Please contact applicant's consultant PHONE: Please contact applicant's consultant MOBILE: Please contact applicant's consultant

APPLICANT'S CONSULTANT: AKS Engineering & Forestry (Attn: Melissa Slotemaker) PHONE: 503-563-6151

ADDRESS: 12965 SW Herman Road, Ste. 100 CITY: Tualatin STATE: OR ZIP: 97062

CONTACT: Melissa Slotemaker

EMAIL ADDRESS: slotemakerm@aks-eng.com

GENERAL INFORMATION:

PROJECT LOCATION: 1013 E Crestview Drive, Newberg, OR 97132 PROJECT VALUATION: $ N/A

PROJECT DESCRIPTION/USE: Two-parcel land partition

MAP/TAX LOT NO. (i.e.3200AB-400): 3S 2W 17, Tax Lot 1905 SITE SIZE: ±20.28 SQ. FT. ☐ ACRE ☑

COMP PLAN DESIGNATION: Public-Quasi Public (PQ) CURRENT ZONING: I

CURRENT USE: George Fox University Austin Sports Complex/Tennis Center

SURROUNDING USES:

NORTH: Joan Austin Elementary School/Northwest Christian Church SOUTH: Residential

EAST: Residential WEST: Residential/vacant

ATTACHED PROJECT CRITERIA AND REQUIREMENTS *(check all that apply)*

General Checklist: ☑ Fees ☑ Public Notice Information ☑ Current Title Report ☑ Written Criteria Response ☑ Owner Signature ☑ 2 Copies of full Application Packet

For detailed checklists, applicable criteria for the written response, and other requirements per application type, turn to:

The Application Packet can be submitted to *Planning@newbergoregon.gov* or at 414 E First St., Newberg OR. 97132
If the Application is emailed 2 physical copies must be mailed or brought into the Community Development Department

The above statements and information herein contained are in all respects true, complete, and correct to the best of my knowledge and belief. Tentative plans must substantially conform to all standards, regulations, and procedures officially adopted by the City of Newberg. All owners must sign the application or submit letters of consent. Incomplete or missing information may delay the approval process.

MKSlotemaker 11/15/2022

Applicant's Consultant Signature Date

Melissa Slotemaker

Print Name

[signature] 11/17/2022

Owner Signature Date

V Piersall

Print Name

LAND DIVISION TENTATIVE PLAN CHECKLIST

The following information shall be submitted with each application. Incomplete applications will not be processed. Incomplete or missing information may delay the review process. Check with the Planning Division staff regarding additional requirements for your project.

☑ **FEES**

☑ **PUBLIC NOTICE INFORMATION** – Draft of mailer notice and sign; mailing list of all properties within 500'.

☑ **CURRENT TITLE REPORT -** (within 60 days old)

☑ **WRITTEN CRITERIA RESPONSE** – Address the criteria listed on previous page .

☑ **PRELIMINARY PLAT**

Preliminary Plat Information. In addition to the general information described in subsection (A) of this section, the preliminary plat application shall consist of drawings and supplementary written material (i.e., on forms and/or in a written narrative) adequate to provide all of the following information, in quantities required by the director:

1. General Information.

a. Name of subdivision (partitions are named by year and file number). This name shall not duplicate the name of another land division in Yamhill County;

b. Date, north arrow, and scale of drawing;

c. Location of the development sufficient to define its location in the city, boundaries, and a legal description of the site;

d. Zoning of tract to be divided, including any overlay zones;

e. A title block including the names, addresses and telephone numbers of the owners of the subject property and, as applicable, the name of the engineer and surveyor, and the date of the survey; and

f. Identification of the drawing as a "preliminary plat."

2. Existing Conditions. Except where the director deems certain information is not relevant, applications for preliminary plat approval shall contain all of the following information on existing conditions of the site:

a. Streets. Location, name, and present width of all streets, alleys and rights-of-way on and abutting the site;

b. Easements. Width, location and purpose of all existing easements of record on and abutting the site;

c. Public Utilities. Location and identity of all public utilities on and abutting the site. If water mains, stormwater mains, and wastewater mains are not on or abutting the site, indicate the direction and distance to the nearest utility line and show how utilities will be brought to standard;

d. Private Utilities. Location and identity of all private utilities serving the site, and whether the utilities are above or underground;

e. Existing Structures. Show all structures on the project site and adjacent abutting properties;

f. Ground elevations shown by contour lines at a minimum two-foot vertical interval for slopes up to 10 percent and five feet for slopes over 10 percent. Show elevations for the subject property and within 100 feet of the subject property. Such ground elevations shall be related to some established

benchmark or other datum approved by the county surveyor; the city engineer may waive this standard for partitions when grades, on average, are less than six percent;

g. The location and elevation of the closest benchmark(s) within or adjacent to the site (i.e., for surveying purposes);

h. Wetlands and stream corridors;

i. The base flood elevation, per FEMA Flood Insurance Rate Maps, as applicable;

j. North arrow and scale; and

k. Other information, as deemed necessary by the director for review of the application. The city may require studies or exhibits prepared by qualified professionals to address specific site features and code requirements.

3. Proposed Development. Except where the director deems certain information is not relevant, applications for preliminary plat approval shall contain all of the following information on the proposed development:

a. Proposed lots, streets, tracts, open space and park land (if any); location, names, right-of-way dimensions, approximate radius of street curves; and approximate finished street centerline grades. All tracts that are being held for private use and all reservations and restrictions relating to such private tracts shall be identified;

b. Easements. Location, width and purpose of all proposed easements;

c. Lots and private tracts (e.g., private open space, common area, or street) with approximate dimensions, area calculation (e.g., in square feet), and identification numbers. Through lots shall be avoided except where necessary to provide separation of residential development from major traffic routes, adjacent nonresidential activities, or to overcome specific issues with topography or orientation;

d. Proposed uses of the property, including all existing structures to remain, areas proposed to be dedicated as public right-of-way or preserved as open space for the purpose of stormwater management, recreation, or other use;

e. Proposed grading;

f. Proposed public street improvements, pursuant to NMC 15.505.030, including street cross sections;

g. Information demonstrating that proposed lots can reasonably be accessed and developed without the need for a variance and in conformance with applicable setbacks and lot coverage requirements;

h. Preliminary design for extending city water and wastewater service to each lot, per NMC 15.505.040;

i. Proposed method of stormwater drainage and treatment, if required, pursuant to NMC 15.505.050;

j. The approximate location and identity of other utilities, including the locations of street lighting fixtures, as applicable;

k. Evidence of compliance with applicable overlay zones; and

l. Evidence of contact with the applicable road authority for proposed new street connections.

N/A ☐ **CC&Rs:** Include a copy of any proposed codes, covenants and restrictions (CC&Rs) which will apply to the project.

N/A ☐ **TRAFFIC ANALYSIS**
A traffic analysis may be required for projects below the 40 trips per p.m. peak hour threshold when the development's location or traffic characteristic could affect the traffic safety, access management, street capacity or a known traffic problem or deficiency. The traffic analysis shall be scoped in conjunction with the city and other applicable roadway authority.

N/A ☐ **PUBLIC UTILITIES ANALYSIS**
The public facilities analysis shall be scoped with the city and shall address the impact of the proposed development on the public wastewater and water systems. The analysis shall identify and mitigation or improvements necessary to the public facilities to adequately serve the development per city standards under adopted ordinances and master plans.

☑ **STORMWATER ANALYSIS**
The stormwater analysis shall address the criteria listed in Chapter 13.25 NMC

N/A ☐ **FUTURE STREETS CONCEPT PLAN**
The future streets concept shall show all existing subdivisions, streets and unsubdivided land surrounding the subject property and show how proposed streets may be extended to connect with existing streets. At a minimum, the plan shall depict future street connections for land within 400 feet of the subject property.

N/A ☐ **WETLAND DELINEATION**
A wetland delineation approved by the Oregon Department of State Lands (DSL) shall be submitted for any property listed on the National wetlands Inventory (NWI) or that is located within the city's mapped stream corridor.

N/A ☐ **TUALATIN VALLEY FIRE & RESCUE**
This only pertains to Subdivision projects. The permit form and detailed information can be found on TVFR website at: https //www.tvfr.com/376/New-Construction-and-Service-Provider-Pe

Exhibit C: Current Title Report

First American Title Insurance Company

775 NE Evans Street
McMinnville, OR 97128
Phn - (503)376-7363
Fax - (866)800-7294

PUBLIC RECORD REPORT
FOR NEW SUBDIVISION OR LAND PARTITION

THIS REPORT IS ISSUED BY THE ABOVE-NAMED COMPANY ("THE COMPANY") FOR THE EXCLUSIVE USE OF:

AKS Engineering & Forestry LLC
12965 SW Herman Road, Suite 100
Tualatin, OR 97062
Phone: (503)563-6151
Fax: (503)563-6152

Date Prepared : November 16, 2022
Effective Date : 8:00 A.M on November 10, 2022
Order No. : 1039-4014026
Subdivision :

The information contained in this report is furnished by First American Title Insurance Company (the "Company") as an information service based on the records and indices maintained by the Company for the county identified below. This report is not title insurance, is not a preliminary title report for title insurance, and is not a commitment for title insurance. No examination has been made of the Company's records, other than as specifically set forth in this report. Liability for any loss arising from errors and/or omissions is limited to the lesser of the fee paid or the actual loss to the Customer, and the Company will have no greater liability by reason of this report. This report is subject to the Definitions, Conditions and Stipulations contained in it.

REPORT

A. The Land referred to in this report is located in the County of Yamhill, State of Oregon, and is described as follows:

As fully set forth on Exhibit "A" attached hereto and by this reference made a part hereof.

B. As of the Effective Date, the tax account and map references pertinent to the Land are as follows:

As fully set forth on Exhibit "A" attached hereto and by this reference made a part hereof.

C. As of the Effective Date and according to the Public Records, we find title to the land apparently vested in:

As fully set forth on Exhibit "B" attached hereto and by this reference made a part hereof

D. As of the Effective Date and according to the Public Records, the Land is subject to the following liens and encumbrances, which are not necessarily shown in the order of priority:

As fully set forth on Exhibit "C" attached hereto and by this reference made a part hereof.

EXHIBIT "A"
(Land Description Map Tax and Account)

A tract of land located in the Northwest One-Quarter of Section 17, Township 3 South, Range 2 West, Willamette Meridian, City of Newberg, Yamhill County, Oregon, and being more particularly described as follows:

Beginning at the southeast corner of Parcel 2 of Partition Plat Number 2003-30; thence South 01°33'55" West 28.68 feet; thence South 88°26'05" East 297.13 feet; thence North 01°34'10" East 49.55 feet; thence South 88°26'05" East 217.93 feet to the westerly right-of-way line of Villa Road (35.00 feet from centerline); thence along said westerly right-of-way line, South 01°44'15" West 688.50 feet; thence along a curve to the right with a Radius of 25.00 feet, a Central Angle of 90°14'49", an Arc Length of 39.38 feet, and a Chord of South 46°51'40" West 35.43 feet to the northerly right-of-way line of Crestview Drive (variable width); thence along said northerly right-of-way line on the following courses: North 88°00'55" West 134.98 feet; thence along a curve to the left with a Radius of 215.31 feet, a Central Angle of 6°37'54", an Arc Length of 24.92 feet, and a Chord of South 88°40'07" West 24.91 feet; thence South 85°21'11" West 110.87 feet; thence North 88°00'55" West 795.54 feet to the easterly line of the plat of "Pioneer View"; thence along said easterly line, North 01°58'03" East 293.27 feet to the northeast corner of said "Pioneer View"; thence along the northerly line of said "Pioneer View" North 88°02'52" West 277.06 feet to the easterly right-of-way line of N Center Street (30.00 feet from centerline); thence along said easterly right-of-way line on the following courses: North 01°57'27" East 250.06 feet; thence along a curve to the left with a Radius of 430.00 feet, a Central Angle of 23°18'05", an Arc Length of 174.87 feet, and a Chord of North 09°41'36" West 173.67 feet; thence North 21°20'38" West 9.20 feet to the south line of said Parcel 2; thence along said south line on the following courses: South 88°26'05" East 442.18 feet; thence South 43°26'05" East 35.36 feet; thence South 88°26'05" East 421.36 feet to the Point of Beginning.

Map No.: R3217 01905
Tax Account No.: 526588

EXHIBIT "B"
(Vesting)

George Fox University, an Oregon Non-Profit Corporation

EXHIBIT "C"
(Liens and Encumbrances)

1. Taxes, including the current fiscal year, not assessed because of 307.145-Academy/School/Child care Exemption. If the exempt status is terminated an additional tax may be levied. Account No. 526588.

2. City liens, if any, of the City of Newberg.

3. The rights of the public in and to that portion of the premises herein described lying within the limits of streets, roads and highways.

4. Ordinance No. 2007, including terms and provisions thereof.
   Recorded: January 07, 1981, Film Volume 157, Page 1695, Deed and Mortgage Records

5. Improvement Non-Remonstrance Agreement - Minor Partition, including terms and provisions thereof.
   Recorded: October 25, 1982, Film Volume 172, Page 1821, Deed and Mortgage Records

6. 10 foot public utility easement as shown on Partition Plat 2003-30.

7. Deed of Dedication, including terms and provisions thereof.
   Recorded: March 27, 2008, Instrument No. 200805264, Deed and Mortgage Records
   And Re-Recorded: May 06, 2008
   Recording Information: Instrument No. 200807823, Deed and Mortgage Records

8. Easement, including terms and conditions contained therein:
   Granted to: Portland General Electric Company ("PGE"), an Oregon corporation
   For: Underground Utility Easement
   Recorded: March 27, 2008
   Recording Information: Instrument No. 200805265, Deed and Mortgage Records

9. Easement, including terms and conditions contained therein:
   Granted to: All Utility Companies ("UC") with an operating franchise agreement with the City of Newberg, an Oregon municipality
   For: Underground General Utility Easement
   Recorded: March 27, 2008
   Recording Information: Instrument No. 200805266, Deed and Mortgage Records

10. Easement, including terms and conditions contained therein:

Granted to:	City of Newberg, a municipal corporation
For:	Reclaimed Waterline Utility Easement
Recorded:	May 29, 2008
Recording Information:	Instrument No. 200809244, Deed and Mortgage Records

11. Easement, including terms and conditions contained therein:

Granted to:	City of Newberg, a municipal corporation
For:	Public Waterline Easement
Recorded:	August 26, 2010
Recording Information:	Instrument No. 201011794, Deed and Mortgage Records

NOTE: We find no outstanding voluntary liens of record affecting subject property. An inquiry should be made concerning the existence of any unrecorded lien or other indebtedness which could give rise to any security interest in the subject property.

DEFINITIONS, CONDITIONS AND STIPULATIONS

1. **Definitions.** The following terms have the stated meaning when used in this report:
   (a) "Customer": The person or persons named or shown as the addressee of this report.
   (b) "Effective Date": The effective date stated in this report.
   (c) "Land": The land specifically described in this report and improvements affixed thereto which by law constitute real property.
   (d) "Public Records": Those records which by the laws of the state of Oregon impart constructive notice of matters relating to the Land.

2. **Liability of the Company.**
   (a) THIS REPORT IS NOT AN INSURED PRODUCT OR SERVICE OR A REPRESENTATION OF THE CONDITION OF TITLE TO REAL PROPERTY. IT IS NOT AN ABSTRACT, LEGAL OPINION, OPINION OF TITLE, TITLE INSURANCE COMMITMENT OR PRELIMINARY REPORT, OR ANY FORM OF TITLE INSURANCE OR GUARANTY. THIS REPORT IS ISSUED EXCLUSIVELY FOR THE BENEFIT OF THE APPLICANT THEREFOR, AND MAY NOT BE USED OR RELIED UPON BY ANY OTHER PERSON. THIS REPORT MAY NOT BE REPRODUCED IN ANY MANNER WITHOUT FIRST AMERICAN'S PRIOR WRITTEN CONSENT. FIRST AMERICAN DOES NOT REPRESENT OR WARRANT THAT THE INFORMATION HEREIN IS COMPLETE OR FREE FROM ERROR, AND THE INFORMATION HEREIN IS PROVIDED WITHOUT ANY WARRANTIES OF ANY KIND, AS-IS, AND WITH ALL FAULTS. AS A MATERIAL PART OF THE CONSIDERATION GIVEN IN EXCHANGE FOR THE ISSUANCE OF THIS REPORT, RECIPIENT AGREES THAT FIRST AMERICAN'S SOLE LIABILITY FOR ANY LOSS OR DAMAGE CAUSED BY AN ERROR OR OMISSION DUE TO INACCURATE INFORMATION OR NEGLIGENCE IN PREPARING THIS REPORT SHALL BE LIMITED TO THE FEE CHARGED FOR THE REPORT. RECIPIENT ACCEPTS THIS REPORT WITH THIS LIMITATION AND AGREES THAT FIRST AMERICAN WOULD NOT HAVE ISSUED THIS REPORT BUT FOR THE LIMITATION OF LIABILITY DESCRIBED ABOVE. FIRST AMERICAN MAKES NO REPRESENTATION OR WARRANTY AS TO THE LEGALITY OR PROPRIETY OF RECIPIENT'S USE OF THE INFORMATION HEREIN.
   (b) No costs (including, without limitation attorney fees and other expenses) of defense, or prosecution of any action, is afforded to the Customer.
   (c) In any event, the Company assumes no liability for loss or damage by reason of the following:

      (1) Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records.
      (2) Any facts, rights, interests or claims which are not shown by the Public Records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
      (3) Easements, liens or encumbrances, or claims thereof, which are not shown by the Public Records.
      (4) Discrepancies, encroachments, shortage in area, conflicts in boundary lines or any other facts which a survey would disclose.
      (5) (i) Unpatented mining claims; (ii) reservations or exceptions in patents or in Acts authorizing the issuance thereof, (iii) water rights or claims or title to water.
      (6) Any right, title, interest, estate or easement in land beyond the lines of the area specifically described or referred to in this report, or in abutting streets, roads, avenues, alleys, lanes, ways or waterways.
      (7) Any law, ordinance or governmental regulation (including but not limited to building and zoning laws, ordinances or regulations) restricting, regulating, prohibiting or relating to (i) the occupancy, use or enjoyment on the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the Public Records at the effective date hereof.
      (8) Any governmental police power not excluded by 2(d)(7) above, except to the extent that notice of the exercise thereof or a notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the Public Records at the effective date hereof.
      (9) Defects, liens, encumbrances, adverse claims or other matters created, suffered, assumed, agreed to or actually known by the Customer.

3. **Charge.** The charge for this report does not include supplemental reports, updates or other additional services of the Company.

First American Title Insurance Company
775 NE Evans Street
McMinnville, OR 97128

Illegal Restrictive Covenants

Please be advised that any provision contained in this document, or in a document that is attached, linked, or referenced in this document, that under applicable law illegally discriminates against a class of individuals based upon personal characteristics such as race, color, religion, sex, sexual orientation, gender identity, familial status, disability, national origin, or any other legally protected class, is illegal and unenforceable by law.

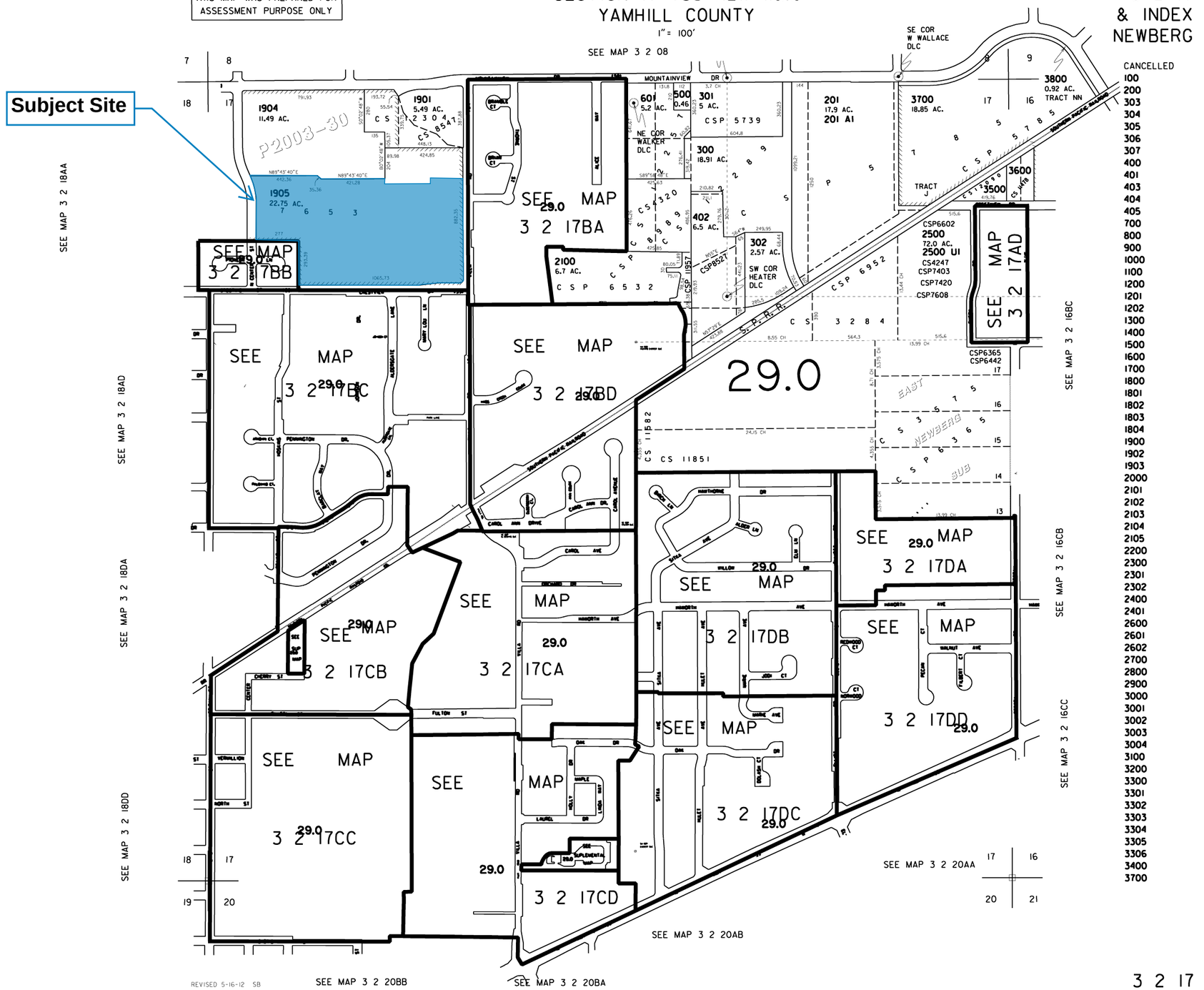
Exhibit D: Yamhill County Assessor's Map

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSE ONLY

SECTION 17 T3S R2W W.M.
YAMHILL COUNTY

1" = 100'

3 2 17
& INDEX
NEWBERG



CANCELLED
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REVISED 5-16-12 SB

3 2 17

Exhibit E: Public Notice Information

City of Newberg
Community Development Department
P.O. Box 970 ▪ 414 E First Street ▪ Newberg, Oregon 97132
503-537-1240. Fax 503-537-1272 www.newbergoregon.gov

WE WANT YOUR COMMENTS ON A PROPOSED NEW DEVELOPMENT IN YOUR NEIGHBORHOOD

A property owner in your neighborhood submitted an application to the City of Newberg to divide one lot into two parcels**.** You are invited to take part in the City's review of this project by sending in your written comments. For more details about giving comments, please see the back of this sheet.

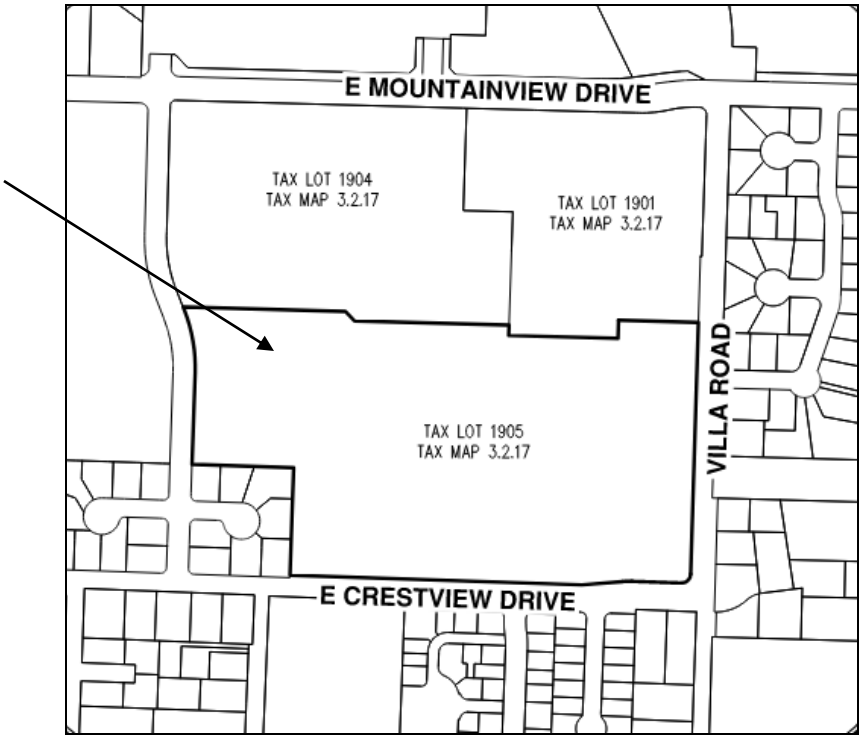
The application would create two lots of ±9.67 acres and ±10.60 acres, respectively. The application divides a vacant portion of the lot from the George Fox Austin Sports Complex. The ±9.67-acre parcel holds the sports complex and will retain existing access from E Crestview Drive. The ±10.60-acre parcel will remain vacant with access from N Villa Drive. There is no structural development or demolition anticipated as part of this application.

APPLICANT: AKS Engineering & Forestry (Attn: Melissa Slotemaker)
TELEPHONE: 503-563-6151

PROPERTY OWNER: George Fox University

LOCATION: 1013 E Crestview Drive

TAX LOT NUMBER: 3S 2W 17, Tax Lot 1905



We are mailing you information about this project because you own land within 500 feet of the proposed new lots. We invite you to send any written comments for or against the proposal within 14 days from the date this notice is mailed.

If you mail your comments to the City, please put the following information on the outside of the envelope:

Written Comments: ***File No.XX***
City of Newberg
Community Development Department
PO Box 970
Newberg, OR 97132

You can look over all the information about this project or drop comments off at Newberg City Hall, 414 E. First Street. You can also buy copies of the information for a cost of 25 cents per page. If you have any questions about the project, you can call the Newberg Planning Division at 503- 537-1240.

All written comments must be turned in by 4:30 p.m. on ***(enter date two weeks from date mailed).***

Any issue which might be raised in an appeal of this case to the Land Use Board of Appeals (LUBA) must be submitted to the City in writing before this date. You must include enough detail to enable the decision maker an opportunity to respond. The applicable criteria used to make a decision on this application for a tentative partition plan is found in Newberg Development Code Section 15.235.040.

The Community Development Director will make a decision at the end of a 14-day comment period. If you send in written comments about this project, we will send you information about any decision made by the City relating to this project.

Date Mailed: ***(date notice is mailed)***

Land Use Notice

File # XXXX

Proposal: A two-parcel partition to divide a ±20.27-acre parcel into a ±9.67-acre parcel and a ±10.60-acre parcel.

For Further Information, Contact:

City of Newberg
Community Development Department
414 E First Street
Phone: 503-537-1240

First American

Date of Production: 11/09/2022

TERMS AND CONDITIONS OF INFORMATION REPORTS

IMPORTANT - READ CAREFULLY: AN INFORMATION REPORT IS **NOT** AN INSURED PRODUCT OR SERVICE OR A REPRESENTATION OF THE CONDITION OF TITLE TO REAL PROPERTY. IT IS NOT AN ABSTRACT, LEGAL OPINION, OPINION OF TITLE, TITLE INSURANCE COMMITMENT OR PRELIMINARY REPORT, OR ANY FORM OF TITLE INSURANCE OR GUARANTY. THE INFORMATION REPORT IS ISSUED EXCLUSIVELY FOR THE BENEFIT OF THE REQUESTOR, AND MAY NOT BE USED OR RELIED UPON BY ANY OTHER PERSON. THE INFORMATION REPORT MAY NOT BE REPRODUCED IN ANY MANNER WITHOUT FIRST AMERICAN TITLE'S PRIOR WRITTEN CONSENT. FIRST AMERICAN TITLE DOES NOT REPRESENT OR WARRANT THAT THE INFORMATION CONTAINED IN THE INFORMATION REPORT IS COMPLETE OR FREE FROM ERROR, AND THE INFORMATION THEREIN IS PROVIDED WITHOUT ANY WARRANTIES OF ANY KIND, AS-IS, AND WITH ALL FAULTS. AS A MATERIAL PART OF THE CONSIDERATION GIVEN IN EXCHANGE FOR THE ISSUANCE OF AN INFORMATION REPORT, REQUESTOR AGREES THAT FIRST AMERICAN TITLE'S SOLE LIABILITY FOR ANY LOSS OR DAMAGE CAUSED BY AN ERROR OR OMISSION DUE TO INACCURATE INFORMATION OR NEGLIGENCE IN PREPARING THE INFORMATION REPORT SHALL BE LIMITED TO THE GREATOR OF THE FEE CHARGED FOR THE INFORMATION REPORT OR $15. REQUESTOR ACCEPTS THE INFORMATION REPORT WITH THIS LIMITATION AND AGREES THAT FIRST AMERICAN TITLE WOULD NOT HAVE ISSUED THE INFORMATION REPORT BUT FOR THE LIMITATION OF LIABILITY DESCRIBED ABOVE. FIRST AMERICAN TITLE MAKES NO REPRESENTATION OR WARRANTY AS TO THE LEGALITY OR PROPRIETY OF REQUESTOR'S USE OF THE INFORMATION CONTAINED IN THE INFORMATION REPORT.

R3217BA 00900
Craig & Leslie Spreng
2290 N Villa Rd
Newberg, OR 97132

R3217BC 00300
Teresa Wegscheid
1843 N Mary Lou Ln
Newberg, OR 97132

R3217BA 00405
Scott & Brenda Burg
1616 E Bramble Ct
Newberg, OR 97132

R3217BA 00427
Elisabeth & Todd Harris
2216 N Thorne St
Newberg, OR 97132

R3217BA 00407
Samuel Peterson
1615 E Briar Ct
Newberg, OR 97132

R3217BA 00410
David & Bitia Carrillo
1600 E Briar Ct
Newberg, OR 97132

R3217BA 00420
Martin & Leota Peterson
515 Fairlane Dr
Tillamook, OR 97141

R3217BA 01900
William & Jennifer Burger
1900 N Villa Rd
Newberg, OR 97132

R3217BC 01100
Oregon Conference Of Free & Methodist
Po Box 98
Turner, OR 97392

R3217BC 01106
Michael & Dana Speer
1800 N Aldersgate Ln
Newberg, OR 97132

R3217BA 00402
Matthew & Katie Miller
1601 E Bramble Ct
Newberg, OR 97132

R3217BA 00901
Ivory Tip Investments Llc
Po Box 436
Amity, OR 97101

R3217BA 00406
Martin & Maria Gonzalez
2219 N Thorne St
Newberg, OR 97132

R3217BA 00902
Schoenborn Eric J Trustee & Schoenborn
Po Box 436
Amity, OR 97101

R3217BC 01704
Robert & Jennifer Hill
904 E Fircrest Dr
Newberg, OR 97132

R3217BA 00426
Donald & Lori Swan
2210 N Thorne St
Newberg, OR 97132

R3217BA 00419
Dale & Joy Welcome
2120 N Thorne St
Newberg, OR 97132

R3217BC 01600
Anthony & Janet Cerasin
900 E Crestview Dr
Newberg, OR 97132

R3217BC 00311
Steven Winchester & Paula Miller
1102 N Springbrook Rd # 275
Newberg, OR 97132

R3217BC 00610
Angela Callender
1709 N Villa Rd
Newberg, OR 97132

R3217BA 00418
Andrea & Ryan Valdez
2116 N Thorne St
Newberg, OR 97132

R3217BA 00403
Alexander & Jessica Rolfe
1600 E Bramble Ct
Newberg, OR 97132

R3217BA 00404
Susan Purcell
1610 E Bramble Ct
Newberg, OR 97132

R3217BA 00428
Jack & Angela May
2220 N Thorne St
Newberg, OR 97132

R3217BC 01700
Gonzalo Rubio & Rebeca Barbosa
1815 N Hoskins St
Newberg, OR 97132

R3217BA 00414
Elliott Richard W Trustee & Elliott Judith A
2129 N Thorne St
Newberg, OR 97132

R3217BA 01802
William & Jennifer Burger
1900 N Villa Rd
Newberg, OR 97132

R3217BA 02002
Terrence & Eva Mahr
1720 E Crestview Cir
Newberg, OR 97132

R3217BC 01130
Okelley William E Living Trust & Okelley
1801 N Johnson Dr
Newberg, OR 97132

R3217BA 00408
David & Paulette Hansen
1609 E Briar Ct
Newberg, OR 97132

R3217BC 01129
Crestview Estates Homeowners A
1609 N Aldersgate Ln
Newberg, OR 97132

R3217BC 01143
Rose Moffitt
1201 E Johnson Ct
Newberg, OR 97132

R3217BC 01140
Reeser Richard D & Jean D Livi
1808 N Johnson Dr
Newberg, OR 97132

R3217BA 00415
Paul & Rebecca Mickel
2109 N Thorne St
Newberg, OR 97132

R3217BA 00416
Chadwick & Brette Harvey
2101 N Thorne St
Newberg, OR 97132

R3217BA 00417
David & Terri Beal
2110 N Thorne St
Newberg, OR 97132

R3217BA 01804
Ollis Donna Trust & Ollis Donna M Trustee
1920 N Villa Rd
Newberg, OR 97132

R3217BA 02000
Terrence & Eva Mahr
1720 E Crestview Cir
Newberg, OR 97132

R3217BC 00315
Gary Geser
1842 N Mary Lou Ln
Newberg, OR 97132

R3217BA 02100
David & Lynda Jensen
1820 N Villa Rd
Newberg, OR 97132

R3217BC 01135
Jill Zatwarnicki
125 NW Alsea Bay Dr
Waldport, OR 97394

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Abel Frances Revocable Living
1837 N Mary Lou Ln
Newberg, OR 97132

R3217BC 01142
Rita Nollette
1809 N Aldersgate Ln
Newberg, OR 97132

R3217BC 01105
Wanda Coulter
46467 Road 620
Ahwahnee, CA 93601

R3217BC 01146
Robert Molzahn & Helen Coblentz
1715 N Aldersgate Ln
Newberg, OR 97132

R3217BC 00400
Shirley & Larry Hill
1801 N Villa Rd
Newberg, OR 97132

R3217BC 00305
Linda Valdez
1813 N Mary Lou Ln
Newberg, OR 97132

R3217BC 00308
Gouger Llc
9600 NE Glen Hollow Dr
Newberg, OR 97132

R3217BC 01137
David Farris & Nancy Seaman
1825 N Johnson Dr
Newberg, OR 97132

R3217BD 00900
Donald & Sherry Sylvester
1521 E Hess Creek Ct
Newberg, OR 97132

R3217BA 00409
Alexander Dailey
1601 E Briar Ct
Newberg, OR 97132

R3217BA 00424
Timothy & Karen Doss
2200 N Thorne St
Newberg, OR 97132

R3217BA 00411
David & Lisa Lawrence
1606 E Briar Ct
Newberg, OR 97132

R3217BA 00412
David & Christine Schlarbaum
1610 E Briar Ct
Newberg, OR 97132

R3217BA 00422
Ludmila Wilson
220 NE 192nd Ave
Portland, OR 97230

R3217BA 01801
Beth Weil
1960 N Villa Rd
Newberg, OR 97132

R3217BA 01800
Jared Tippets & Anne Caffall-Tippets
1950 N Villa Rd
Newberg, OR 97132

R3217BA 01803
Timothy & Amber Brown
1940 N Villa Rd
Newberg, OR 97132

R3217BC 01133
Teresa Mccoskey
1811 N Johnson Dr
Newberg, OR 97132

R3217BC 00314
Svendsen Francis P Trustee & Svendsen
1836 N Mary Lou Ln
Newberg, OR 97132

R3217BC 01709
David & Heather Johnstone
1809 N Hoskins St
Newberg, OR 97132

R3217BC 01706
Daniel & Paola Webster
1801 N Hoskins St
Newberg, OR 97132

R3217BC 00303
Franklin H P Trustee & & Franklin
23855 NE Old Yamhill Rd
Newberg, OR 97132

R3217BC 00612
Matthew & Zoe Noe
8073 S Sconce Rd
Canby, OR 97013

R3217BD 00800
Bonnie Edghill & Mary Wenk
1517 E Hess Creek Ct
Newberg, OR 97132

R3217BC 00302
Mark & Renetta Krager
1831 N Mary Lou Ln
Newberg, OR 97132

R3217BC 00313
Janice Love
4262 Lemon St NE
Salem, OR 97305

R3217BA 01500
Steven Meyers
2018 N Villa Rd
Newberg, OR 97132

R3217BA 01700
Kyle Henderson
11746 SE Ash St
Portland, OR 97216

R3217BA 02001
Terrence & Eva Mahr
1720 E Crestview Cir
Newberg, OR 97132

R3217BC 01200
Leslie Herrema
1805 N Daniel Dr
Newberg, OR 97132

R3217BC 00200
Gary & Debra Routon
1404 E Crestview Dr
Newberg, OR 97132

R3217BC 01103
Steven & Irene Wells
1812 N Aldersgate Ln
Newberg, OR 97132

R3217BC 00304
Anita Massey
1819 N Mary Lou Ln
Newberg, OR 97132

R3217BC 00312
James Frank
1824 N Mary Lou Ln
Newberg, OR 97132

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Jacobson Living Trust & Jacobson Sharon
1807 N Mary Lou Ln
Newberg, OR 97132

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Dickenson Terence & Helen Livi
1801 N Mary Lou Ln
Newberg, OR 97132

R3217BC 01162
Ephraim & Mary Schwab
17600 NE Aviation Way
Newberg, OR 97132

R3217BC 01147
Obrien James M & Nancy F Livin
1709 N Aldersgate Ln
Newberg, OR 97132

R3217BC 00611
Vannoord Debra 2007 Descendant
161 Nawiliwili St
Honolulu, HI 96825

R3217BC 01104
Kathleen Ronning
1808 N Aldersgate Ln
Newberg, OR 97132

R3218AA 00603
Catherine Owens
807 E Crestview Dr
Newberg, OR 97132

R3217BC 01708
Brenda Clowers
1811 N Hoskins St
Newberg, OR 97132

R3217BC 01144
Doris & David Hoskins
1205 E Johnson Ct
Newberg, OR 97132

R3217BA 00413
Douglas Gardner
2139 N Thorne St
Newberg, OR 97132

R3217BA 01600
Michael & Emily Sherman
2012 N Villa Rd
Newberg, OR 97132

R3217BC 01400
Aaron Calcagno & Monica Martinez
904 E Crestview Dr
Newberg, OR 97132

R3217BC 01101
Or Conf Of Free Methodist Chur
1800 N Hoskins St
Newberg, OR 97132

R3217BC 01132
Ronald & Janice Kelley
1809 N Johnson Dr
Newberg, OR 97132

R3217BC 01102
Phyllis Austin-Taylor
1816 N Aldersgate Ln
Newberg, OR 97132

R3217BC 01701
Larry & Sandra Taylor
901 E Fircrest Dr
Newberg, OR 97132

R3217BC 01800
Newberg Congregation Of & Jehovahs
Po Box 623
Newberg, OR 97132

R3217BD 00300
Scott & Diane Allen
1708 N Villa Rd
Newberg, OR 97132

R3217BC 01707
Rigoberto Aviles
1805 N Hoskins St
Newberg, OR 97132

R3217BC 01500
Barbara Metson
515 E 1st St
Newberg, OR 97132

R3217BA 02101
Timothy & Nancy Hruska
1610 E Crestview Cir
Newberg, OR 97132

R3217BC 00100
Alexis Solorio
1418 E Crestview Dr
Newberg, OR 97132

R3217BC 01702
Moses Hooper
905 E Fircrest Dr
Newberg, OR 97132

R3217BC 01110
James & Katherine Knowlton
12605 Coyote Loop
Newberg, OR 97132

R3217BC 01139
Susan & Steven Teslow
1820 N Johnson Dr
Newberg, OR 97132

R3217BC 00310
Mary Mcfarland
1812 N Mary Lou Ln
Newberg, OR 97132

R3217BC 01108
Edward & Jeanette Piller
1716 N Aldersgate Ln
Newberg, OR 97132

R3217BC 01138
Ruth Fogarty
1824 N Johnson Dr
Newberg, OR 97132

R3217BA 00423
Douglas Cossel
2140 N Thorne St
Newberg, OR 97132

R3217BC 01300
Steve & Jackie Maiben
906 E Crestview Dr
Newberg, OR 97132

R3217BC 01168
Crestview Estates Homeowners A
1609 N Aldersgate Ln
Newberg, OR 97132

R3217BC 01165
Tom Jennings
1820 N Aldersgate Ln
Newberg, OR 97132

R3217BC 00500
Keith Gouger
9600 NE Glen Hollow Dr
Newberg, OR 97132

R3217BC 01164
Ardanola Llc
5000 N Basin Ave
Portland, OR 97217

R3217BA NONTL
County Non-Taxlot

,

R3217BC 01145
Lee Borgaes
320 SW 3rd St
Dundee, OR 97115

R3217BA 00425
Forrest & Brittany Gregg
2206 N Thorne St
Newberg, OR 97132

R3217BC 01161
Joyce Williams
1708 N Johnson Dr
Newberg, OR 97132

R3217BA 00421
Gayle Sandra L Living Trust & Gayle
2130 N Thorne St
Newberg, OR 97132

R3218AD 00700
Janet Rader
812 E Crestview Dr
Newberg, OR 97132

R3217BC 01134
Ellen Butcher
1815 N Johnson Dr
Newberg, OR 97132

R3217BC 01131
Jodi Tautfest
1805 N Johnson Dr
Newberg, OR 97132

R3217BC 00309
Gouger Llc
9600 NE Glen Hollow Dr
Newberg, OR 97132

R3217BC 01163
Janie Berry
1716 N Johnson Dr
Newberg, OR 97132

R3217BB 01400
Jennifer Monrean
901 E Crestview Dr
Newberg, OR 97132

R3217BB 01000
Terrence Weldon
909 E Pioneer Ln
Newberg, OR 97132

R3217BB 00500
Randy Mckee
1009 E Crestview Dr
Newberg, OR 97132

R3218 00900
Aspen Way West Llc
3113 E Crestview Dr
Newberg, OR 97132

R3217BB 00400
Donald & Carol Newburn
1008 E Pioneer Ln
Newberg, OR 97132

R3217BB 00600
Bryan & Brooke Codina
1005 E Crestview Dr
Newberg, OR 97132

R3217BB 00700
Reed Family Living Trust & Reed Jeff R
1300 SE Rio Vista Dr
Newport, OR 97365

R3217BB 01800
Mattson & Jodi Klink
913 E Crestview Dr
Newberg, OR 97132

R3217BB 01200
Tsohantaridis Demetrius Truste
201 N Meridian St STE B
Newberg, OR 97132

R3217BB 00200
Carol Mccomis & Richard Scheideman
1005 E Pioneer Ln
Newberg, OR 97132

R3217 01901
Northwest Christian Church
2315 N Villa Rd
Newberg, OR 97132

R3217BB 00300
Luce Kenneth A Trustee & Luce Kenneth A
Po Box 114
Dundee, OR 97115

R3217BB 00900
Donna & Frank Page
1909 N Center St
Newberg, OR 97132

R3217BB 00100
Joseph Mah
1908 N Center St
Newberg, OR 97132

R3217BB 01300
James Howell
Po Box 270
Newberg, OR 97132

R3217BB 00800
Dwight & Patti Kimberly
18201 NE Baker Trail Ln
Newberg, OR 97132

R3217BD 00200
Joyful Servant Lutheran Church
1716 N Villa Rd
Newberg, OR 97132

R3217 01904
Newberg School District 29J
714 E 6th St
Newberg, OR 97132

R3217BB 01700
Joshua & Clarissa Rapacz
912 E Pioneer Ln
Newberg, OR 97132

R3217BB 01100
Keith Reed
905 E Pioneer Ln
Newberg, OR 97132

R3217 01905
Northwest Christian Church
2315 N Villa Rd
Newberg, OR 97132

R3217BB 01500
Buck David F Trustee & Sajjadi Shapour
904 E Pioneer Ln
Newberg, OR 97132

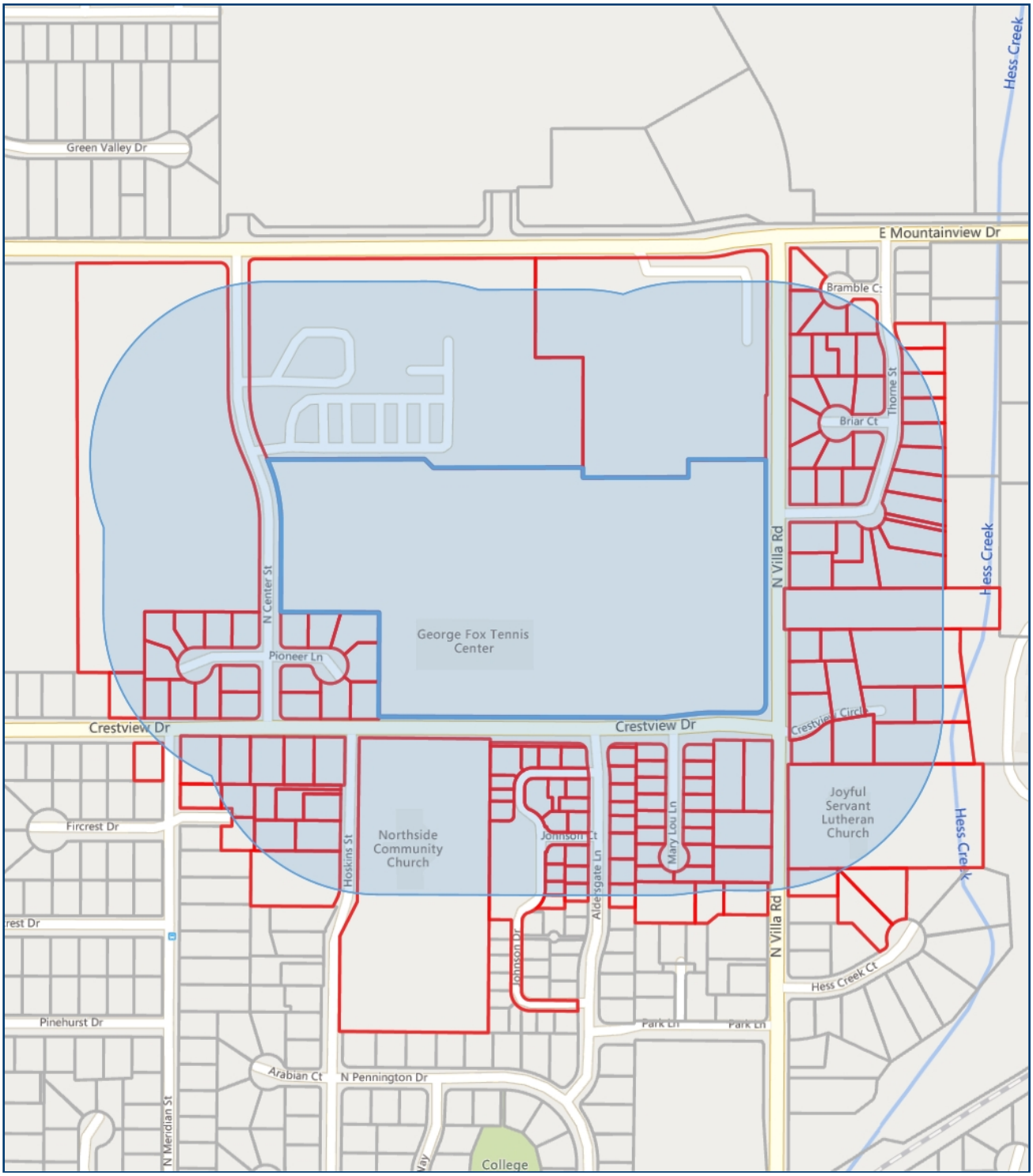
R3217BB 01600
James & Pamela Schaubel
908 E Pioneer Ln
Newberg, OR 97132

First American Title™

500 ft Buffer

2155 Villa Rd, Newberg, OR 97132

Report Generated: 11/9/2022



First American Title™

Customer Service Department
Phone: 503.219.8746(TRIO)
Email: cs.oregon@firstam.com
Report Generated: 11/9/2022

Ownership

Legal Owner(s): Northwest Christian Church
Site Address: 2155 Villa Rd Newberg, OR 97132
Mailing Address: 2315 N Villa Rd Newberg, OR 97132

Parcel #: R3217 01905
APN:
County: Yamhill

Property Characteristics

Bedrooms: 0
Total Bathrooms: 0
Full Bathrooms: 0
Half Bathrooms: 0
Units: 0
Stories:
Fire Place: N
Air Conditioning:
Heating Type:
Electric Type:

Year Built: 0
Building SqFt: 0
First Floor SqFt: 0
Basement Sqft: 0
Basment Type: Improved

Lot SqFt: 882961
Lot Acres: 20.27
Roof Type:
Roof Shape:
Porch Type:
Building Style:
Garage:
Garage SqFt: 0
Parking Spots: 0
Pool:

Property Information

Land Use: EXEMPT
Improvement Type: Public School
Legal Description: PT PARCEL 1 OF PARTITION P2003-30

Zoning: I
School District: Newberg School
Neighborhood:
Subdivision: Partition Plat P2003-30

Assessor & Tax

Market Land: $10,005,791
Market Total: $15,354,023
Market Structure: $5,348,232
Assessed Total: $4,992,227

Taxes: $0.00
% Improved: 43
Levy Code:
Millage Rate:

Sale History

Last Sale Date: 3/25/2022
Prior Sale Date: 11/15/2004

Doc #: 4476
Prior Doc #: 200423217

Last Sale Price: $652,488
Prior Sale Price: $180,400

Mortgage

1st Mortgage Date:
1st Mortgage Type:
2nd Mortgage Type:

Doc #:
1st Mortgage Lender:

1st Mortgage: $162,360
2nd Mortgage: $0

Exhibit F: Stormwater Report

GFU Austin Sports Complex
Newberg, Oregon

Stormwater Report

Date:	May 09, 2017 Revised July 14, 2017
Client:	George Fox University 1101 North Villa Road Newberg, OR 97132
Engineering Contact:	Chuck Gregory, P.E. chuckg@aks-eng.com
Engineering Firm:	AKS Engineering & Forestry, LLC
AKS Job Number:	5809

AKS ENGINEERING & FORESTRY
12965 SW Herman Road, Suite 100
Tualatin, OR 97062
P: (503) 563-6151
www.aks-eng.com

REGISTERED PROFESSIONAL ENGINEER
50644PE
OREGON
SEPT. 14, 1999
CHARLES EDWARD GREGORY
RENEWS: JUNE 30, 20__

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Tables

Appendices

Exhibit

Stormwater Report
GFU AUSTIN SPORTS COMPLEX
NEWBERG, OREGON

1.0 Purpose of Report
The purpose of this report is to analyze the effects of the proposed developments on the existing stormwater conveyance system and to document the criteria, methodology, and informational sources by which the proposed stormwater system has been designed.

2.0 Project Location/Description
The proposed improvements are positioned in the southwest portion of Tax Lot 1905 (Yamhill County Tax Map 3S 2W 17), along Crestview Drive west of the intersection with Villa Road.

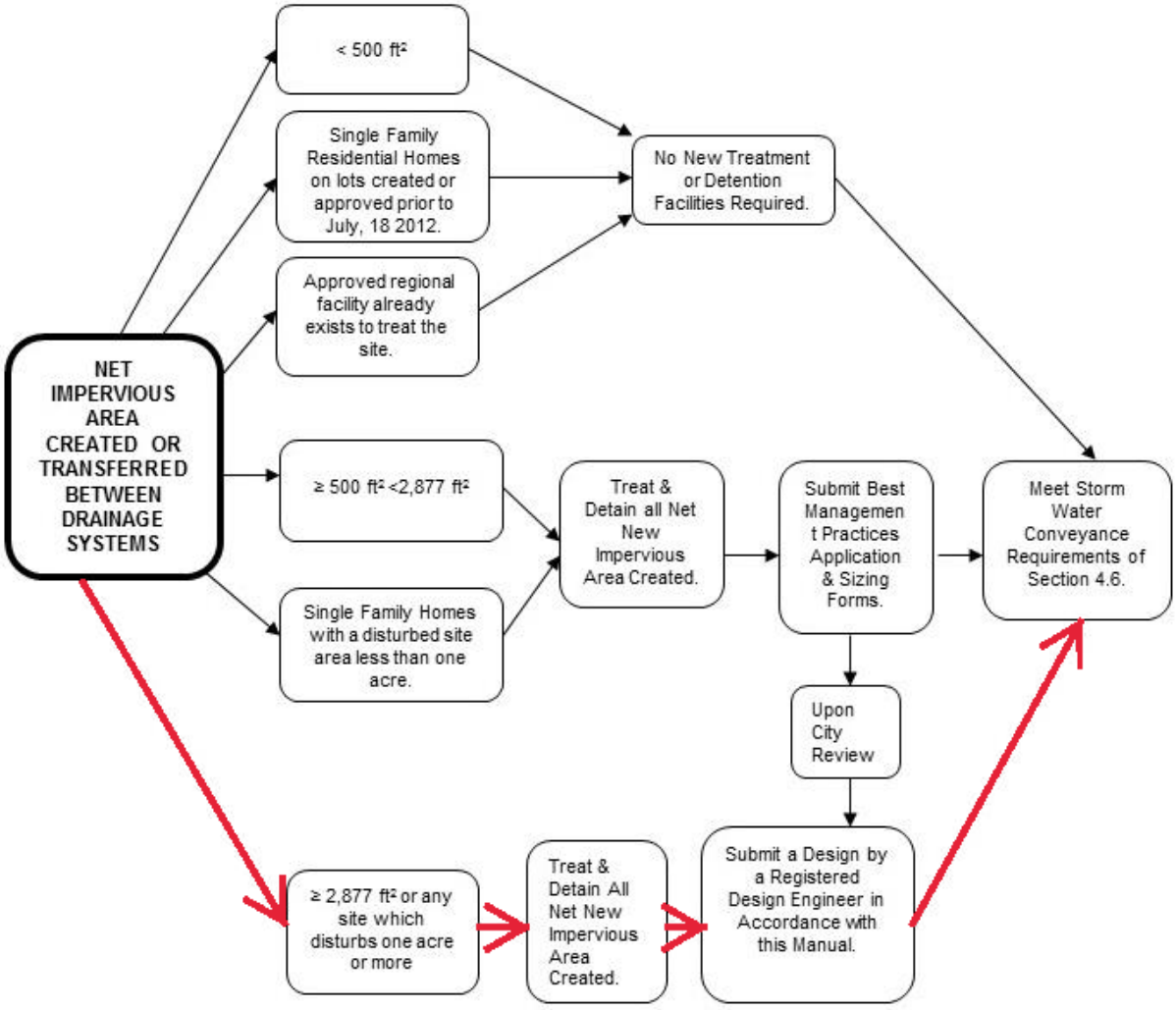
To the north of the project site, within the tax lot, there are existing athletic facilities with pedestrian paths. The eastern portion of the lot is undeveloped.

Proposed improvements include the construction of a domed fabric structure, a porous parking area, concrete sidewalks, and stormwater facilities; no demolition will be necessary. Surface water drainage will be provided with porous pavement and with the construction of a flat-bottomed swale/planter engineered to provide water quantity control and water quality treatment for post-development runoff.

3.0 Regulatory Design Criteria
Stormwater criteria was designed per the City of Newberg Public Works Design and Construction Standards (August 2015). Per the figure below, the stormwater facilities are engineered to treat and detain all new net impervious area created.

4.6 Water Quantity and Quality Facilities

Figure 4.4 Storm water Quality & Quantity Design Flow Chart



3.1 STORMWATER QUANTITY

4.7.1.III Water Quantity Facility Design & Control Standards

Stormwater quantity on-site detention facilities shall be designed to capture runoff so the post-development runoff rates from the site do not exceed the predevelopment runoff rates from the site, based on 24-hour storm events ranging from the ½ of the 2-year return storm to the 25-year return storm. Specifically, the ½ of the 2, 2, 10, and 25-year post-development runoff rates will not exceed their respective ½ of the 2, 2, 10, and 25-year pre-development runoff rates….

3.2 STORMWATER QUALITY

4.8.5 Water Quality Storm

The storm defines both the volume and rate of runoff. The stormwater quality only facilities shall be designed for a dry weather storm event totaling 1.0 inches of precipitation falling in 24 hours…

4.0 Design Methodology

The Santa Barbara Urban Hydrograph (SBUH) Method was used to analyze stormwater runoff from the site. This method utilizes the SCS Type 1A 24-hour design storm. HydroCAD computer software version 10.00-18 aided in the analysis.

5.0 Design Parameters

5.1 DESIGN STORMS – CONVEYANCE SIZING

Stormwater mains, inlets, and laterals for the site are placed at locations that adequately collect and control the stormwater for the site. The stormwater pipes are sized using Manning's equation based on peak flows for the 25-year storm event.

5.2 PRE-DEVELOPED SITE CONDITIONS

5.2.1 Site Topography

The center of the existing site is graded with a crown with slopes ranging up to one (1) percent. Runoff sheet flows to a ditch to the south and through an existing culvert. Stormwater then flows to an existing ditch inlet, west of Villa Road.

There is an existing on-site gravel parking/staging area to the south and gravel paths flanking the east and west sides of the project site. The gravel path to the west is used as a fire apparatus access for the existing athletic facilities located on the lot. Runoff from these gravel areas sheet flows to the south and to the east where it collects in a ditch and is conveyed to the ditch inlet west of Villa Road.

A small portion of runoff from the westernmost area of the site sheet flows to an existing swale/rain garden along the pedestrian path connecting the site to N Center Street.

The time of concentration (Tc) is based on a combination of sheet flow and shallow concentrated flow. See Appendix C for input parameters.

5.2.2 Land Use

The current land use is zoned for institutional development.

5.3 SOIL TYPE

Per Section 4.5.4 Santa Barbara Urban Hydrograph (SBUH) of the City of Newberg Public Works Design and Construction Standards (August 2015):

> *II. Curve numbers shall be derived from the National Resources Conservation Service's (NRCS) runoff curve numbers contained in Technical Release 55 (TR-55)-Urban Hydrology for Small Watersheds.*
>
> *III. Soil types shall be derived from the NRCS Soil Survey for Yamhill County.*

The soils for the site are classified as Aloha Silt Loam (0 to 3% slopes) and Woodburn Silt Loam (3 to 12% slopes) per the USDA Soil Survey for Yamhill County. Information for these soils and selected curve numbers are contained within Appendix E and F, respectively, of this report.

5.4 POST-DEVELOPED SITE CONDITIONS

5.4.1 Site Topography

A domed fabric structure will be constructed on the crowned portion of the site. A swale will be constructed around three (3) sides. Runoff from the building will be treated as it infiltrates through the growing medium and then conveyed to an overflow which conveys stormwater to a flow spreader in the undeveloped eastern section of the property.

The gravel parking area along Crestview Drive will be dug out, scarified, and replaced with porous asphalt underlain with drain rock. Any excess rainfall that permeates through the porous pavement will flow along the sloped subgrade, be collected in a perforated pipe, and discharge to an existing culvert. This runoff will then flow as in pre-developed conditions.

The gravel fire access road to the west will remain, for the most part, as gravel. Approximately 70 feet will be removed and replaced with porous asphalt. Any excess rainfall from the northeast portion of the gravel road will sheet flow east onto the site where it will have the opportunity to infiltrate (see Post-Development Catchment Map). A small portion to the northwest will drain to an existing grassy swale which discharges to existing stormwater facilities. The majority of runoff from the gravel road will sheet flow to a french drain which will discharge to the swale.

Site topography will not change outside of the immediate improvement areas. Stormwater will either be collected and detained in the water quality swale or sheet flow as in pre-developed conditions. The discharge locations will mimic the existing runoff conditions.

5.4.2 Land Use

The site land-use will remain unchanged. The tax lot is developed with athletic facilities for the educational institution (George Fox University) or remains undeveloped.

5.4.3 Post-Developed Input Parameters

Per the City of Newberg *Public Works Design and Construction Standards (August 2015)*, curve numbers for input are to be taken from Technical Release 55 (TR-55)-Urban Hydrology for Small Watersheds. Per the NRCS Soil Survey for Yamhill County, the hydrological soil group for on-site soils is C.

The existing ground is most accurately described as “open space, fair condition.” Grass cover is sparse in places but overall covers more than 50 percent. A curve number of 79 is used for on-site soils. See Appendix F for additional input parameters.

During the on-site geotechnical investigation, equipment limitations and site topography meant that infiltration testing could not be performed. Per the USDA NRCS Soil Survey for Yamhill County, Oregon, the capacity of the most limiting layer to transmit water (Ksat) for Aloha silt loam is 0.20 to 0.57 in/hr. Applying a factor of safety of 2.0 to the most conservative value of 0.20 in/hr, a design infiltration rate of 0.10 in/hr was chosen.

The minimum time of concentration (Tc) was conservatively assumed to be 5 minutes.

5.4.4 Description of Off-Site Contributing Basins

There are no off-site contributory basins. Runoff from the northern section of the property will sheet flow to the existing ditch inlet and will not be routed through the proposed stormwater infrastructure.

6.0 Stormwater Analyses

6.1 PROPOSED STORMWATER CONDUIT SIZING AND INLET SPACING

The stormwater pipes are adequately sized to capture and convey flows from the 25-year storm event.

6.2 PROPOSED STORMWATER QUALITY CONTROL FACILITY

Stormwater quantity control will be provided with the construction of LIDA facilities, a porous pavement parking lot and a flat-bottomed vegetated swale/planter which surrounds the north, south, and east sides of the structure. The two lengths of the swale drain to an overflow standpipe located on the east side of the structure. The elevation of the standpipe is designed to detain the released runoff to pre-developed rates.

The swale is underlain with 18 inches of growing medium and 12 inches of drain rock. A perforated pipe runs along the length of the swale, at the bottom of the drain rock layer. The two perforated pipes (running along the north and south end) meet and tie into the standpipe overflow. The orifice size from the perforated pipe is engineered to meet required release rates and is accounted for in the stormwater design.

6.3 PROPOSED STORMWATER QUALITY CONTROL FACILITY DESIGN

Stormwater quality control will be provided with the construction of a flat-bottomed swale/planter which surrounds the north, south, and east sides of the structure, as well as porous pavement for the parking area.

The swale is underlain with 18 inches of growing medium with a composition meeting the requirements of section A2.2.III.b of Appendix A of the City of Newberg Public Works Design and Construction Standards (August 2015). It is assumed that the growing medium has an infiltration rate of 2 in/hr.

The prescribed water quality storm completely infiltrates through the growing medium before being collected in the perforated pipe and released into the standpipe overflow.

6.4 STORMWATER SUMMARY

Table 6-4 Stormwater Summary

Storm Event	Rainfall Depth (inches)	Pre-Developed Flow (cfs)	Total Post-Developed Flow (cfs)	Flow Released (cfs)	Difference (cfs)	*Detention Volume Provided (cf)	Detention Volume Utilized (cf)
½ 2-Year	1.25	0.21	1.65	0.21	-0.00	17,384	1,190
2-Year	2.50	1.46	4.61	1.22	-0.24	17,384	3,754
10-Year	3.50	2.78	7.03	2.77	-0.01	17,384	5,389
25-Year	4.00	3.47	8.24	3.08	-0.39	17,384	6,300

*Note: Detention volume provided includes 12” of freeboard above the 25-year storm peak elevation.

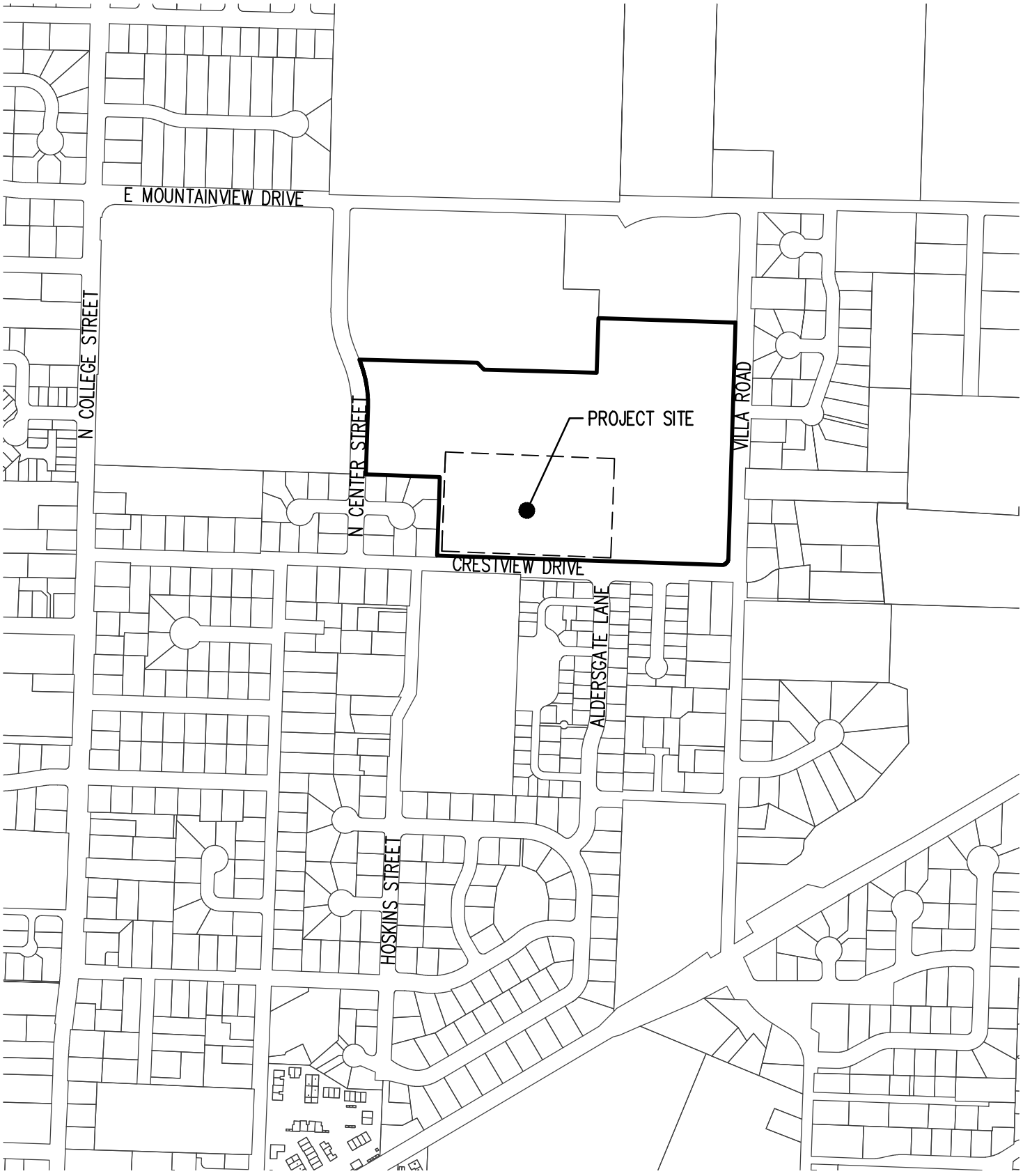
It should also be noted that the flow released for the 100-year design storm is 3.34 cfs (see hydroCAD calculations). This value is less than the pre-developed release rate for the 25-year storm. In addition, the total utilized storage for the 100-year storm is less than half of the total capacity of the swale with the required 12" of freeboard (7,257 cf out of 17,384 cf). The planned improvements will lessen the demand on the public storm system during large storms.

6.5 DOWNSTREAM ANALYSIS

The proposed improvements include stormwater facilities to treat and detain all new net impervious area created. The stormwater impact from the development ends at the proposed flow spreader, where runoff rates and conditions mirror those in the pre-developed state. See Appendix G for the downstream analysis map.

The post-development discharge to the existing ditch inlet (and then to Hess Creek) will be less than or equal to pre-developed rates. Therefore, no impact to the downstream public storm system is anticipated.

Appendix A: Vicinity Map



NTS

DATE: 05/09/2017

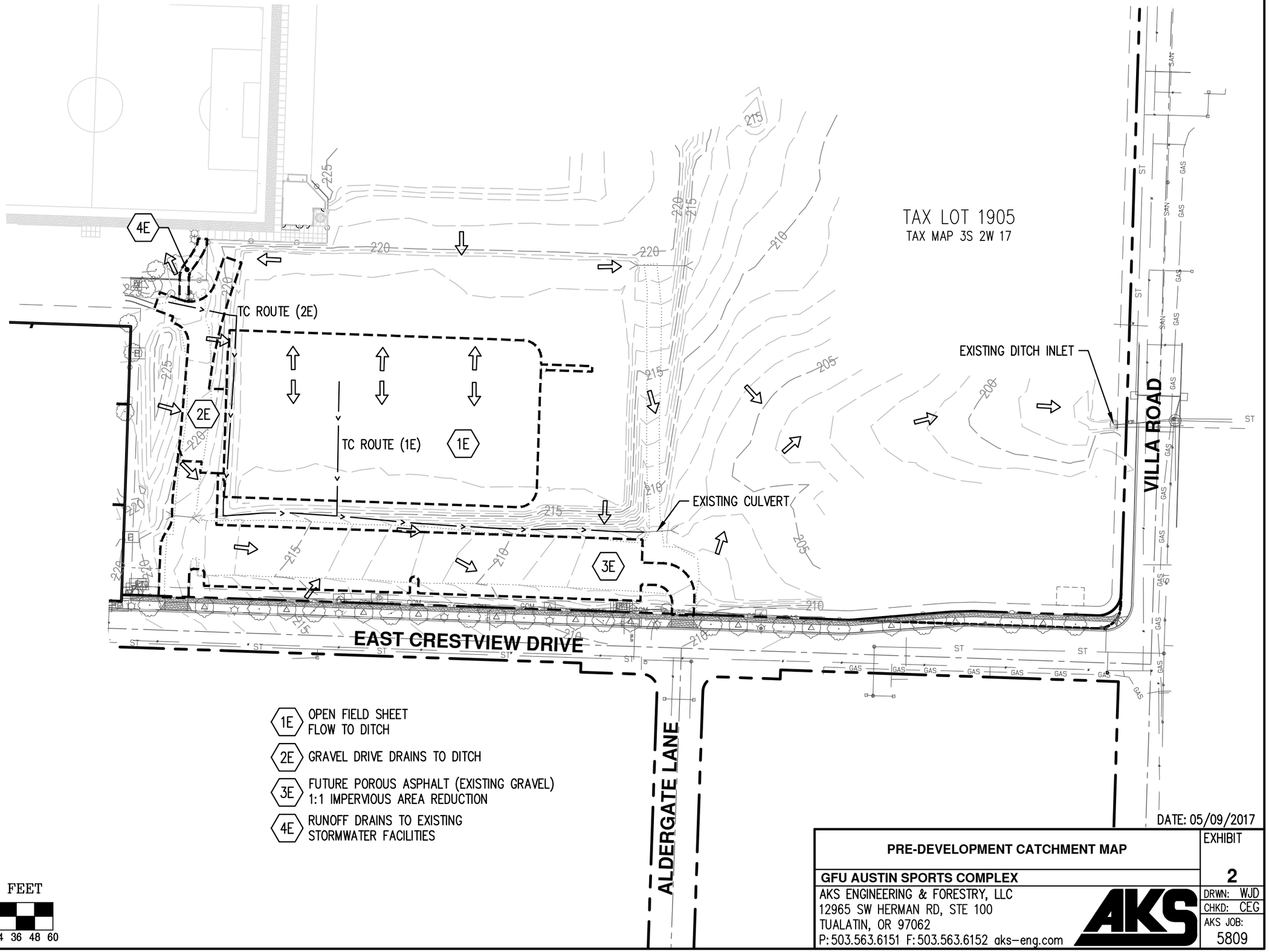
VICINITY MAP

EXHIBIT 1

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
P: 503.563.6151 F: 503.563.6152 aks-eng.com

DRWN: WJD
CHKD: CEG
AKS JOB: 5809

Appendix B: Catchment Maps



1E OPEN FIELD SHEET FLOW TO DITCH

2E GRAVEL DRIVE DRAINS TO DITCH

3E FUTURE POROUS ASPHALT (EXISTING GRAVEL) 1:1 IMPERVIOUS AREA REDUCTION

4E RUNOFF DRAINS TO EXISTING STORMWATER FACILITIES

SCALE 1" = 60 FEET

60 0 24 36 48 60

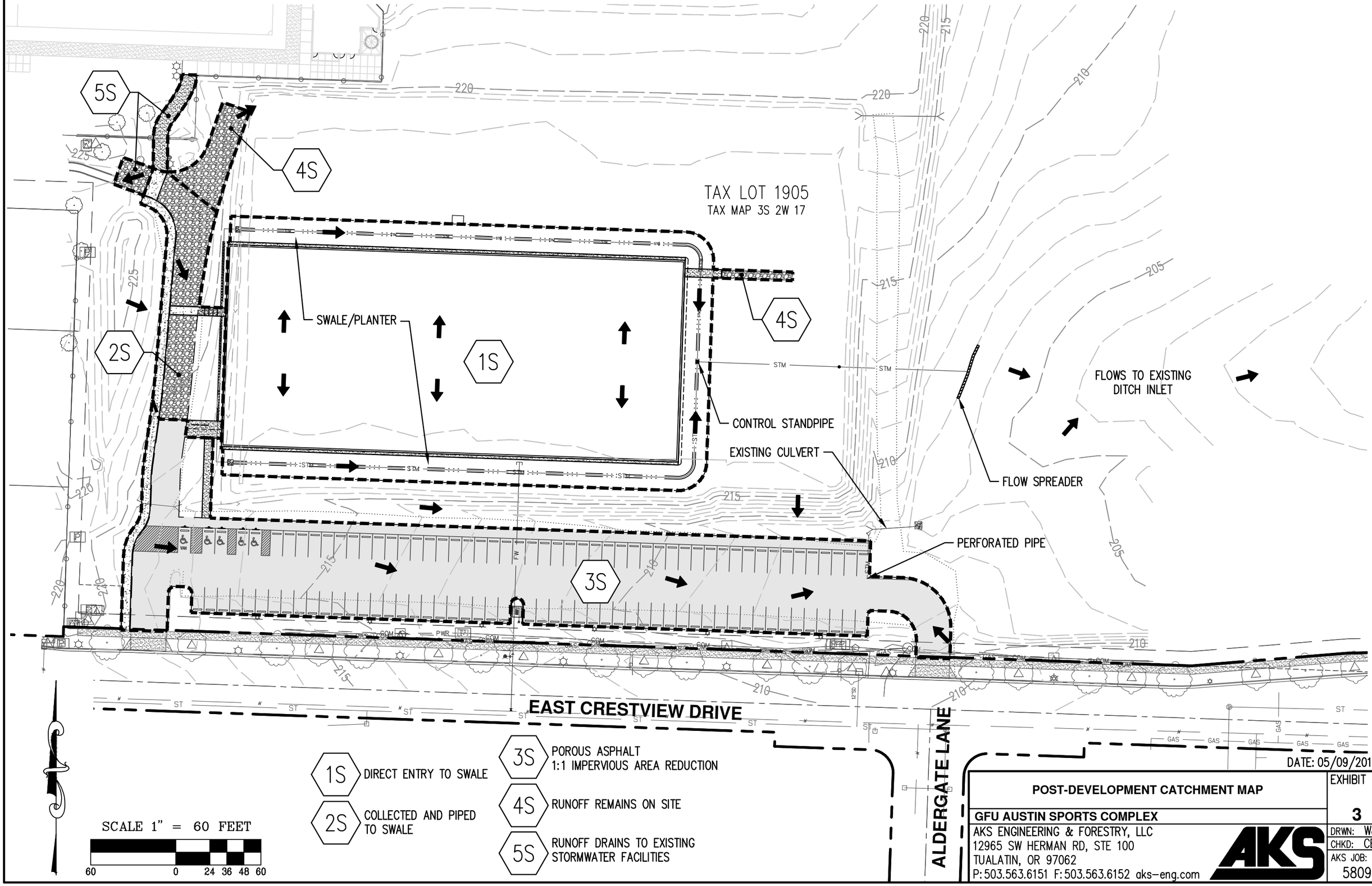
DATE: 05/09/2017

PRE-DEVELOPMENT CATCHMENT MAP	EXHIBIT
GFU AUSTIN SPORTS COMPLEX	2

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
P: 503.563.6151 F: 503.563.6152 aks-eng.com

DRWN: WJD
CHKD: CEG
AKS JOB: 5809

DWG: 5809 STORMWATER EXHIBITS-PRE | PRE-DEVELOPED



DATE: 05/09/2017

POST-DEVELOPMENT CATCHMENT MAP

EXHIBIT 3

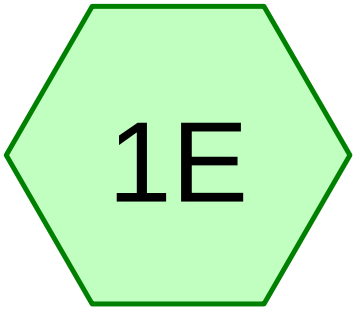
GFU AUSTIN SPORTS COMPLEX

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
P: 503.563.6151 F: 503.563.6152 aks-eng.com

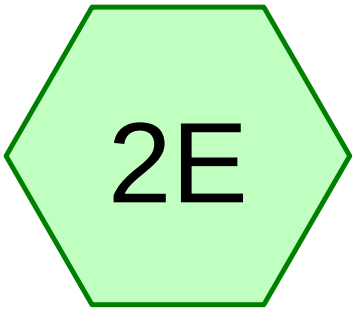
DRWN: WJD
CHKD: CEG
AKS JOB: 5809

DWG: 5809 STORMWATER EXHIBITS-POST | POST-DEVELOPED

Appendix C: Pre-Developed HydroCAD Calculations



OPEN FIELD SHEET
FLOW TO DITCH



GRAVEL DRIVE
DRAINS TO DITCH

Subcat Reach Pond Link

Routing Diagram for PRE DEVELOPED
Prepared by AKS Engineering & Forestry, Printed 5/2/2017

Summary for Subcatchment 1E: OPEN FIELD SHEET FLOW TO DITCH

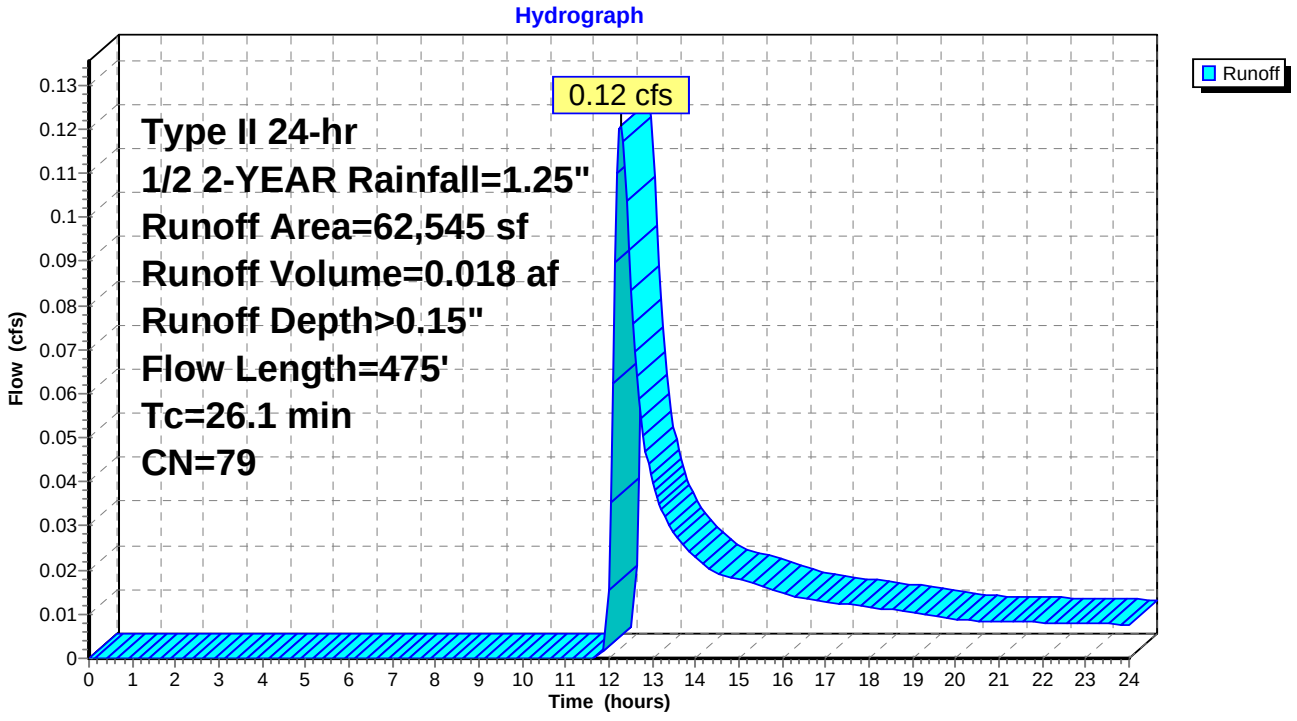
Runoff = 0.12 cfs @ 12.28 hrs, Volume= 0.018 af, Depth> 0.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1/2 2-YEAR Rainfall=1.25"

	Area (sf)	CN	Description
*	62,545	79	OPEN SPACE, POOR CONDITION
	62,545		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	140	0.0060	0.10		**Sheet Flow, SHEET FLOW TO DITCH** Grass: Short n= 0.150 P2= 2.50"
2.6	335	0.0210	2.17		**Shallow Concentrated Flow, DITCH FLOW** Grassed Waterway Kv= 15.0 fps
26.1	475	Total			

Subcatchment 1E: OPEN FIELD SHEET FLOW TO DITCH



Summary for Subcatchment 2E: GRAVEL DRIVE DRAINS TO DITCH

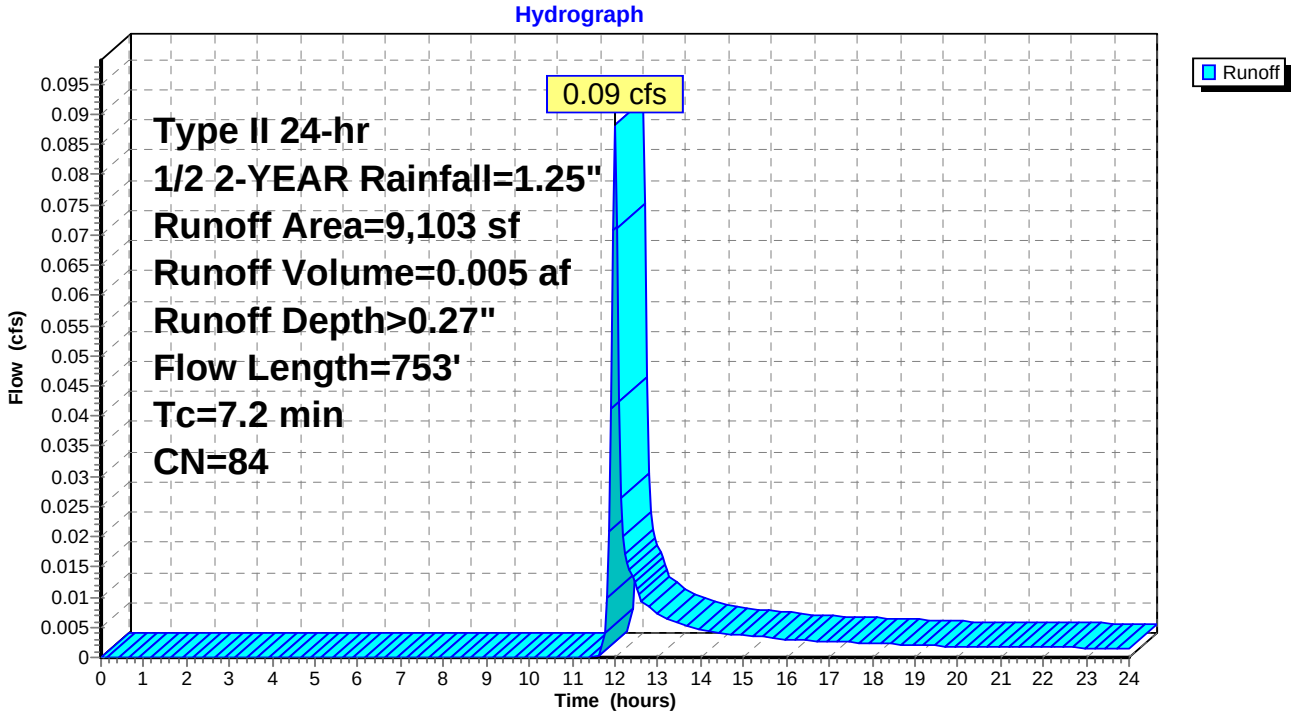
Runoff = 0.09 cfs @ 12.00 hrs, Volume= 0.005 af, Depth> 0.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1/2 2-YEAR Rainfall=1.25"

	Area (sf)	CN	Description
*	4,931	89	EXISTING GRAVEL
*	4,172	79	OPEN SPACE, FAIR CONDITION
	9,103	84	Weighted Average
	9,103		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	75	0.0930	2.12		**Sheet Flow, SHEET FLOW OVER GRAVEL TO DITCH** Smooth surfaces n= 0.011 P2= 2.50"
3.1	218	0.0060	1.16		**Shallow Concentrated Flow, DITCH FLOW #`1** Grassed Waterway Kv= 15.0 fps
3.5	460	0.0210	2.17		**Shallow Concentrated Flow, DITCH FLOW #2** Grassed Waterway Kv= 15.0 fps
7.2	753	Total			

Subcatchment 2E: GRAVEL DRIVE DRAINS TO DITCH



Summary for Subcatchment 1E: OPEN FIELD SHEET FLOW TO DITCH

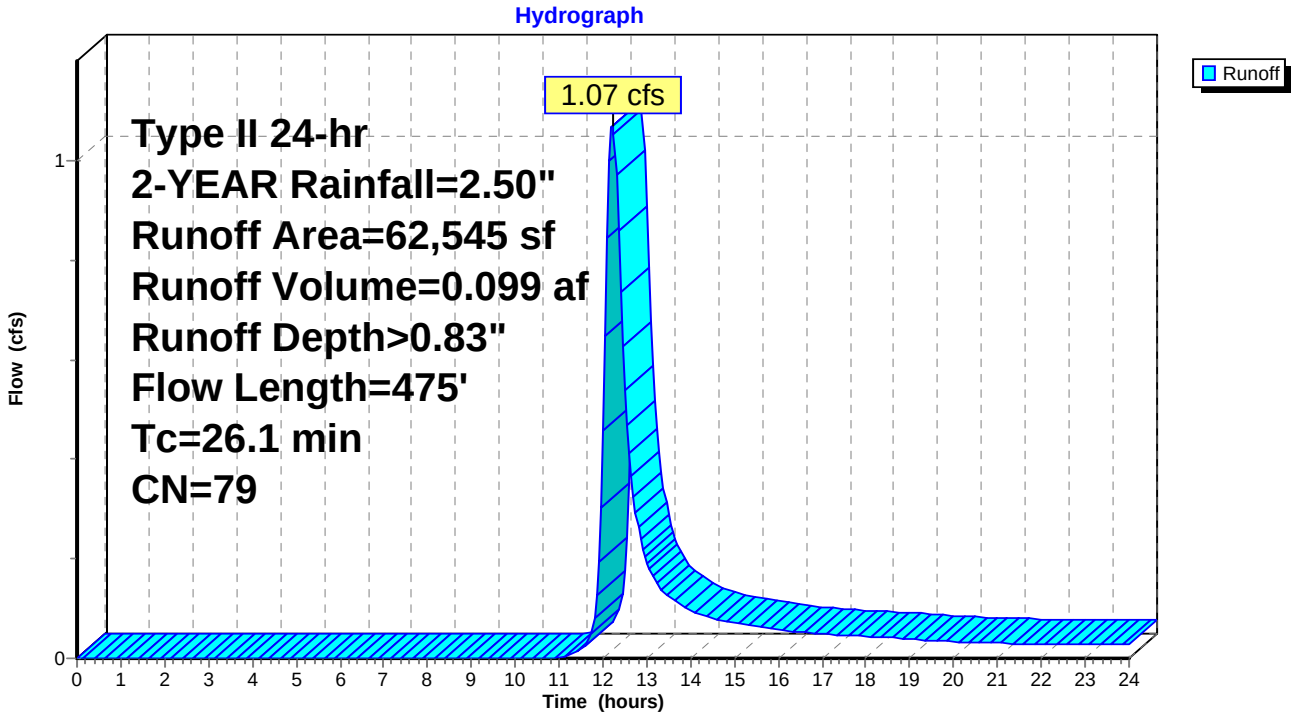
Runoff = 1.07 cfs @ 12.22 hrs, Volume= 0.099 af, Depth> 0.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-YEAR Rainfall=2.50"

	Area (sf)	CN	Description
*	62,545	79	OPEN SPACE, POOR CONDITION
	62,545		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	140	0.0060	0.10		**Sheet Flow, SHEET FLOW TO DITCH** Grass: Short n= 0.150 P2= 2.50"
2.6	335	0.0210	2.17		**Shallow Concentrated Flow, DITCH FLOW** Grassed Waterway Kv= 15.0 fps
26.1	475	Total			

Subcatchment 1E: OPEN FIELD SHEET FLOW TO DITCH



Summary for Subcatchment 2E: GRAVEL DRIVE DRAINS TO DITCH

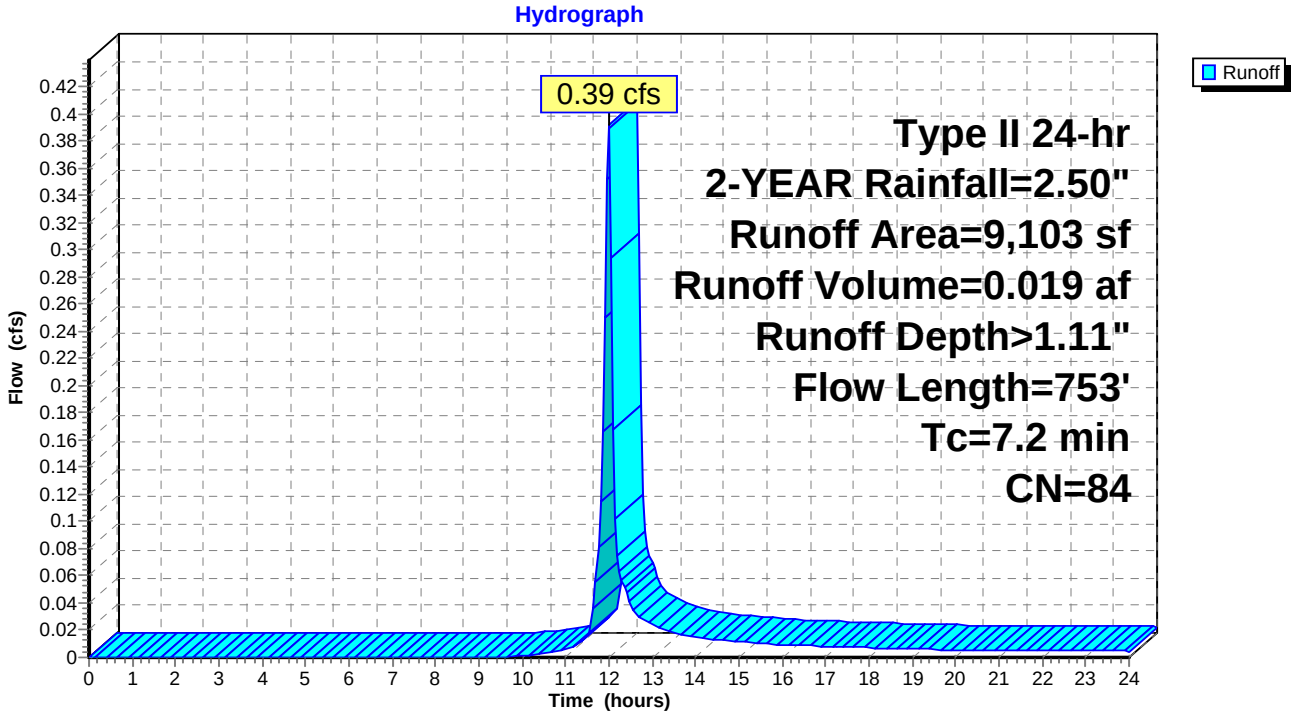
Runoff = 0.39 cfs @ 11.99 hrs, Volume= 0.019 af, Depth> 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-YEAR Rainfall=2.50"

	Area (sf)	CN	Description
*	4,931	89	EXISTING GRAVEL
*	4,172	79	OPEN SPACE, FAIR CONDITION
	9,103	84	Weighted Average
	9,103		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	75	0.0930	2.12		**Sheet Flow, SHEET FLOW OVER GRAVEL TO DITCH** Smooth surfaces n= 0.011 P2= 2.50"
3.1	218	0.0060	1.16		**Shallow Concentrated Flow, DITCH FLOW #`1** Grassed Waterway Kv= 15.0 fps
3.5	460	0.0210	2.17		**Shallow Concentrated Flow, DITCH FLOW #2** Grassed Waterway Kv= 15.0 fps
7.2	753	Total			

Subcatchment 2E: GRAVEL DRIVE DRAINS TO DITCH



Summary for Subcatchment 1E: OPEN FIELD SHEET FLOW TO DITCH

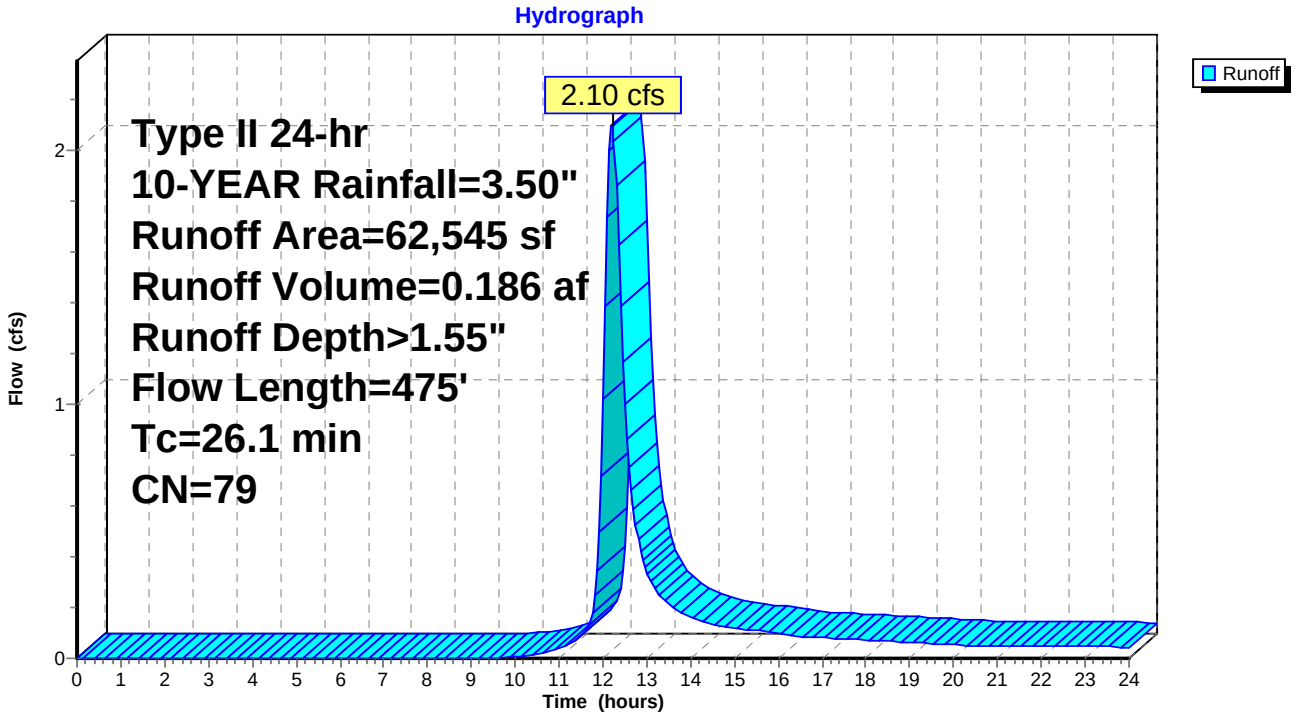
Runoff = 2.10 cfs @ 12.21 hrs, Volume= 0.186 af, Depth> 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	62,545	79	OPEN SPACE, POOR CONDITION
	62,545		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	140	0.0060	0.10		**Sheet Flow, SHEET FLOW TO DITCH** Grass: Short n= 0.150 P2= 2.50"
2.6	335	0.0210	2.17		**Shallow Concentrated Flow, DITCH FLOW** Grassed Waterway Kv= 15.0 fps
26.1	475	Total			

Subcatchment 1E: OPEN FIELD SHEET FLOW TO DITCH



Summary for Subcatchment 2E: GRAVEL DRIVE DRAINS TO DITCH

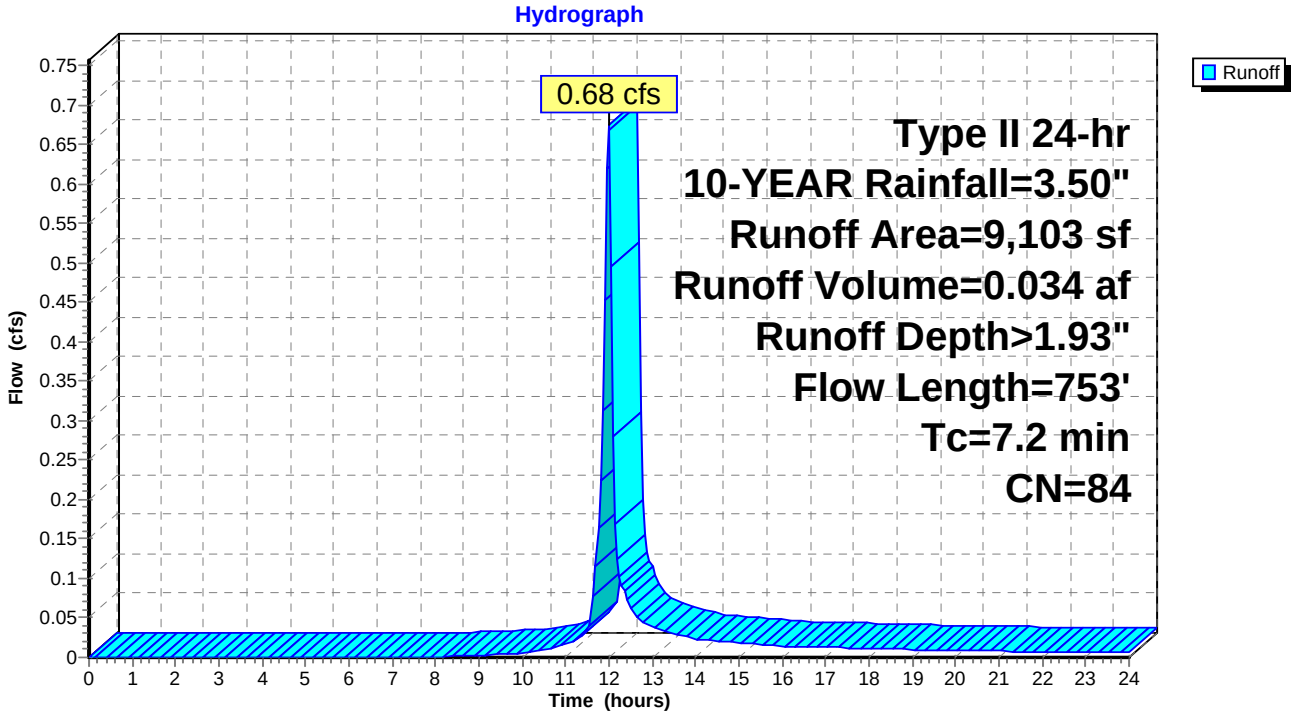
Runoff = 0.68 cfs @ 11.99 hrs, Volume= 0.034 af, Depth> 1.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	4,931	89	EXISTING GRAVEL
*	4,172	79	OPEN SPACE, FAIR CONDITION
	9,103	84	Weighted Average
	9,103		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	75	0.0930	2.12		**Sheet Flow, SHEET FLOW OVER GRAVEL TO DITCH** Smooth surfaces n= 0.011 P2= 2.50"
3.1	218	0.0060	1.16		**Shallow Concentrated Flow, DITCH FLOW #`1** Grassed Waterway Kv= 15.0 fps
3.5	460	0.0210	2.17		**Shallow Concentrated Flow, DITCH FLOW #2** Grassed Waterway Kv= 15.0 fps
7.2	753	Total			

Subcatchment 2E: GRAVEL DRIVE DRAINS TO DITCH



Summary for Subcatchment 1E: OPEN FIELD SHEET FLOW TO DITCH

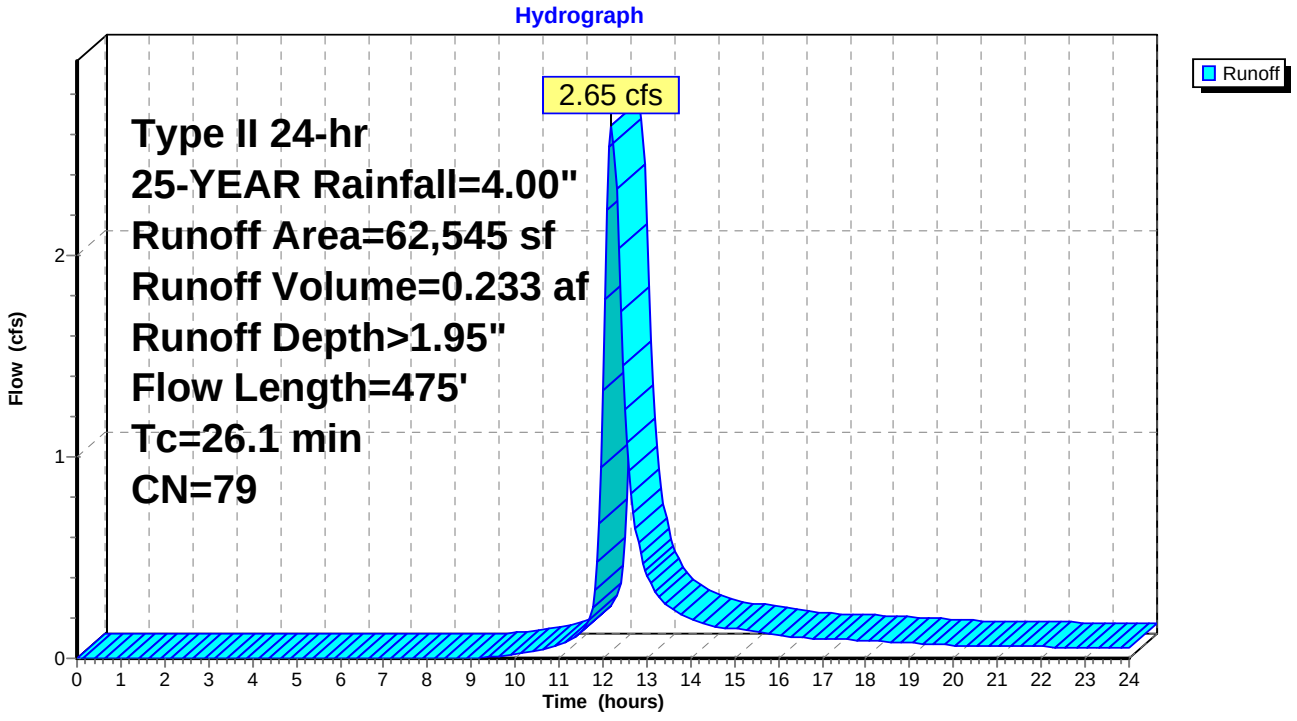
Runoff = 2.65 cfs @ 12.20 hrs, Volume= 0.233 af, Depth> 1.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-YEAR Rainfall=4.00"

	Area (sf)	CN	Description
*	62,545	79	OPEN SPACE, POOR CONDITION
	62,545		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.5	140	0.0060	0.10		**Sheet Flow, SHEET FLOW TO DITCH** Grass: Short n= 0.150 P2= 2.50"
2.6	335	0.0210	2.17		**Shallow Concentrated Flow, DITCH FLOW** Grassed Waterway Kv= 15.0 fps
26.1	475	Total			

Subcatchment 1E: OPEN FIELD SHEET FLOW TO DITCH



Summary for Subcatchment 2E: GRAVEL DRIVE DRAINS TO DITCH

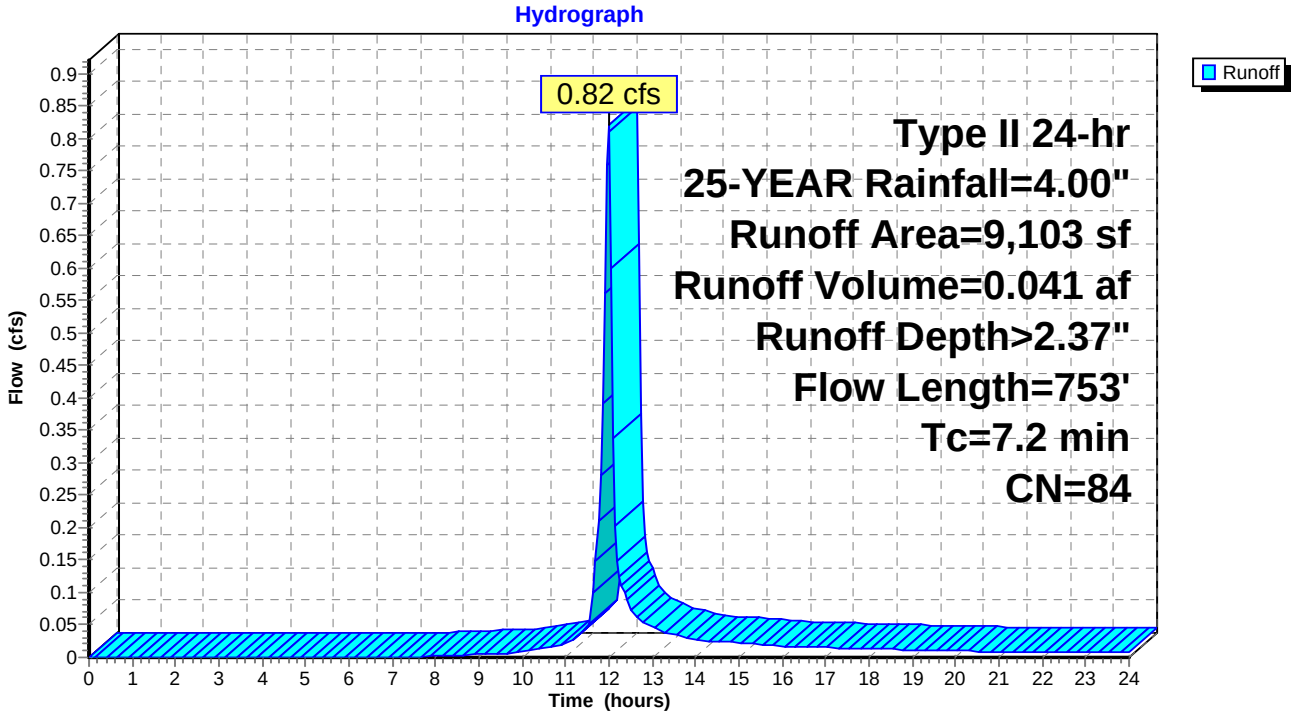
Runoff = 0.82 cfs @ 11.98 hrs, Volume= 0.041 af, Depth> 2.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-YEAR Rainfall=4.00"

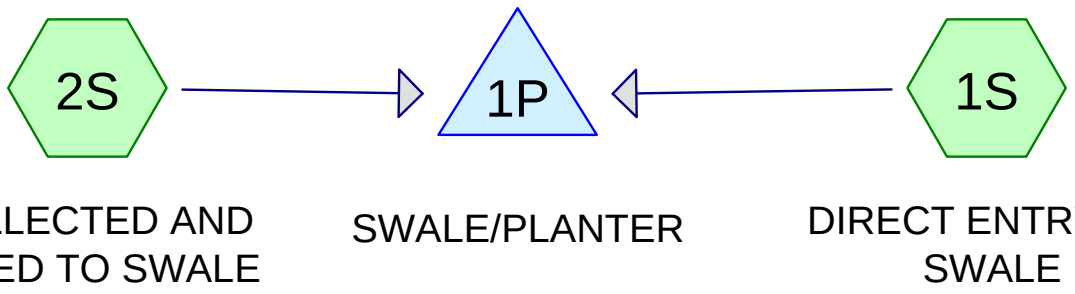
	Area (sf)	CN	Description
*	4,931	89	EXISTING GRAVEL
*	4,172	79	OPEN SPACE, FAIR CONDITION
	9,103	84	Weighted Average
	9,103		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	75	0.0930	2.12		**Sheet Flow, SHEET FLOW OVER GRAVEL TO DITCH** Smooth surfaces n= 0.011 P2= 2.50"
3.1	218	0.0060	1.16		**Shallow Concentrated Flow, DITCH FLOW #`1** Grassed Waterway Kv= 15.0 fps
3.5	460	0.0210	2.17		**Shallow Concentrated Flow, DITCH FLOW #2** Grassed Waterway Kv= 15.0 fps
7.2	753	Total			

Subcatchment 2E: GRAVEL DRIVE DRAINS TO DITCH



Appendix D: Post-Developed HydroCAD Calculations



Subcat Reach Pond Link

Routing Diagram for POST DEVELOPED
Prepared by AKS Engineering & Forestry, Printed 5/5/2017

Summary for Subcatchment 1S: DIRECT ENTRY TO SWALE

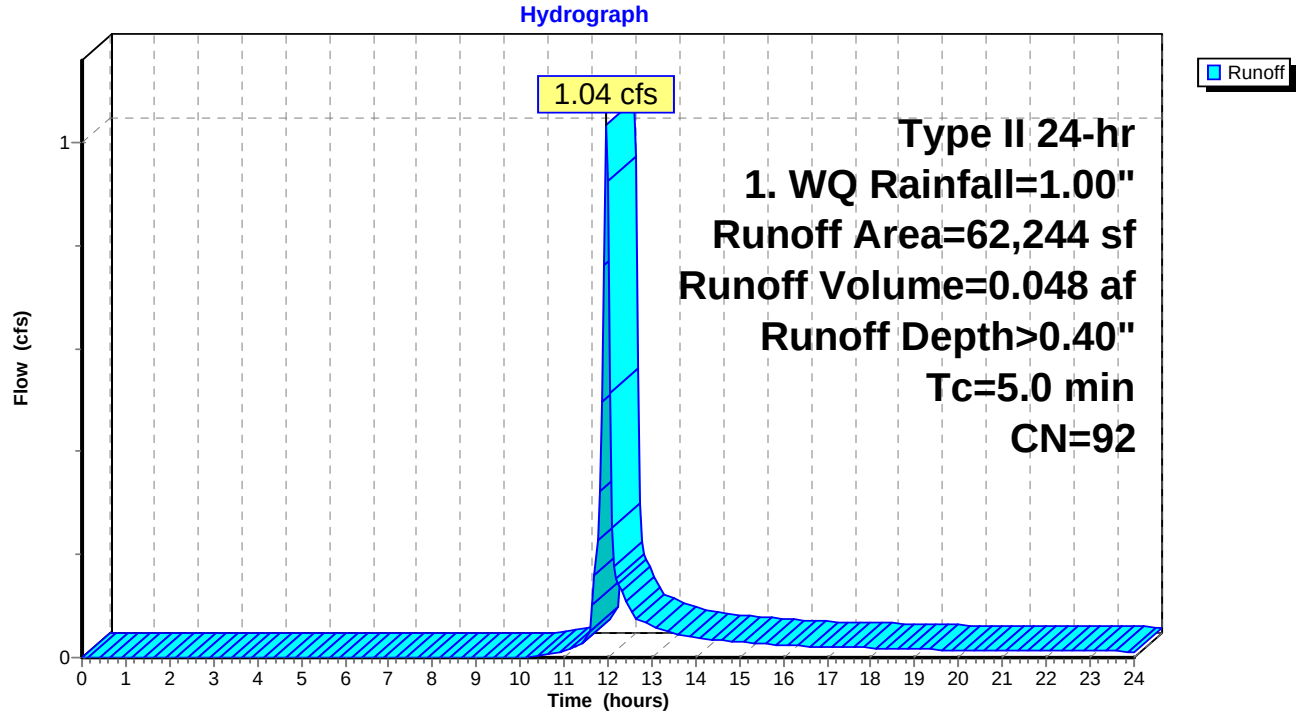
Runoff = 1.04 cfs @ 11.96 hrs, Volume= 0.048 af, Depth> 0.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1. WQ Rainfall=1.00"

	Area (sf)	CN	Description
*	45,882	98	DOMED FABRIC STRUCTURE
*	1,445	98	CONCRETE
*	14,746	74	SWALE FOOTPRINT
*	171	79	OPEN SPACE, FAIR CONDITION
	62,244	92	Weighted Average
	14,917		23.97% Pervious Area
	47,327		76.03% Impervious Area

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

Subcatchment 1S: DIRECT ENTRY TO SWALE



Summary for Subcatchment 2S: COLLECTED AND PIPED TO SWALE

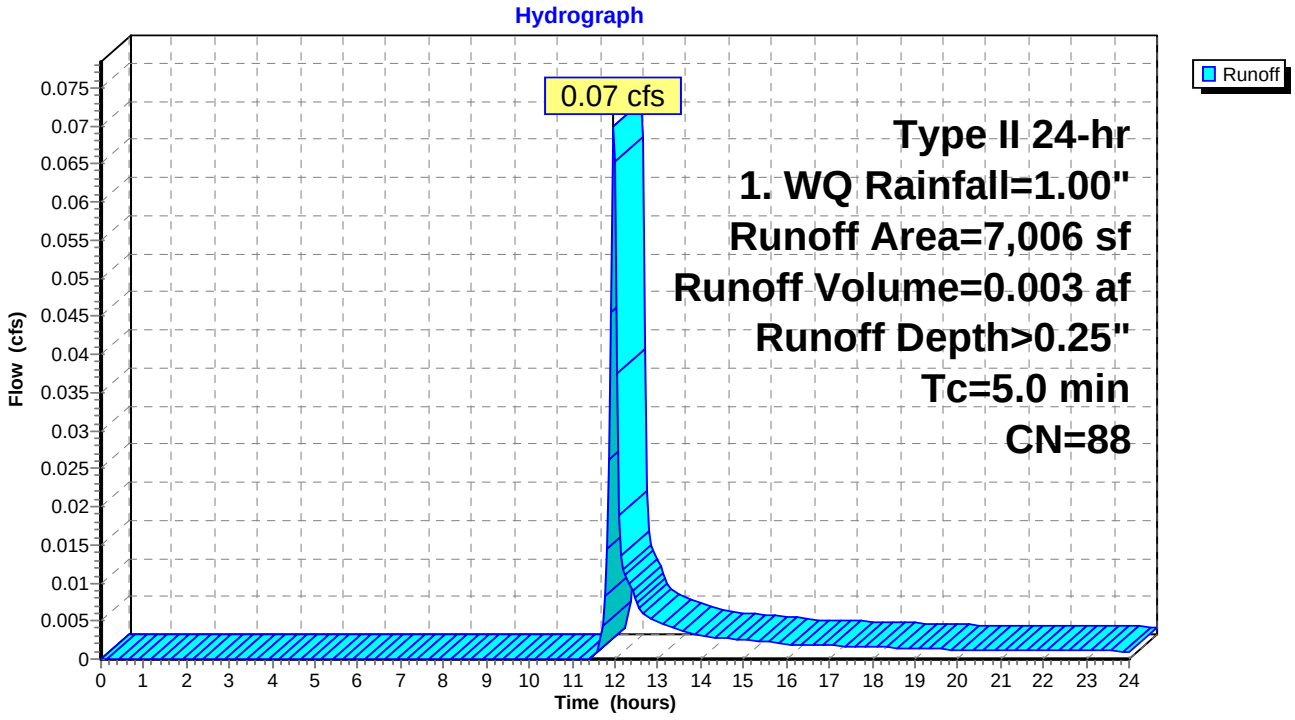
Runoff = 0.07 cfs @ 11.97 hrs, Volume= 0.003 af, Depth> 0.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1. WQ Rainfall=1.00"

	Area (sf)	CN	Description
*	1,389	98	CONCRETE
*	3,632	89	GRAVEL
*	1,985	79	OPEN SPACE, FAIR CONDITION
	7,006	88	Weighted Average
	5,617		80.17% Pervious Area
	1,389		19.83% Impervious Area

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

Subcatchment 2S: COLLECTED AND PIPED TO SWALE



Summary for Pond 1P: SWALE/PLANTER

Inflow Area = 1.590 ac, 70.35% Impervious, Inflow Depth > 0.39" for 1. WQ event
Inflow = 1.11 cfs @ 11.96 hrs, Volume= 0.051 af
Outflow = 0.20 cfs @ 12.15 hrs, Volume= 0.051 af, Atten= 82%, Lag= 11.5 min
Discarded = 0.02 cfs @ 12.15 hrs, Volume= 0.003 af
Primary = 0.18 cfs @ 12.15 hrs, Volume= 0.048 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 215.52' @ 12.15 hrs Surf.Area= 8,353 sf Storage= 737 cf

Plug-Flow detention time= 53.0 min calculated for 0.051 af (100% of inflow)
Center-of-Mass det. time= 51.8 min (897.2 - 845.4)

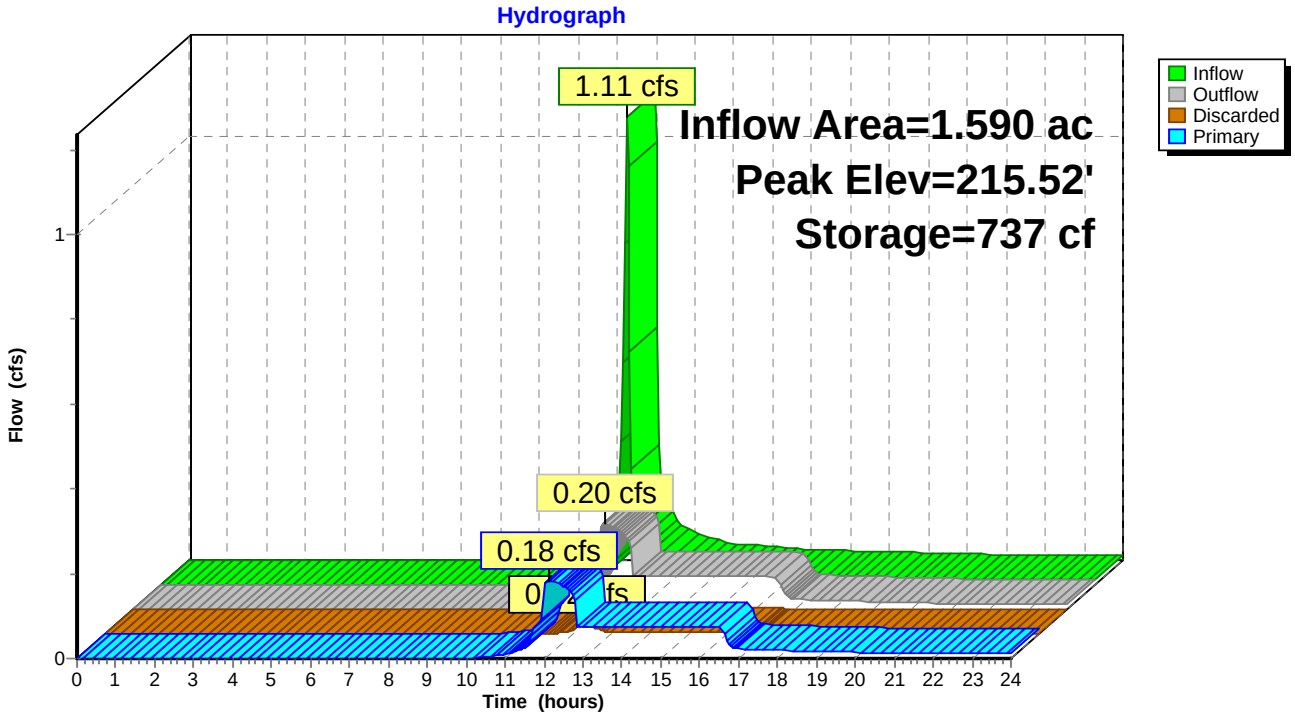
Volume	Invert	Avail.Storage	Storage Description
#1	216.23'	16,325 cf	**2.00'W x 398.00'L x 2.00'H PONDING DEPTH Z=4.0** x 2
#2	214.73'	487 cf	**2.00'W x 398.00'L x 1.50'H 1.5' GROWING MEDIUM Z=4.0** x 2 9,732 cf Overall x 5.0% Voids
#3	213.73'	502 cf	**2.00'W x 398.00'L x 1.00'H 1' DRAIN ROCK** x 2 1,592 cf Overall - 69 cf Embedded = 1,523 cf x 33.0% Voids
#4	213.73'	69 cf	**4.0" Round PERFORATED PIPE** x 2 Inside #3 L= 398.0'
		17,384 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	211.95'	**12.0" Round CULVERT TO STM DRAIN** L= 100.0' Ke= 0.600 Inlet / Outlet Invert= 211.95' / 209.42' S= 0.0253 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	213.37'	**2.2" Vert. Orifice/Grate** C= 0.600
#3	Device 2	213.73'	**2.000 in/hr Exfiltration over Surface area**
#4	Device 1	216.72'	**12.0" Horiz. RISER** C= 0.600 Limited to weir flow at low heads
#5	Discarded	213.73'	**0.100 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.02 cfs @ 12.15 hrs HW=215.52' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.18 cfs @ 12.15 hrs HW=215.52' (Free Discharge)
└**1=CULVERT TO STM DRAIN** (Passes 0.18 cfs of 6.22 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.18 cfs @ 6.91 fps)
  │ └**3=Exfiltration** (Passes 0.18 cfs of 0.39 cfs potential flow)
  └**4=RISER** (Controls 0.00 cfs)

Pond 1P: SWALE/PLANTER



Summary for Subcatchment 1S: DIRECT ENTRY TO SWALE

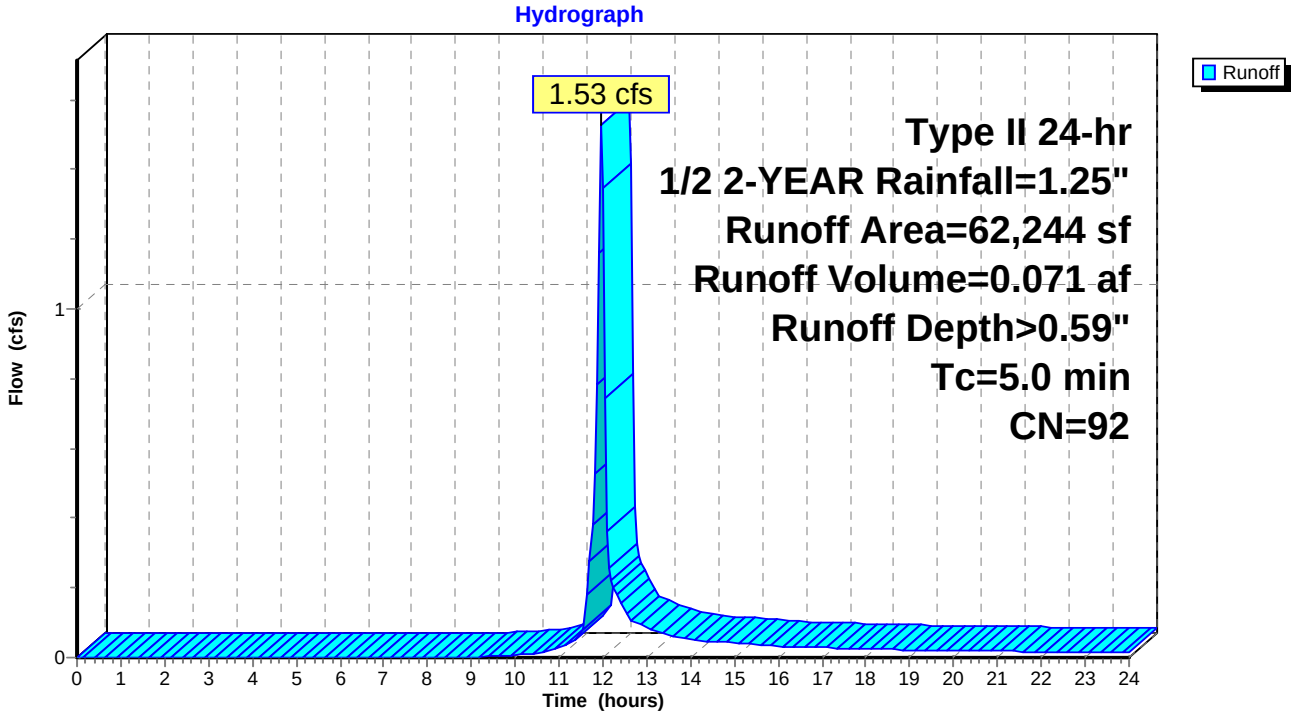
Runoff = 1.53 cfs @ 11.96 hrs, Volume= 0.071 af, Depth> 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1/2 2-YEAR Rainfall=1.25"

	Area (sf)	CN	Description
*	45,882	98	DOMED FABRIC STRUCTURE
*	1,445	98	CONCRETE
*	14,746	74	SWALE FOOTPRINT
*	171	79	OPEN SPACE, FAIR CONDITION
	62,244	92	Weighted Average
	14,917		23.97% Pervious Area
	47,327		76.03% Impervious Area

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

Subcatchment 1S: DIRECT ENTRY TO SWALE



Summary for Subcatchment 2S: COLLECTED AND PIPED TO SWALE

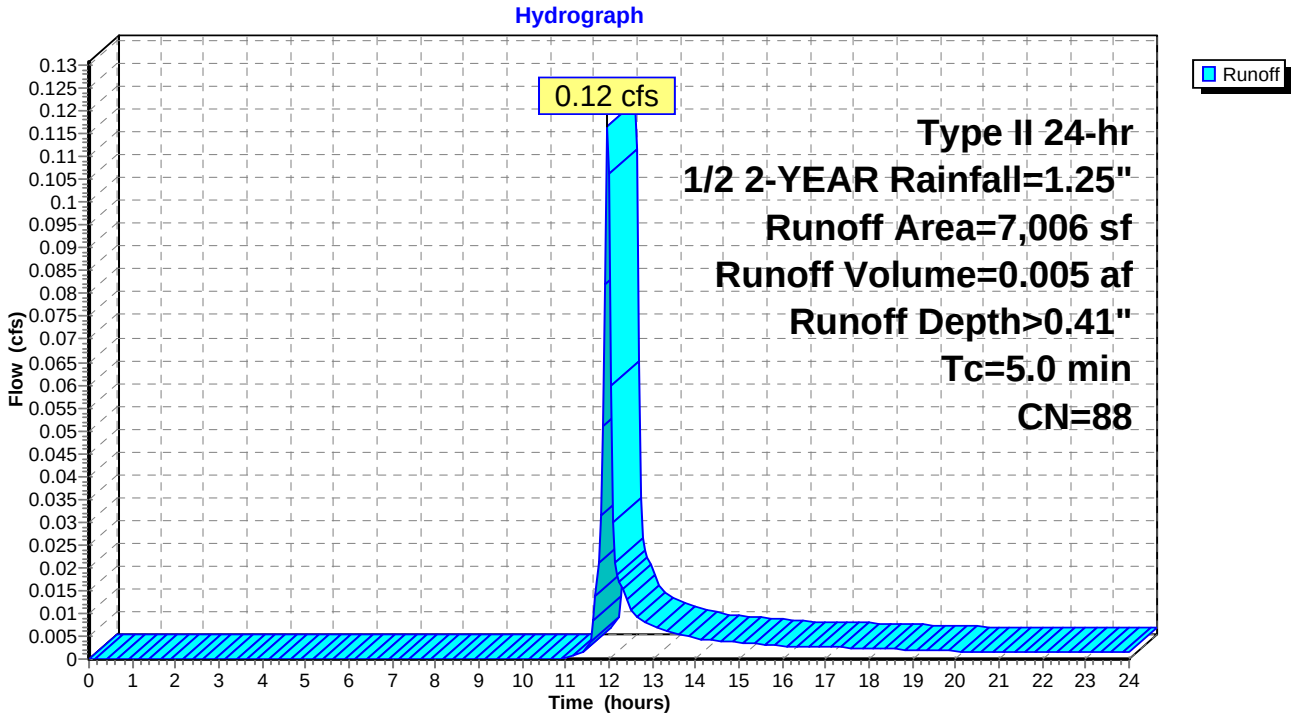
Runoff = 0.12 cfs @ 11.96 hrs, Volume= 0.005 af, Depth> 0.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 1/2 2-YEAR Rainfall=1.25"

	Area (sf)	CN	Description
*	1,389	98	CONCRETE
*	3,632	89	GRAVEL
*	1,985	79	OPEN SPACE, FAIR CONDITION
	7,006	88	Weighted Average
	5,617		80.17% Pervious Area
	1,389		19.83% Impervious Area

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

Subcatchment 2S: COLLECTED AND PIPED TO SWALE



Summary for Pond 1P: SWALE/PLANTER

Inflow Area = 1.590 ac, 70.35% Impervious, Inflow Depth > 0.58" for 1/2 2-YEAR event
Inflow = 1.65 cfs @ 11.96 hrs, Volume= 0.076 af
Outflow = 0.25 cfs @ 12.19 hrs, Volume= 0.076 af, Atten= 85%, Lag= 13.7 min
Discarded = 0.04 cfs @ 12.19 hrs, Volume= 0.006 af
Primary = 0.21 cfs @ 12.19 hrs, Volume= 0.070 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 216.30' @ 12.19 hrs Surf.Area= 15,127 sf Storage= 1,190 cf

Plug-Flow detention time= 57.4 min calculated for 0.076 af (100% of inflow)
Center-of-Mass det. time= 56.1 min (890.0 - 833.9)

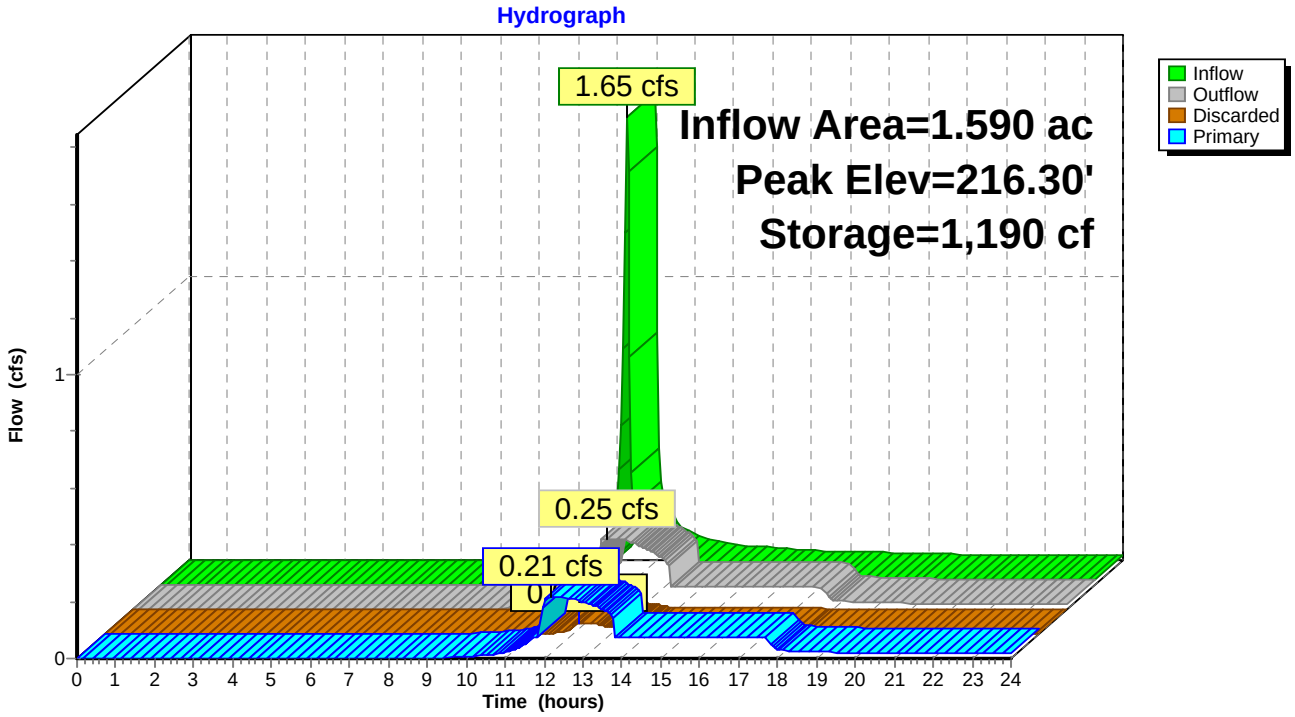
Volume	Invert	Avail.Storage	Storage Description
#1	216.23'	16,325 cf	**2.00'W x 398.00'L x 2.00'H PONDING DEPTH Z=4.0** x 2
#2	214.73'	487 cf	**2.00'W x 398.00'L x 1.50'H 1.5' GROWING MEDIUM Z=4.0** x 2 9,732 cf Overall x 5.0% Voids
#3	213.73'	502 cf	**2.00'W x 398.00'L x 1.00'H 1' DRAIN ROCK** x 2 1,592 cf Overall - 69 cf Embedded = 1,523 cf x 33.0% Voids
#4	213.73'	69 cf	**4.0" Round PERFORATED PIPE** x 2 Inside #3 L= 398.0'
		17,384 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	211.95'	**12.0" Round CULVERT TO STM DRAIN** L= 100.0' Ke= 0.600 Inlet / Outlet Invert= 211.95' / 209.42' S= 0.0253 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	213.37'	**2.2" Vert. Orifice/Grate** C= 0.600
#3	Device 2	213.73'	**2.000 in/hr Exfiltration over Surface area**
#4	Device 1	216.72'	**12.0" Horiz. RISER** C= 0.600 Limited to weir flow at low heads
#5	Discarded	213.73'	**0.100 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.04 cfs @ 12.19 hrs HW=216.30' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.21 cfs @ 12.19 hrs HW=216.30' (Free Discharge)
└**1=CULVERT TO STM DRAIN** (Passes 0.21 cfs of 6.96 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.21 cfs @ 8.11 fps)
  │ └**3=Exfiltration** (Passes 0.21 cfs of 0.70 cfs potential flow)
  └**4=RISER** (Controls 0.00 cfs)

Pond 1P: SWALE/PLANTER



Summary for Subcatchment 1S: DIRECT ENTRY TO SWALE

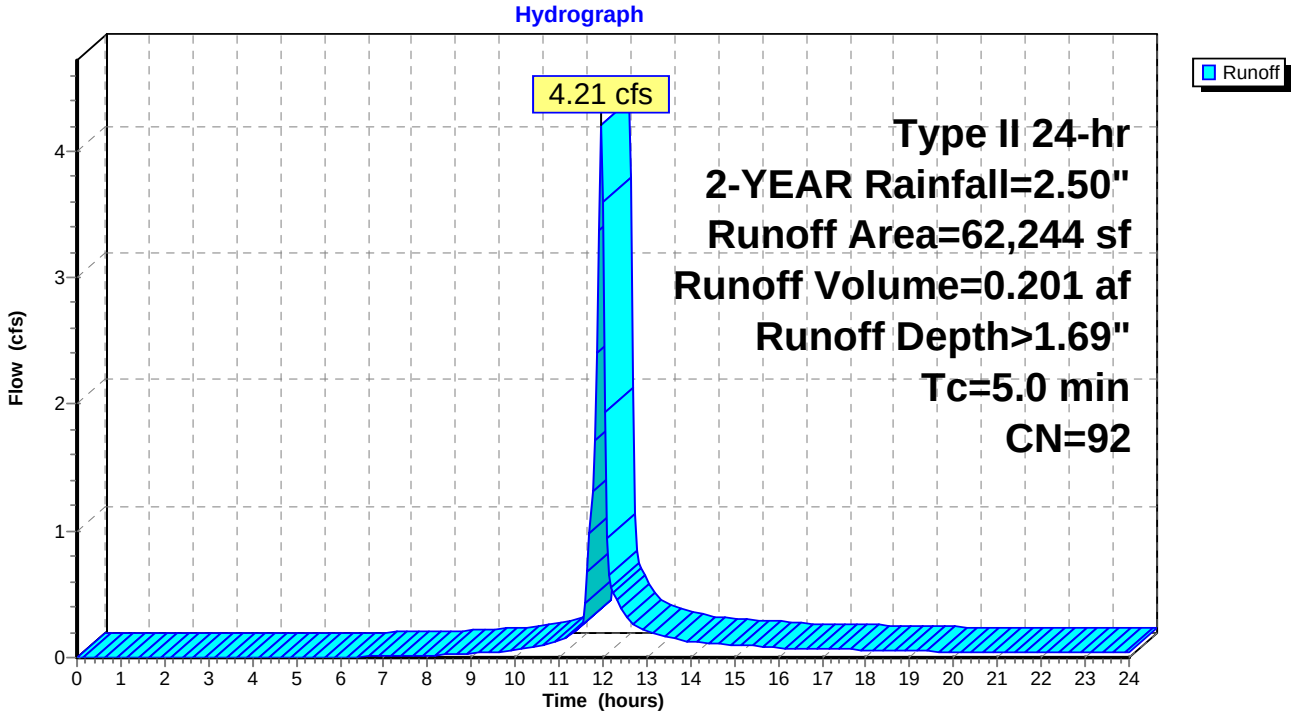
Runoff = 4.21 cfs @ 11.95 hrs, Volume= 0.201 af, Depth> 1.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-YEAR Rainfall=2.50"

	Area (sf)	CN	Description
*	45,882	98	DOMED FABRIC STRUCTURE
*	1,445	98	CONCRETE
*	14,746	74	SWALE FOOTPRINT
*	171	79	OPEN SPACE, FAIR CONDITION
	62,244	92	Weighted Average
	14,917		23.97% Pervious Area
	47,327		76.03% Impervious Area

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

Subcatchment 1S: DIRECT ENTRY TO SWALE



Summary for Subcatchment 2S: COLLECTED AND PIPED TO SWALE

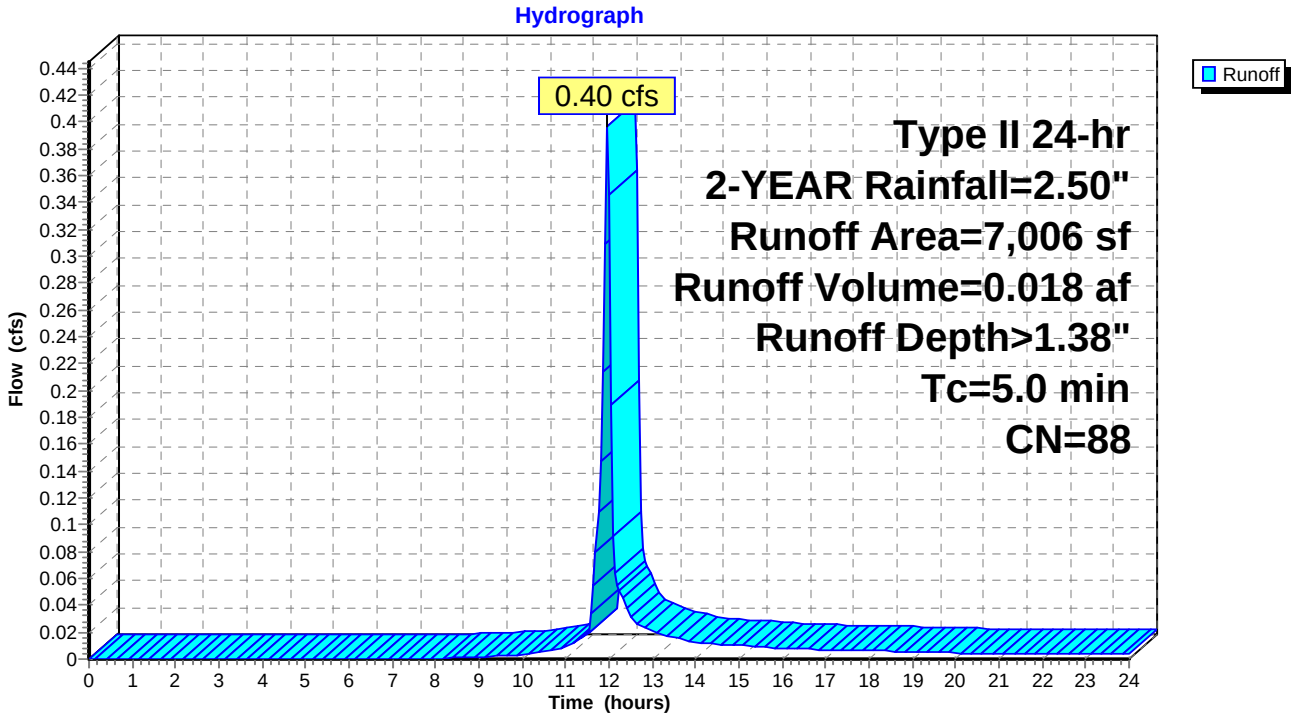
Runoff = 0.40 cfs @ 11.96 hrs, Volume= 0.018 af, Depth> 1.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-YEAR Rainfall=2.50"

	Area (sf)	CN	Description
*	1,389	98	CONCRETE
*	3,632	89	GRAVEL
*	1,985	79	OPEN SPACE, FAIR CONDITION
	7,006	88	Weighted Average
	5,617		80.17% Pervious Area
	1,389		19.83% Impervious Area

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

Subcatchment 2S: COLLECTED AND PIPED TO SWALE



Summary for Pond 1P: SWALE/PLANTER

Inflow Area = 1.590 ac, 70.35% Impervious, Inflow Depth > 1.66" for 2-YEAR event
Inflow = 4.61 cfs @ 11.95 hrs, Volume= 0.220 af
Outflow = 1.27 cfs @ 12.10 hrs, Volume= 0.220 af, Atten= 72%, Lag= 8.7 min
Discarded = 0.04 cfs @ 12.10 hrs, Volume= 0.020 af
Primary = 1.22 cfs @ 12.10 hrs, Volume= 0.200 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 216.93' @ 12.10 hrs Surf.Area= 19,205 sf Storage= 3,754 cf

Plug-Flow detention time= 86.1 min calculated for 0.219 af (100% of inflow)
Center-of-Mass det. time= 85.0 min (889.0 - 804.0)

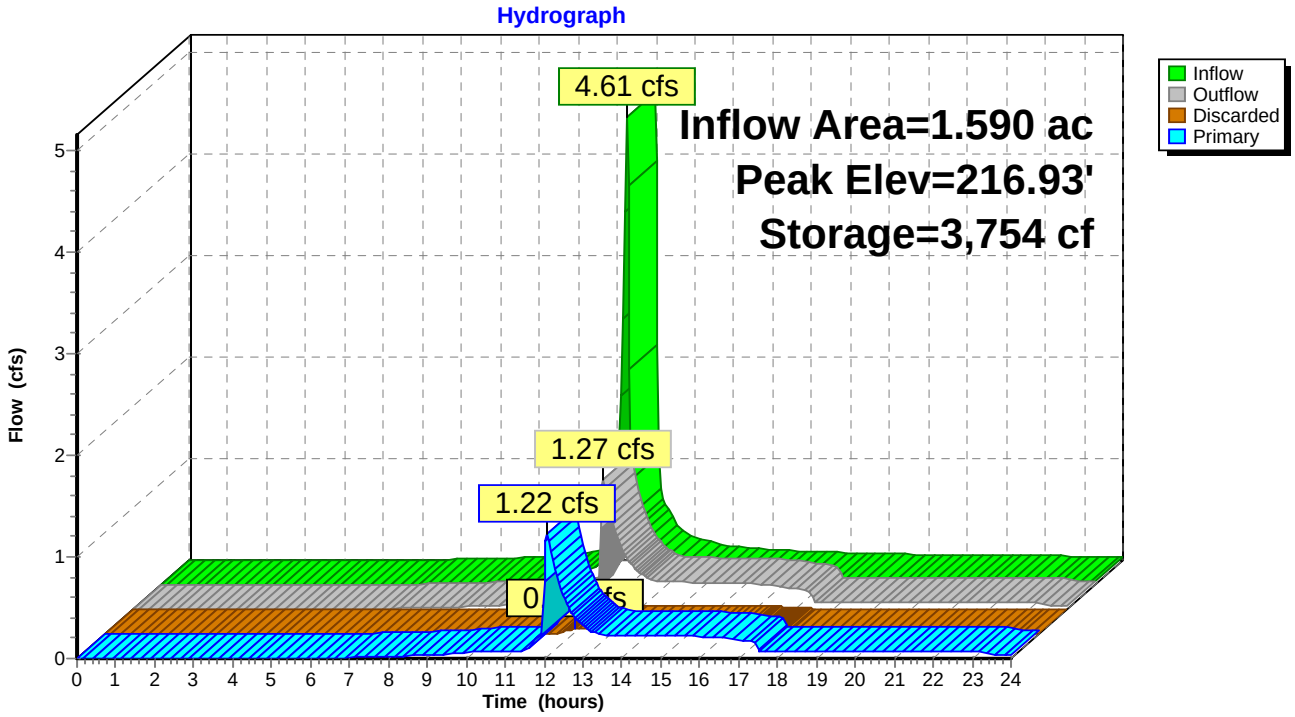
Volume	Invert	Avail.Storage	Storage Description
#1	216.23'	16,325 cf	**2.00'W x 398.00'L x 2.00'H PONDING DEPTH Z=4.0** x 2
#2	214.73'	487 cf	**2.00'W x 398.00'L x 1.50'H 1.5' GROWING MEDIUM Z=4.0** x 2 9,732 cf Overall x 5.0% Voids
#3	213.73'	502 cf	**2.00'W x 398.00'L x 1.00'H 1' DRAIN ROCK** x 2 1,592 cf Overall - 69 cf Embedded = 1,523 cf x 33.0% Voids
#4	213.73'	69 cf	**4.0" Round PERFORATED PIPE** x 2 Inside #3 L= 398.0'
		17,384 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	211.95'	**12.0" Round CULVERT TO STM DRAIN** L= 100.0' Ke= 0.600 Inlet / Outlet Invert= 211.95' / 209.42' S= 0.0253 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	213.37'	**2.2" Vert. Orifice/Grate** C= 0.600
#3	Device 2	213.73'	**2.000 in/hr Exfiltration over Surface area**
#4	Device 1	216.72'	**12.0" Horiz. RISER** C= 0.600 Limited to weir flow at low heads
#5	Discarded	213.73'	**0.100 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.04 cfs @ 12.10 hrs HW=216.93' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=1.22 cfs @ 12.10 hrs HW=216.93' (Free Discharge)
└**1=CULVERT TO STM DRAIN** (Passes 1.22 cfs of 7.39 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.24 cfs @ 8.97 fps)
  │ └**3=Exfiltration** (Passes 0.24 cfs of 0.89 cfs potential flow)
  └**4=RISER** (Weir Controls 0.99 cfs @ 1.50 fps)

Pond 1P: SWALE/PLANTER



Summary for Subcatchment 1S: DIRECT ENTRY TO SWALE

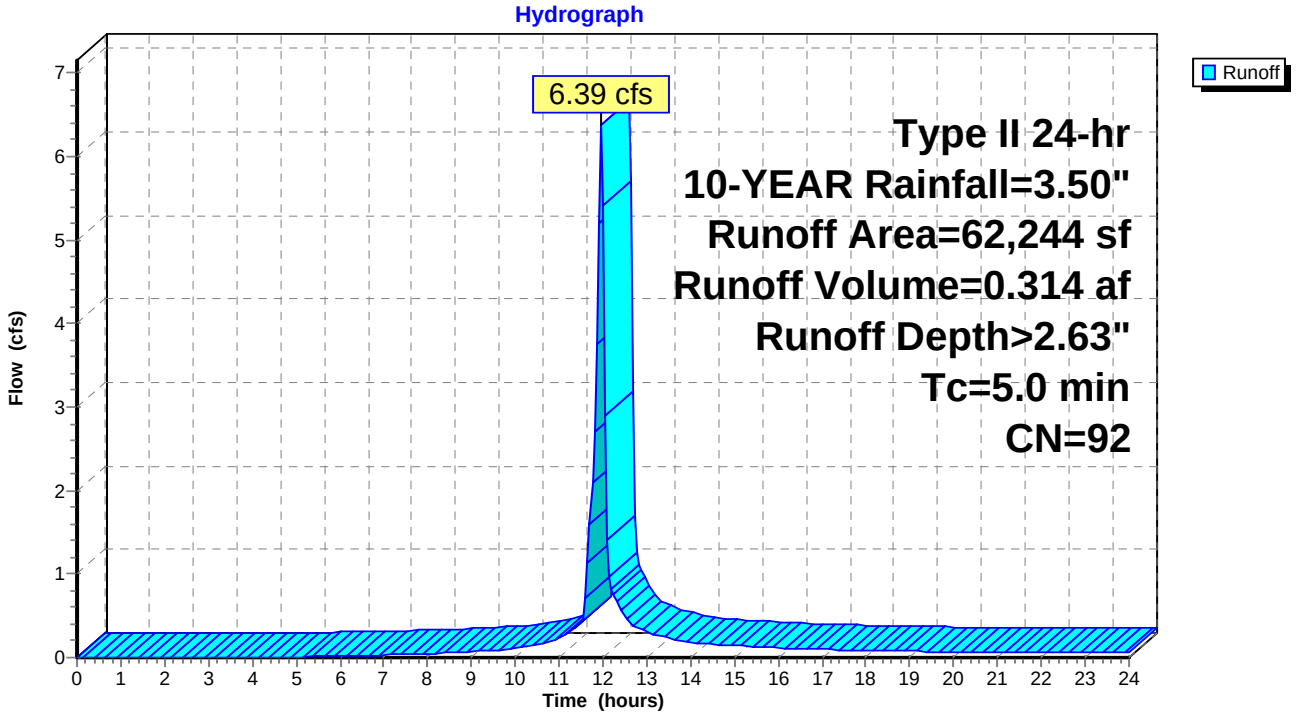
Runoff = 6.39 cfs @ 11.95 hrs, Volume= 0.314 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	45,882	98	DOMED FABRIC STRUCTURE
*	1,445	98	CONCRETE
*	14,746	74	SWALE FOOTPRINT
*	171	79	OPEN SPACE, FAIR CONDITION
	62,244	92	Weighted Average
	14,917		23.97% Pervious Area
	47,327		76.03% Impervious Area

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

Subcatchment 1S: DIRECT ENTRY TO SWALE



Summary for Subcatchment 2S: COLLECTED AND PIPED TO SWALE

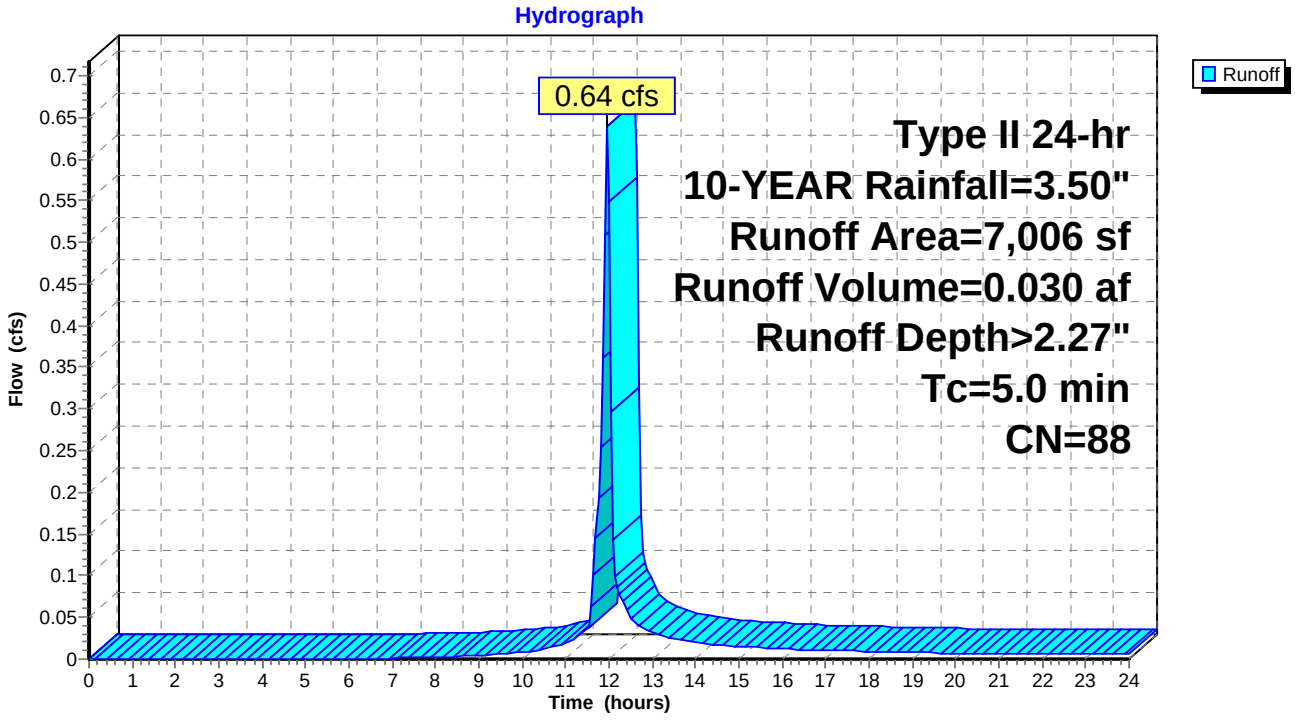
Runoff = 0.64 cfs @ 11.95 hrs, Volume= 0.030 af, Depth> 2.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-YEAR Rainfall=3.50"

	Area (sf)	CN	Description
*	1,389	98	CONCRETE
*	3,632	89	GRAVEL
*	1,985	79	OPEN SPACE, FAIR CONDITION
	7,006	88	Weighted Average
	5,617		80.17% Pervious Area
	1,389		19.83% Impervious Area

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

Subcatchment 2S: COLLECTED AND PIPED TO SWALE



Summary for Pond 1P: SWALE/PLANTER

Inflow Area = 1.590 ac, 70.35% Impervious, Inflow Depth > 2.60" for 10-YEAR event
Inflow = 7.03 cfs @ 11.95 hrs, Volume= 0.344 af
Outflow = 2.82 cfs @ 12.07 hrs, Volume= 0.336 af, Atten= 60%, Lag= 6.8 min
Discarded = 0.05 cfs @ 12.07 hrs, Volume= 0.025 af
Primary = 2.77 cfs @ 12.07 hrs, Volume= 0.310 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 217.17' @ 12.07 hrs Surf.Area= 20,768 sf Storage= 5,389 cf

Plug-Flow detention time= 76.2 min calculated for 0.336 af (98% of inflow)
Center-of-Mass det. time= 61.1 min (852.6 - 791.5)

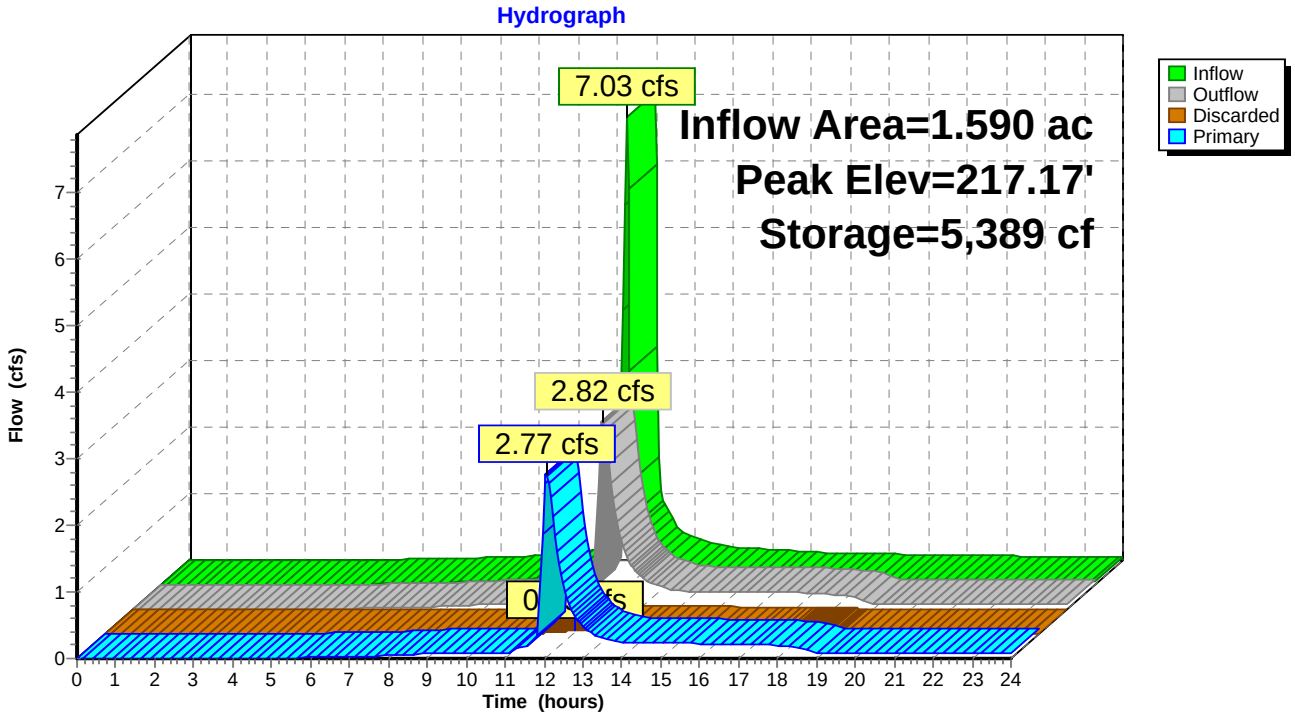
Volume	Invert	Avail.Storage	Storage Description
#1	216.23'	16,325 cf	**2.00'W x 398.00'L x 2.00'H PONDING DEPTH Z=4.0** x 2
#2	214.73'	487 cf	**2.00'W x 398.00'L x 1.50'H 1.5' GROWING MEDIUM Z=4.0** x 2 9,732 cf Overall x 5.0% Voids
#3	213.73'	502 cf	**2.00'W x 398.00'L x 1.00'H 1' DRAIN ROCK** x 2 1,592 cf Overall - 69 cf Embedded = 1,523 cf x 33.0% Voids
#4	213.73'	69 cf	**4.0" Round PERFORATED PIPE** x 2 Inside #3 L= 398.0'
		17,384 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	211.95'	**12.0" Round CULVERT TO STM DRAIN** L= 100.0' Ke= 0.600 Inlet / Outlet Invert= 211.95' / 209.42' S= 0.0253 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	213.37'	**2.2" Vert. Orifice/Grate** C= 0.600
#3	Device 2	213.73'	**2.000 in/hr Exfiltration over Surface area**
#4	Device 1	216.72'	**12.0" Horiz. RISER** C= 0.600 Limited to weir flow at low heads
#5	Discarded	213.73'	**0.100 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.05 cfs @ 12.07 hrs HW=217.16' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=2.75 cfs @ 12.07 hrs HW=217.16' (Free Discharge)
└**1=CULVERT TO STM DRAIN** (Passes 2.75 cfs of 7.52 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.24 cfs @ 9.26 fps)
  │ └**3=Exfiltration** (Passes 0.24 cfs of 0.96 cfs potential flow)
  └**4=RISER** (Orifice Controls 2.51 cfs @ 3.20 fps)

Pond 1P: SWALE/PLANTER



Summary for Subcatchment 1S: DIRECT ENTRY TO SWALE

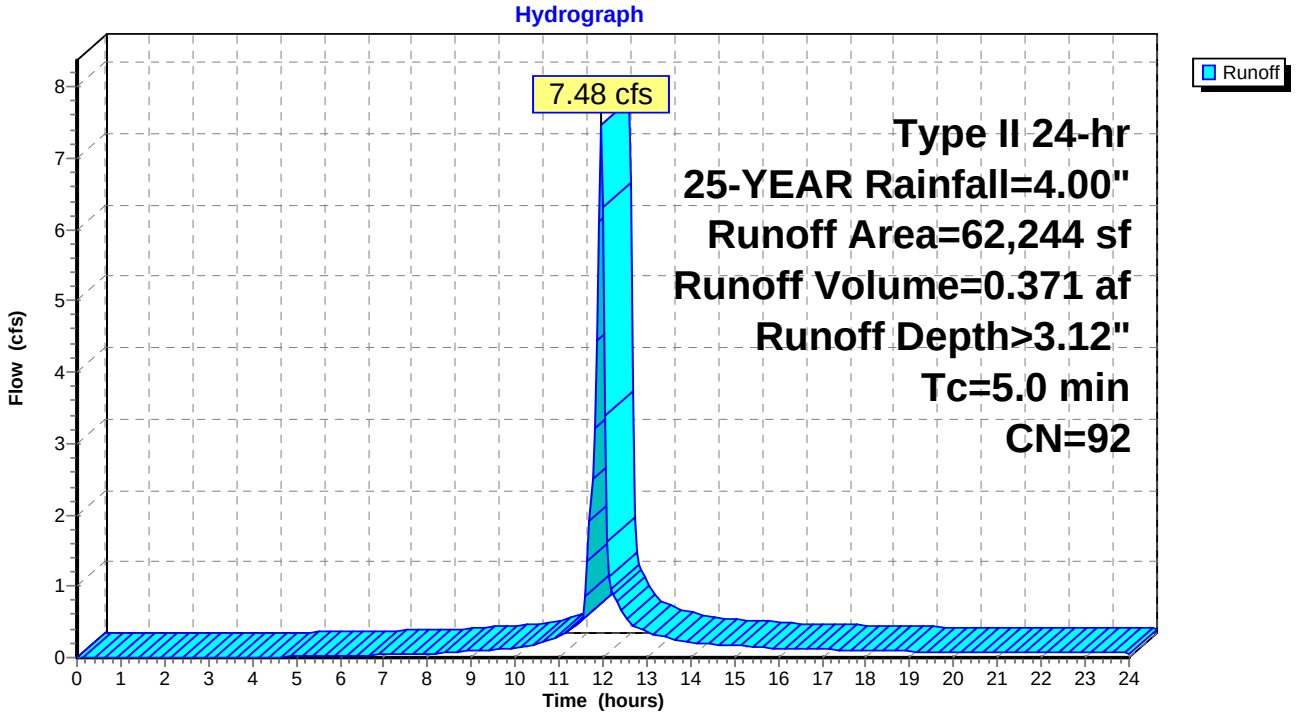
Runoff = 7.48 cfs @ 11.95 hrs, Volume= 0.371 af, Depth> 3.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-YEAR Rainfall=4.00"

	Area (sf)	CN	Description
*	45,882	98	DOMED FABRIC STRUCTURE
*	1,445	98	CONCRETE
*	14,746	74	SWALE FOOTPRINT
*	171	79	OPEN SPACE, FAIR CONDITION
	62,244	92	Weighted Average
	14,917		23.97% Pervious Area
	47,327		76.03% Impervious Area

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

Subcatchment 1S: DIRECT ENTRY TO SWALE



Summary for Subcatchment 2S: COLLECTED AND PIPED TO SWALE

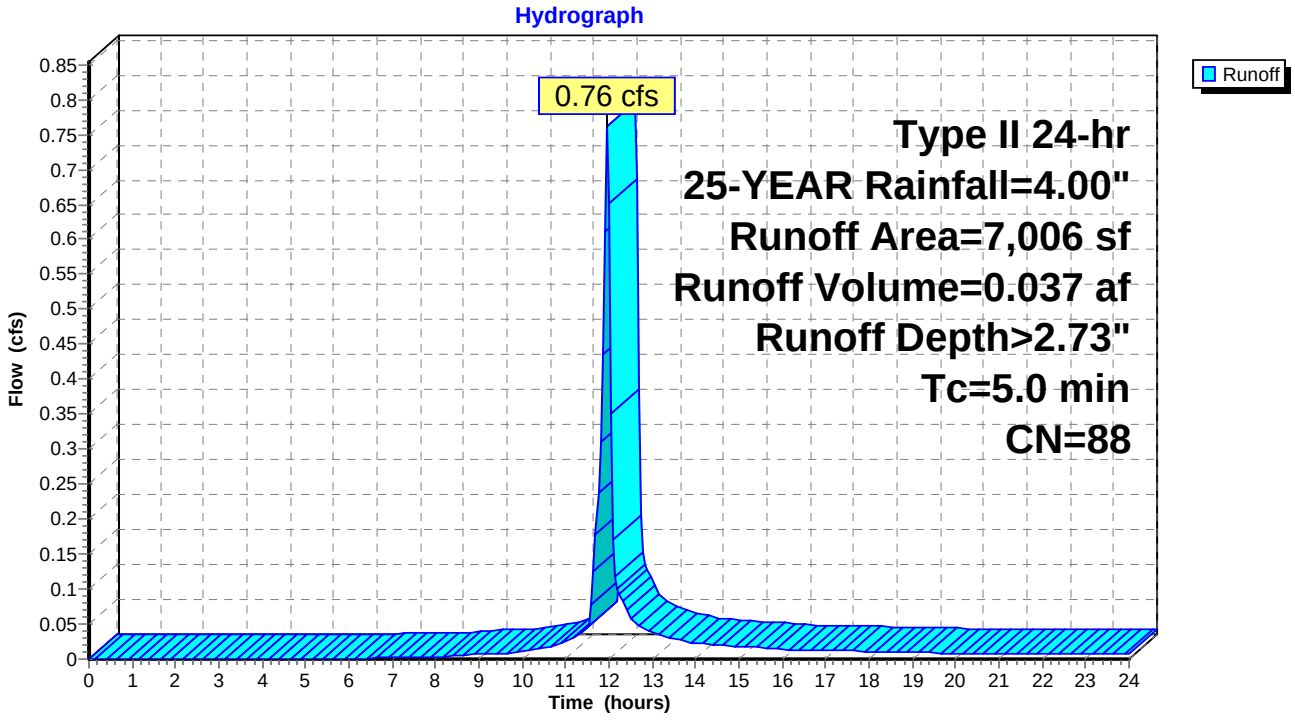
Runoff = 0.76 cfs @ 11.95 hrs, Volume= 0.037 af, Depth> 2.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-YEAR Rainfall=4.00"

	Area (sf)	CN	Description
*	1,389	98	CONCRETE
*	3,632	89	GRAVEL
*	1,985	79	OPEN SPACE, FAIR CONDITION
	7,006	88	Weighted Average
	5,617		80.17% Pervious Area
	1,389		19.83% Impervious Area

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

Subcatchment 2S: COLLECTED AND PIPED TO SWALE



Summary for Pond 1P: SWALE/PLANTER

Inflow Area = 1.590 ac, 70.35% Impervious, Inflow Depth > 3.08" for 25-YEAR event
Inflow = 8.24 cfs @ 11.95 hrs, Volume= 0.408 af
Outflow = 3.13 cfs @ 12.07 hrs, Volume= 0.396 af, Atten= 62%, Lag= 7.0 min
Discarded = 0.05 cfs @ 12.07 hrs, Volume= 0.028 af
Primary = 3.08 cfs @ 12.07 hrs, Volume= 0.367 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 217.28' @ 12.07 hrs Surf.Area= 21,519 sf Storage= 6,300 cf

Plug-Flow detention time= 72.6 min calculated for 0.396 af (97% of inflow)
Center-of-Mass det. time= 54.9 min (841.7 - 786.8)

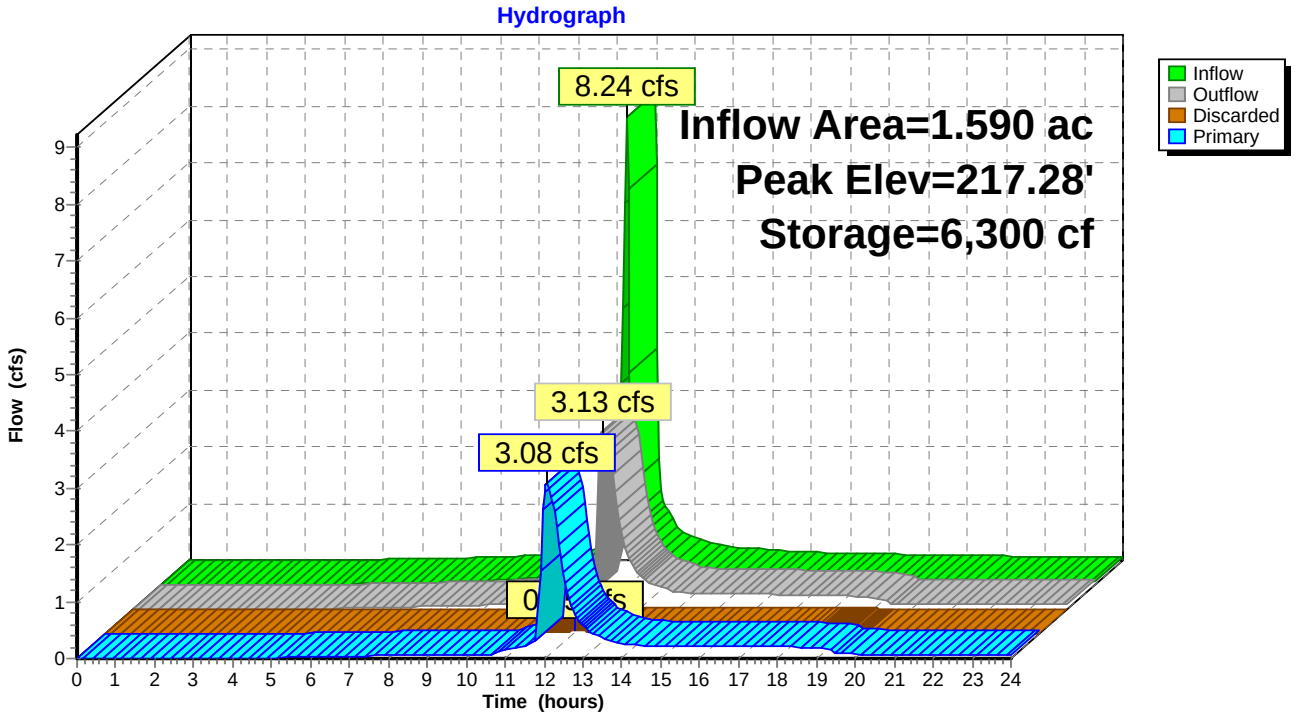
Volume	Invert	Avail.Storage	Storage Description
#1	216.23'	16,325 cf	**2.00'W x 398.00'L x 2.00'H PONDING DEPTH Z=4.0** x 2
#2	214.73'	487 cf	**2.00'W x 398.00'L x 1.50'H 1.5' GROWING MEDIUM Z=4.0** x 2 9,732 cf Overall x 5.0% Voids
#3	213.73'	502 cf	**2.00'W x 398.00'L x 1.00'H 1' DRAIN ROCK** x 2 1,592 cf Overall - 69 cf Embedded = 1,523 cf x 33.0% Voids
#4	213.73'	69 cf	**4.0" Round PERFORATED PIPE** x 2 Inside #3 L= 398.0'
		17,384 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	211.95'	**12.0" Round CULVERT TO STM DRAIN** L= 100.0' Ke= 0.600 Inlet / Outlet Invert= 211.95' / 209.42' S= 0.0253 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	213.37'	**2.2" Vert. Orifice/Grate** C= 0.600
#3	Device 2	213.73'	**2.000 in/hr Exfiltration over Surface area**
#4	Device 1	216.72'	**12.0" Horiz. RISER** C= 0.600 Limited to weir flow at low heads
#5	Discarded	213.73'	**0.100 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.05 cfs @ 12.07 hrs HW=217.27' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=3.06 cfs @ 12.07 hrs HW=217.27' (Free Discharge)
└**1=CULVERT TO STM DRAIN** (Passes 3.06 cfs of 7.58 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.25 cfs @ 9.40 fps)
  │ └**3=Exfiltration** (Passes 0.25 cfs of 0.99 cfs potential flow)
  └**4=RISER** (Orifice Controls 2.81 cfs @ 3.58 fps)

Pond 1P: SWALE/PLANTER



Summary for Subcatchment 1S: DIRECT ENTRY TO SWALE

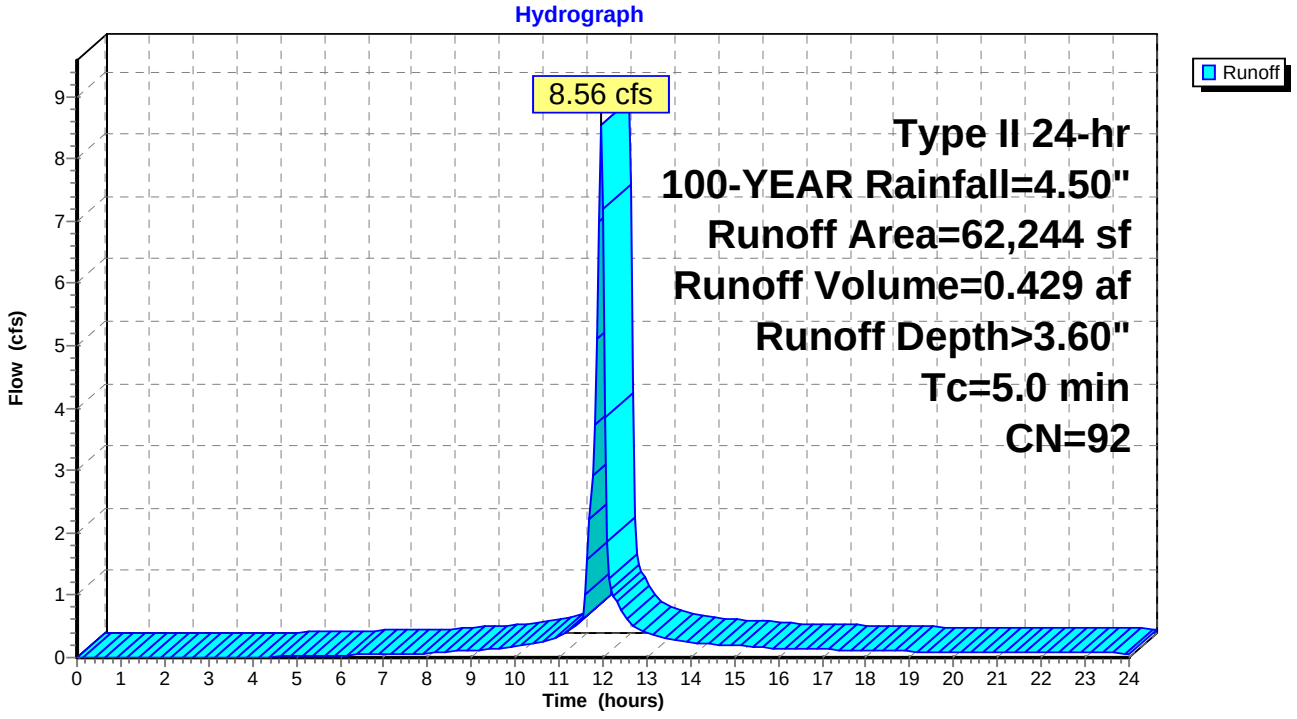
Runoff = 8.56 cfs @ 11.95 hrs, Volume= 0.429 af, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YEAR Rainfall=4.50"

	Area (sf)	CN	Description
*	45,882	98	DOMED FABRIC STRUCTURE
*	1,445	98	CONCRETE
*	14,746	74	SWALE FOOTPRINT
*	171	79	OPEN SPACE, FAIR CONDITION
	62,244	92	Weighted Average
	14,917		23.97% Pervious Area
	47,327		76.03% Impervious Area

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

Subcatchment 1S: DIRECT ENTRY TO SWALE



Summary for Subcatchment 2S: COLLECTED AND PIPED TO SWALE

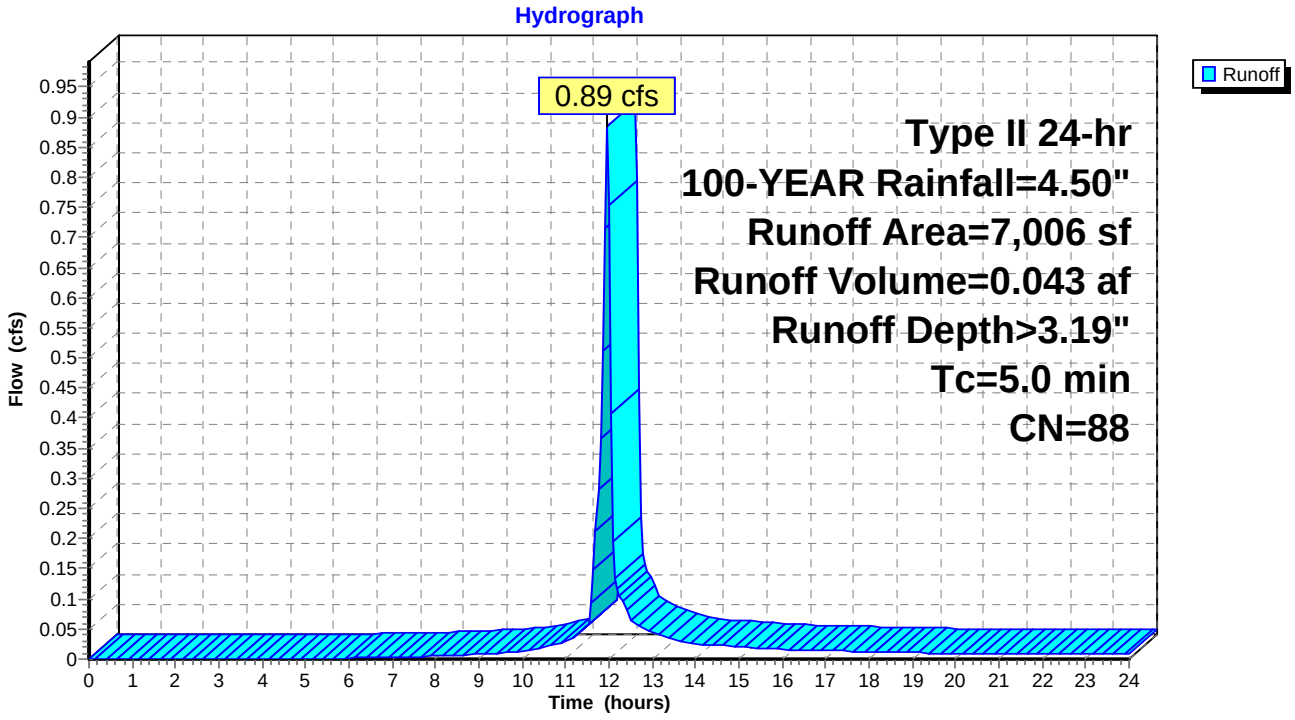
Runoff = 0.89 cfs @ 11.95 hrs, Volume= 0.043 af, Depth> 3.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-YEAR Rainfall=4.50"

	Area (sf)	CN	Description
*	1,389	98	CONCRETE
*	3,632	89	GRAVEL
*	1,985	79	OPEN SPACE, FAIR CONDITION
	7,006	88	Weighted Average
	5,617		80.17% Pervious Area
	1,389		19.83% Impervious Area

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

Subcatchment 2S: COLLECTED AND PIPED TO SWALE



Summary for Pond 1P: SWALE/PLANTER

Inflow Area = 1.590 ac, 70.35% Impervious, Inflow Depth > 3.56" for 100-YEAR event
Inflow = 9.44 cfs @ 11.95 hrs, Volume= 0.471 af
Outflow = 3.39 cfs @ 12.07 hrs, Volume= 0.458 af, Atten= 64%, Lag= 7.2 min
Discarded = 0.05 cfs @ 12.07 hrs, Volume= 0.031 af
Primary = 3.34 cfs @ 12.07 hrs, Volume= 0.427 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 217.39' @ 12.07 hrs Surf.Area= 22,245 sf Storage= 7,257 cf

Plug-Flow detention time= 69.8 min calculated for 0.457 af (97% of inflow)
Center-of-Mass det. time= 52.9 min (835.7 - 782.8)

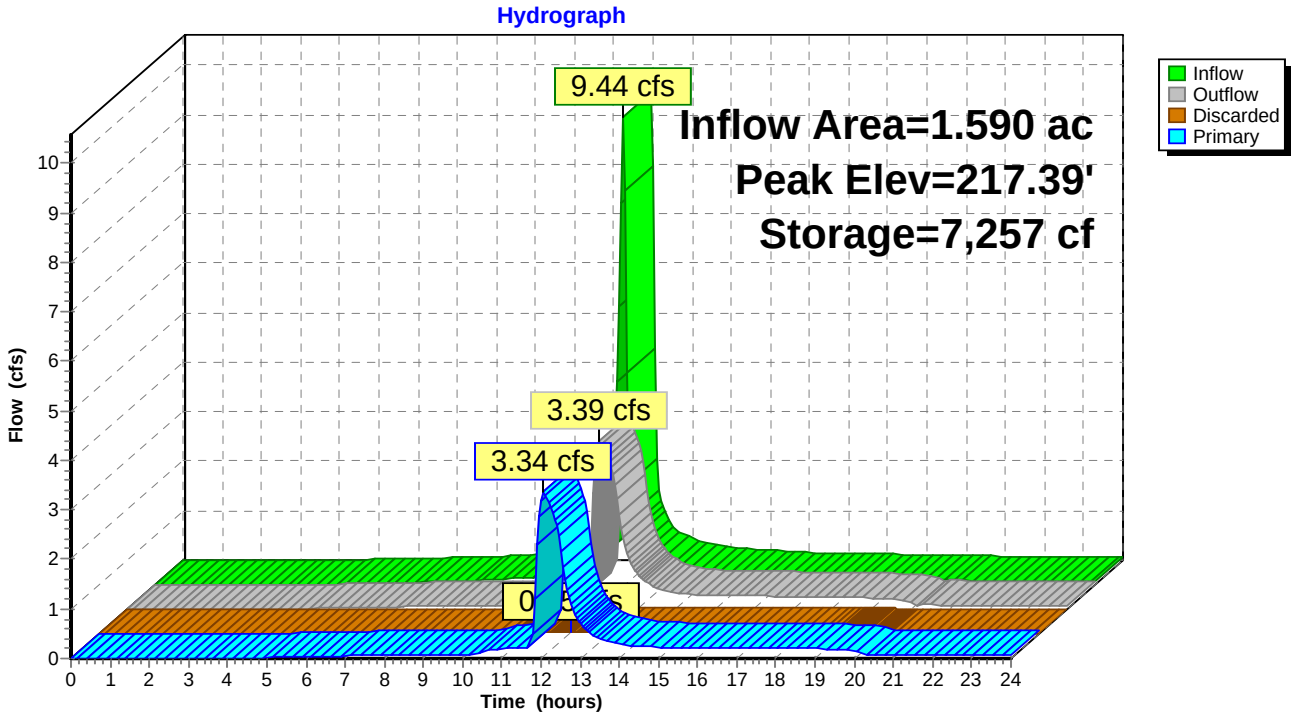
Volume	Invert	Avail.Storage	Storage Description
#1	216.23'	16,325 cf	**2.00'W x 398.00'L x 2.00'H PONDING DEPTH Z=4.0** x 2
#2	214.73'	487 cf	**2.00'W x 398.00'L x 1.50'H 1.5' GROWING MEDIUM Z=4.0** x 2 9,732 cf Overall x 5.0% Voids
#3	213.73'	502 cf	**2.00'W x 398.00'L x 1.00'H 1' DRAIN ROCK** x 2 1,592 cf Overall - 69 cf Embedded = 1,523 cf x 33.0% Voids
#4	213.73'	69 cf	**4.0" Round PERFORATED PIPE** x 2 Inside #3 L= 398.0'
		17,384 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Primary	211.95'	**12.0" Round CULVERT TO STM DRAIN** L= 100.0' Ke= 0.600 Inlet / Outlet Invert= 211.95' / 209.42' S= 0.0253 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	213.37'	**2.2" Vert. Orifice/Grate** C= 0.600
#3	Device 2	213.73'	**2.000 in/hr Exfiltration over Surface area**
#4	Device 1	216.72'	**12.0" Horiz. RISER** C= 0.600 Limited to weir flow at low heads
#5	Discarded	213.73'	**0.100 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.05 cfs @ 12.07 hrs HW=217.38' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=3.32 cfs @ 12.07 hrs HW=217.38' (Free Discharge)
└**1=CULVERT TO STM DRAIN** (Passes 3.32 cfs of 7.64 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.25 cfs @ 9.53 fps)
  │ └**3=Exfiltration** (Passes 0.25 cfs of 1.03 cfs potential flow)
  └**4=RISER** (Orifice Controls 3.07 cfs @ 3.91 fps)

Pond 1P: SWALE/PLANTER



Appendix E: USDA NRCS Soil Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Yamhill County, Oregon

April 5, 2017

Preface

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

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

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

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

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

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

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Contents

Soil Map

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

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,110 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Yamhill County, Oregon
Survey Area Data: Version 4, Sep 16, 2016

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

Date(s) aerial images were photographed: Jul 8, 2010—Sep 4, 2011

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

Yamhill County, Oregon (OR071)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
2300A	Aloha silt loam, 0 to 3 percent slopes	4.9	94.3%
2310C	Woodburn silt loam, 3 to 12 percent slopes	0.3	5.7%
Totals for Area of Interest		**5.2**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

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

Yamhill County, Oregon

2300A—Aloha silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1j8b0
Elevation: 100 to 350 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Aloha and similar soils: 96 percent
Minor components: 3 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aloha

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loamy glaciolacustrine deposits

Typical profile

Ap - 0 to 8 inches: silt loam
BA - 8 to 15 inches: silt loam
Bt - 15 to 22 inches: silt loam
Bw1 - 22 to 31 inches: silt loam
Bw2 - 31 to 46 inches: silt loam
Bw3 - 46 to 60 inches: silt loam
C - 60 to 65 inches: very fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 8 to 15 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very high (about 12.0 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Other vegetative classification: Somewhat Poorly Drained (G002XY005OR)
Hydric soil rating: No

Minor Components

Dayton

Percent of map unit: 3 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

2310C—Woodburn silt loam, 3 to 12 percent slopes

Map Unit Setting

National map unit symbol: 1j8b5
Elevation: 100 to 350 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Woodburn and similar soils: 93 percent
Minor components: 2 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodburn

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex, linear
Across-slope shape: Linear
Parent material: Silty glaciolacustrine deposits

Typical profile

Ap - 0 to 9 inches: silt loam
A - 9 to 17 inches: silt loam
2Bt1 - 17 to 25 inches: silty clay loam
2Bt2 - 25 to 32 inches: silty clay loam
2BCt1 - 32 to 39 inches: silt loam
2BCt2 - 39 to 54 inches: silt loam
2C1 - 54 to 68 inches: silt loam
2C2 - 68 to 80 inches: stratified fine sandy loam to silt loam
3C3 - 80 to 92 inches: stratified fine sandy loam to silt loam

Properties and qualities

Slope: 3 to 12 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 1.98 in/hr)
Depth to water table: About 25 to 32 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very high (about 12.2 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Other vegetative classification: Moderately Well Drained < 15% Slopes (G002XY004OR)
Hydric soil rating: No

Minor Components

Dayton

Percent of map unit: 2 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Soil Physical Properties

This folder contains a collection of tabular reports that present soil physical properties. The reports (tables) include all selected map units and components for each map unit. Soil physical properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission

rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group

index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Percentage of rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination. Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Three values are provided to identify the expected Low (L), Representative Value (R), and High (H).

Engineering Properties–Yamhill County, Oregon														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
2300A—Aloha silt loam, 0 to 3 percent slopes														
Aloha	96	C/D	0-8	Silt loam	ML, CL-ML, CL	A-6, A-4	0- 0- 0	0- 0- 0	100-100-100	95-100-100	95-97-100	85-85-95	25-35-40	5-9 -15
			8-15	Loam, silt loam	ML, CL-ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	100-100-100	95-100-100	95-97-100	75-85-95	25-35-40	5-9 -15
			15-22	Silt loam, loam	CL	A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	95-97-100	75-85-95	30-36-40	10-13-15
			22-31	Silt loam, loam	CL	A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	95-98-100	75-82-95	30-36-40	10-13-15
			31-46	Silt loam, loam	CL	A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	90-98-100	65-82-95	30-36-40	10-13-15
			46-60	Silt loam, loam	CL, CL-ML	A-6, A-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	90-98-100	65-80-95	25-30-40	5-10-15
			60-65	Silt loam, loam, very fine sandy loam	CL, CL-ML	A-4, A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	90-97-100	60-64-95	25-28-40	5-8 -15

Engineering Properties–Yamhill County, Oregon														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Pct Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*	*L-R-H*
2310C—Woodburn silt loam, 3 to 12 percent slopes														
Woodburn	93	C	0-9	Silt loam	ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	95-99-100	95-98-100	95-97-100	85-94-100	30-36-40	5-11-15
			9-17	Silt loam	ML, CL	A-4, A-6	0- 0- 0	0- 0- 0	95-99-100	95-98-100	95-97-100	85-94-100	30-36-40	5-11-15
			17-25	Silty clay loam, silt loam	CL	A-6, A-7	0- 0- 0	0- 0- 0	100-100-100	100-100-100	95-99-100	90-97-100	30-38-45	10-15-20
			25-32	Silty clay loam, silt loam	CL	A-6, A-7	0- 0- 0	0- 0- 0	100-100-100	100-100-100	95-99-100	90-97-100	30-38-45	10-15-20
			32-39	Silt loam, silty clay loam	CL	A-7, A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	95-99-100	90-97-100	30-36-45	10-14-20
			39-54	Silt loam, silty clay loam	CL	A-7, A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	95-99-100	90-97-100	30-36-45	10-14-20
			54-68	Silty clay loam, silt loam	CL-ML, CL	A-6, A-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	95-98-100	80-90-100	25-35-40	5-11-15
			68-80	Stratified fine sandy loam to silt loam	ML, SM	A-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	70-92-100	40-60-90	20-28-35	NP-5-10
			80-92	Stratified fine sandy loam to silt loam	ML, SM	A-4	0- 0- 0	0- 0- 0	100-100-100	100-100-100	70-92-100	40-51-90	20-28-35	NP-5-10

Appendix F: Technical Release 55 Runoff Curve Numbers

Table 2-2a Runoff curve numbers for urban areas [1/]

Cover description: Cover type and hydrologic condition	Average percent impervious area [2/]	Curve numbers for hydrologic soil group: A	B	C	D
Fully developed urban areas (vegetation established)					
Open space (lawns, parks, golf courses, cemeteries, etc.) [3/]:					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) [4/]		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5/]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

[1] Average runoff condition, and $I_a = 0.2S$.

[2] The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

[3] CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

[4] Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

[5] Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

Appendix G: Infiltration Test Report

INFILTRATION TEST REPORT

July 13, 2017

TO WHOM IT MY CONCERN

DESCRIPTION:

A storm water infiltration test was conducted on July 20, 2016 at the Austin Athletic Fields, 1013 Crestview Drive, Newberg Oregon, 97132. The test was conducted according to the Portland Stormwater Management Manual, Appendix F2, Simplified Method. The purpose of the test was to determine the suitability of the subgrade material at this location for construction of a porous pavement parking lot. Logs of the 2 test are attached. The test were performed per the Simplified Method by digging a hole by hand using a clam shell type post hole digger to the approximate depth of the subgrade and pre soaking the hole by filling it with water. This was completed the day prior to the test. Then the hole was filled with 6 inches of water and the time to completely infiltrate is recorded. This is repeated 3 times.

RESULTS:

The infiltration rates for last of the 3 tests was 1.26 inches per hour for hole #1 and 0.56 inches per hour for hole #2. The results for hole #2 were much lower for test #3 than for the first 2 tests because the sides of the hole collapsed leaving a larger diameter at the bottom of the hole and a larger volume of water to make the 6 inch column at the start of the test.

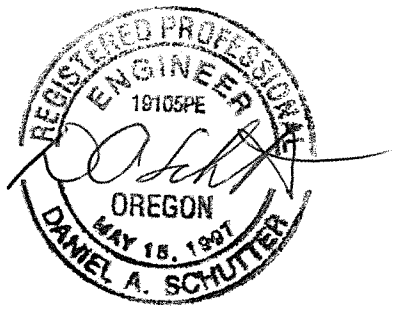
DESIGN CONDITIONS:

The Newberg Stormwater Design Standard is based on a 25 year event with design criteria equal to 4 in./24hr and 2.5in/1hr. rain fall intensity. The proposed porous pavement section design has 12 inches of drain rock with 40 percent porosity and can store about 4.8 inches of storm water. This section is capable of storing the 4 inches of storm water from a 25 yr. event and with a design infiltration rate of one half the average of the 2 test measured infiltration rate (0.455 inches per hour) will drain the 25 year event in under about 9 hours.

CONCLUSION:

The infiltration rate at this site when combined with the 12 inches of drain rock as specified in the Newberg Standard Drawing 459 is more than adequate for handling the 25 year storm water event.

Daniel A. Schutter, P.E.



Expires: 6-30-18

Soil Infitration Test Record
Date: July 11 - 12, 2017
Location: Austin Athletic Fields Parking Lot
By: Dan Schutter

Test hole #1
South edge of proposed parking lot about 20 ft. east of west driveway
hole depth 23 inches
started pre soak on 7/10/2017 at about 3 pm by filling to the top.
it had drained completely by the morning of July 11.

date	time	water depth			
test 1					
11-Jul	9:45	17			
	11:05	19.25			
	12:35	21.5	time		rate (inches per hour)
	13:45	23		4:00	1.50
test 2					
11-Jul	13:45	17			
	16:05	20	time		rate (inches per hour)
	20:00	23		6:15	0.96
test 3					
12-Jul	6:45	17			
	10:15	22.25	time		rate (inches per hour)
	11:30	23		4:45	1.26

Soil Infitration Test Record
Date: July 11 - 12, 2017
Location: Austin Athletic Fields Parking Lot
By: Dan Schutter

Test hole #2
South edge of proposed parking lot about 100 ft. west of east driveway
initial hole depth 22 inches
note that the hole washed in as the test progressed reducing the depth.
started pre soak on 7/10/2017 at about 3 pm by filling to the top.
it had drained completely by the morning of July 11.

date	time	water depth			
test 1					
11-Jul	9:45	16			
	11:05	18			
	12:35	21	time	rate (inches per hour)	
	13:45	22	4:00	1.50	
test 2					
11-Jul	13:45	13.5			
	16:05	15.25			
	20:00	17.25	time	rate (inches per hour)	
	23:00	19.5	9:15	0.65	
test 3					
12-Jul	6:45	13			
	10:15	16			
	11:30	16.5			
	15:00	18	time	rate (inches per hour)	
	17:30	19	10:45	0.56	

Appendix H: Downstream Analysis Map


DOWNSTREAM ANALYSIS MAP
EXISTING DITCH INLET
DISCHARGE TO HESS CREEK
PROJECT SITE
LOCATION OF FLOW SPREADER

Appendix I: Operations and Maintenance of Facilities

AFTER RECORDING RETURN TO:
City of Newberg – Engineering Department
PO Box 970 - 414 E. First Street
Newberg, OR 97132

CITY OF NEWBERG

AGREEMENT TO MAINTAIN PRIVATE STORMWATER FACILITIES

THIS AGREEMENT is entered into this ___ day of _____, 20__ by and between the City of Newberg, a municipal corporation of the State of Oregon, hereinafter called CITY, and

_____
(Owner name)

_____
(Address)

_____ _____ _____
(City, State, Zip) (Phone) (Email Address)

hereinafter called OWNER.

RECITALS

1. OWNER has developed the following facilities located at: _____
Tax Map _____, Tax Lot _____. (Site Address)

(select one, or both if applicable):

☐ Private Stormwater Detention or Retention Facilities

☐ Private Water Quality Treatment Facilities

2. Stormwater Facilities (FACILITIES) enable development of property while mitigating the impacts of additional surface water and pollutants associated with stormwater runoff prior to discharge from the property to the public stormwater system. The consideration for this agreement is connection to the public stormwater system.

3. The property benefited by the FACILITIES and subject to the obligation of this Agreement is described in Exhibit A (PROPERTY). The site specific maintenance plan and checklist for the FACILITIES is to assist with the successful completion of the operation and maintenance is described in Exhibit B. Exhibits A and B are attached hereto and incorporated by reference.

4. The FACILITIES are a required condition of permit approval for the property and are designed by a registered professional engineer in accordance with the City of Newberg Standard Design Manual; and are binding on all current and future owners of the property as described in Section VII below. The owner is required to operate and maintain the FACILITIES in accordance with the attached O&M plans.

5. CITY and OWNER agree that effective maintenance of the FACILITIES will best be facilitated by regular inspections, not less than twice a year, those times being generally described as once in the early spring and again in the fall prior to the onset of fall rains.

6. Failure to inspect and maintain the FACILITIES will constitute a violation of Section 13.25 of the Newberg Municipal Code (NMC) and can result in a notice of violation and penalties, as stated in Section V below:

NOW, THEREFORE, it is agreed by and between the parties as follows:

I. OWNER INSPECTIONS

OWNER shall provide inspections of the Facilities in conformance with the requirements set forth in Exhibits B. OWNER shall maintain a log of inspection activities. The log shall be available to the CITY upon request, and submitted yearly to the City as outlined in Section 13.25.300, Maintenance of the NMC.

II. DEFICIENCIES

All aspects in which the FACILITIES fail to satisfy the Operations and Maintenance Plan shall be noted as "Deficiencies" **in the inspection logs.**

III. OWNER CORRECTIONS

All Deficiencies shall be corrected at OWNER'S expense within thirty (30) days after completion of the inspection. If more than 30 days is reasonably needed to correct a Deficiency, OWNER shall have a reasonable period to correct the Deficiency so long as the correction is commenced within the 30-day period and is diligently prosecuted to completion.

IV. CITY INSPECTIONS

OWNER hereby grants CITY the right to access and inspect the FACILITIES. CITY will endeavor to give prior notice (as courtesy to OWNER), except that no notice shall be required in case of an emergency. CITY shall determine whether Deficiencies need to be corrected. OWNER (at the last known address provided to the City) will be notified in writing via first class mail of the Deficiencies and shall make corrections in accordance with the City inspection report and within the timeframe specified in the report.

V. CITY CORRECTIONS

If correction of all CITY identified Deficiencies is not completed within the timeframe specified in the notice of violation, the CITY shall have the right to correct the noted Deficiencies. CITY (i) shall hereby have full access to the Facilities for the purpose of correcting such Deficiencies and (ii) shall bill OWNER in accordance with the summary abatement procedures of NMC 13.25.370.

VI. EMERGENCY MEASURES

If at any time the CITY reasonably determines that the FACILITIES create an immediate threat to public health and safety; potential for damage to public or private property adjacent to or downstream of the FACILITIES; or the potential for damage or negative impacts to water quality, riparian habitat, or channel morphology of the receiving watercourse; the CITY may immediately and without prior notice to OWNER take measures reasonably designed to remedy the threat. CITY shall provide notice of the threat and the measures taken to OWNER as soon as reasonably practicable, and charge OWNER for the cost of these corrective measures as outlined in V above.

VII. FORCE AND EFFECT

This Agreement has the same force and effect as any deed covenant running with the land and shall benefit and bind all OWNERS of the PROPERTY present and future, and their heirs, successors and assigns.

VIII. AMENDMENTS

The terms of this Agreement may be amended only by mutual agreement of the parties and shall not alter the intended purpose, intent, or functionality (NMC 13.25.300) of the FACILITIES. Any amendments shall be in writing, shall refer specifically to this Agreement, and shall be valid only when executed by the owners of the PROPERTY and CITY and recorded in the Official Records of Yamhill County.

IX. PREVAILING PARTY

In any action brought by either party to enforce the terms of this Agreement, the prevailing party shall be entitled to recover all costs, including reasonable attorney's fees as may be determined by the court having jurisdiction, including any appeal.

X. SEVERABILITY

The invalidity of any section, clause, sentence, or provision of this Agreement shall not affect the validity of any other part of this Agreement, which can be given effect without such invalid part or parts.

IN WITNESS WHEREOF, OWNER and CITY have signed this Agreement.

OWNER(S):

_____	_____
Signature	*Signature*
_____	_____
Name (Print or Type)	*Name (Print or Type)*
_____	_____
Title (Corporate)	*Title (Corporate)*
_____	_____
Name of Entity (Corporate)	*Name of Entity (Corporate)*

STATE OF _____)
) s.s.
County of _____)

This instrument was acknowledged before me this ____ day of _____, 20__, by

_____.

_____
Notary Public for Oregon
My Commission expires:_____

City Approval:

_____
Sue Ryan
City Recorder

Department Approval:

_____
Kaaren Hofmann
City Engineer

Approved as to Form and Content:

_____
Truman A. Stone
City Attorney

EXHIBIT A

Benefited Property Legal Description and Facility
Agreement Area Meets and Bounds Legal Description with Sketch
(To be Provided by Owner)

Parcel 1 of Partition Plat 2003-30 (see attached)

EXHIBIT B

Site Specific Maintenance Plan and Checklist

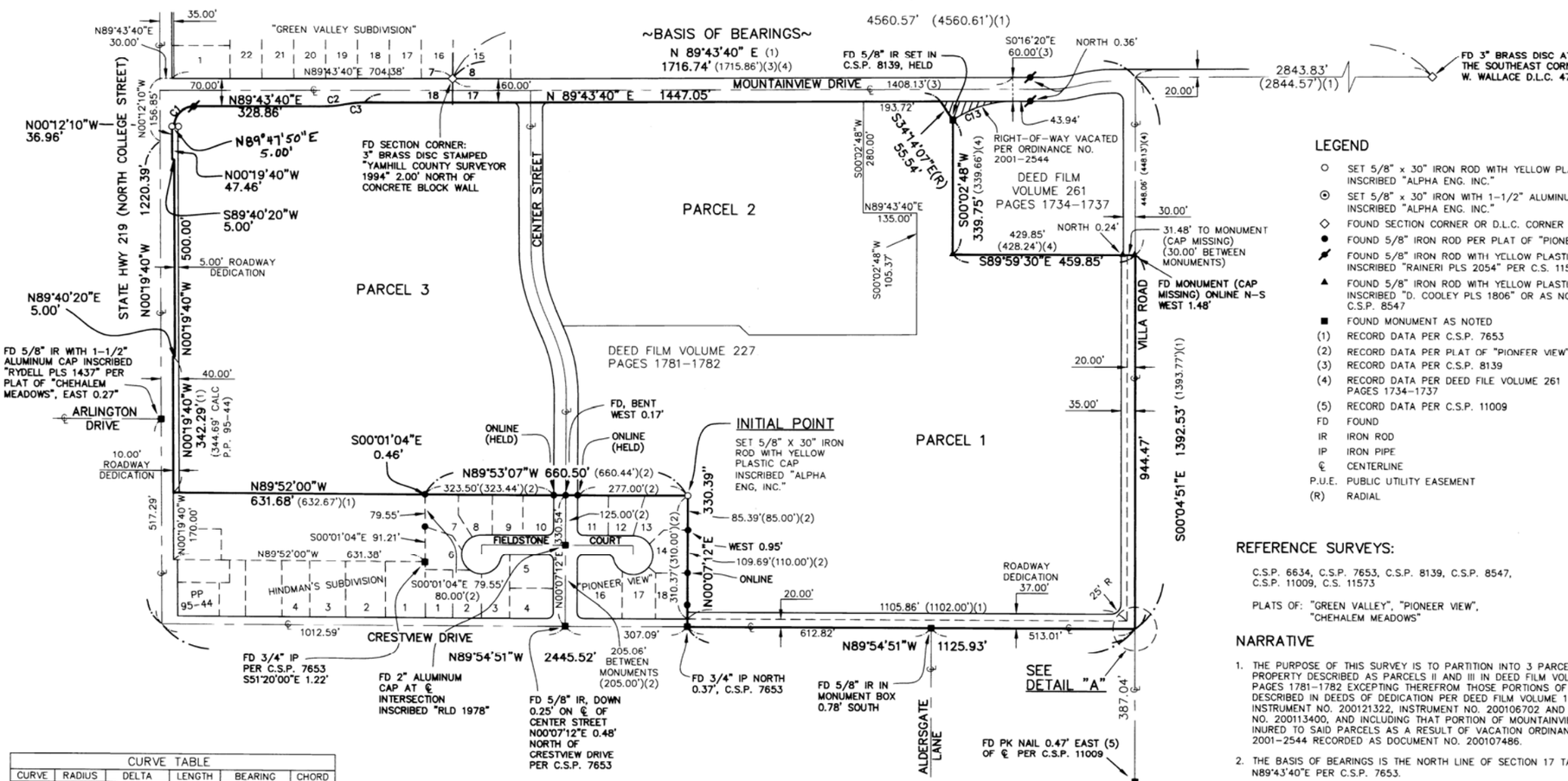
PARTITION PLAT 2003-30

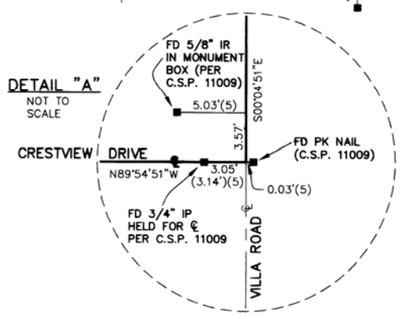
LOCATED IN THE NORTHWEST ONE-QUARTER OF SECTION 17,
AND THE NORTHEAST ONE-QUARTER OF SECTION 18,
TOWNSHIP 3 SOUTH, RANGE 2 WEST, WILLAMETTE MERIDIAN,
CITY OF NEWBERG, YAMHILL COUNTY, OREGON

SURVEYED: NOVEMBER 10, 2003
FOR: KENNETH AND JOAN AUSTIN

ALPHA ENGINEERING, INC.
9600 S.W. OAK, PLAZA WEST, SUITE 230
PORTLAND, OREGON 97223
(503) 452-8003

PARTITION 2003-30





CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	BEARING	CHORD
C1	50.00'	89°55'31"	78.47'	N44°45'55"E	70.66'
C2	251.90'	11°26'08"	50.28'	N84°00'36"E	50.19'
C3	251.90'	11°26'08"	50.28'	N84°00'36"E	50.19'
C13	270.00'	33°57'47"	160.05'	N72°44'47"E	157.74'

BOUNDARY CONTROL DIAGRAM 1" = 200'

SHEET INDEX

NOTE

THIS PLAT IS SUBJECT TO THE CONDITIONS IMPOSED BY THE CITY OF NEWBERG IN PLANNING FILE S-33-03.

REGISTERED PROFESSIONAL LAND SURVEYOR
Michael Gates
OREGON
JULY 25, 1990
MICHAEL R. GATES
2449
VALID UNTIL 6-30-05

I HEREBY CERTIFY THAT THIS TRACING IS A TRUE AND EXACT COPY OF PARTITION PLAT 2003-_____.

Michael Gates
MICHAEL R. GATES P.L.S. 2449

THIS PLAT WAS PREPARED USING HP PRODUCT NO. 51645A INK, ON CONTINENTAL NO. JPC4M2 POLYESTER FILM.

LEGEND

- ○ SET 5/8" x 30" IRON ROD WITH YELLOW PLASTIC CAP INSCRIBED "ALPHA ENG. INC."
- ⊙ SET 5/8" x 30" IRON WITH 1-1/2" ALUMINUM CAP INSCRIBED "ALPHA ENG. INC."
- ◇ FOUND SECTION CORNER OR D.L.C. CORNER AS NOTED.
- ● FOUND 5/8" IRON ROD PER PLAT OF "PIONEER VIEW"
- ✎ FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP INSCRIBED "RAINERI PLS 2054" PER C.S. 11573
- ▲ FOUND 5/8" IRON ROD WITH YELLOW PLASTIC CAP INSCRIBED "D. COOLEY PLS 1806" OR AS NOTED PER C.S.P. 8547
- ■ FOUND MONUMENT AS NOTED
- (1) RECORD DATA PER C.S.P. 7653
- (2) RECORD DATA PER PLAT OF "PIONEER VIEW"
- (3) RECORD DATA PER C.S.P. 8139
- (4) RECORD DATA PER DEED FILE VOLUME 261 PAGES 1734-1737
- (5) RECORD DATA PER C.S.P. 11009
- FD FOUND
- IR IRON ROD
- IP IRON PIPE
- ℄ CENTERLINE
- P.U.E. PUBLIC UTILITY EASEMENT
- (R) RADIAL

REFERENCE SURVEYS:

C.S.P. 6634, C.S.P. 7653, C.S.P. 8139, C.S.P. 8547, C.S.P. 11009, C.S. 11573

PLATS OF: "GREEN VALLEY", "PIONEER VIEW", "CHEHALEM MEADOWS"

NARRATIVE

1. THE PURPOSE OF THIS SURVEY IS TO PARTITION INTO 3 PARCELS THE PROPERTY DESCRIBED AS PARCELS II AND III IN DEED FILM VOLUME 227 PAGES 1781-1782 EXCEPTING THEREFROM THOSE PORTIONS OF SAID PARCELS DESCRIBED IN DEEDS OF DEDICATION PER DEED FILM VOLUME 172 PAGE 1947, INSTRUMENT NO. 200121322, INSTRUMENT NO. 200106702 AND INSTRUMENT NO. 200113400, AND INCLUDING THAT PORTION OF MOUNTAINVIEW DRIVE WHICH INURED TO SAID PARCELS AS A RESULT OF VACATION ORDINANCE NO. 2001-2544 RECORDED AS DOCUMENT NO. 200107486.
2. THE BASIS OF BEARINGS IS THE NORTH LINE OF SECTION 17 TAKEN AS N89°43'40"E PER C.S.P. 7653.
3. THE EAST RIGHT-OF-WAY LINE OF NORTH COLLEGE (STATE HIGHWAY 219) AND THAT PORTION OF THE SOUTH LINE FOLLOWING THE CENTERLINE OF CRESTVIEW DRIVE WERE ESTABLISHED PER SAID SURVEY NO. C.S.P. 7653.
4. THE RIGHT-OF-WAY OF MOUNTAINVIEW DRIVE WAS ESTABLISHED PER C.S.P. 8139. A PORTION OF SAID RIGHT-OF-WAY WAS VACATED PER SAID ORDINANCE NO. 2001-2544. HELD MONUMENT SET IN C.S.P. 8139 AT THE NORTHWEST CORNER OF PROPERTY DESCRIBED IN FILM VOLUME 261 PAGES 1734-1737. ESTABLISHED THAT PORTION OF THE VACATED RIGHT-OF-WAY OF MOUNTAINVIEW DRIVE WHICH INURED TO SAID PROPERTY ON A RADIAL BEARING FROM SAID NORTHWEST CORNER WITH THE CURVE OF THE VACATED RIGHT-OF-WAY. HELD MONUMENTS AT THE SOUTHWEST CORNER AND ON THE SOUTH LINE OF SAID PROPERTY SET IN C.S.P. 8547 TO DETERMINE THE REMAINING LINES OF SAID PROPERTY. THE SOUTHERLY NORTHEAST CORNER OF THE SUBJECT PROPERTY BEING THE INTERSECTION OF SAID SOUTH LINE WITH THE CENTERLINE OF VILLA ROAD ESTABLISHED FROM MONUMENTS FOUND IN C.S.P. 11009.
5. HELD MONUMENTS SET IN PLAT OF "PIONEER VIEW" AS SHOWN TO ESTABLISH THE BOUNDARIES OF SAID SUBDIVISION.
6. HELD MONUMENT SET IN C.S. 11573 AT THE NORTHWEST CORNER MARKING THE RIGHT-OF-WAY DEDICATION PER INSTRUMENT NO. 200121322.

Received 12-03-03
County Surveyor

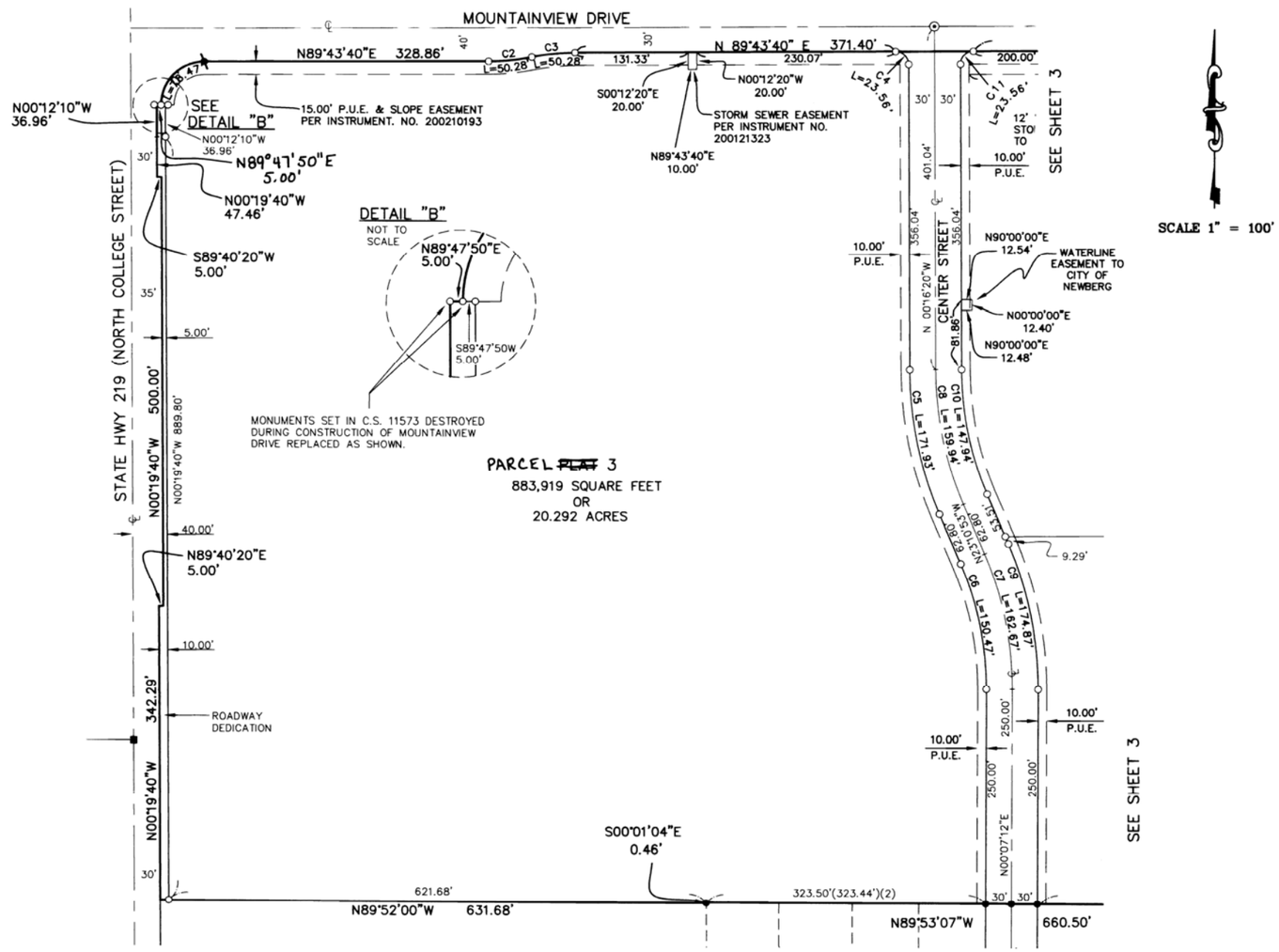
693-001

PARTITION PLAT 2003-30

LOCATED IN THE NORTHWEST ONE-QUARTER OF SECTION 17,
AND THE NORTHEAST ONE-QUARTER OF SECTION 18,
TOWNSHIP 3 SOUTH, RANGE 2 WEST, WILLAMETTE MERIDIAN,
CITY OF NEWBERG, YAMHILL COUNTY, OREGON

SURVEYED: NOVEMBER 10, 2003
FOR: KENNETH AND JOAN AUSTIN

ALPHA ENGINEERING, INC.
9600 S.W. OAK, PLAZA WEST, SUITE 230
PORTLAND, OREGON 97223
(503) 452-8003



SCALE 1" = 100'

NOTE

THIS SUBDIVISION IS SUBJECT TO THE CONDITIONS IMPOSED BY THE CITY OF NEWBERG IN PLANNING FILE S-33-03.

LEGEND

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- P.U.E. PUBLIC UTILITY EASEMENT
- (R) RADIAL

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C7	400.00'	23°18'05"	162.67'	N11°31'50"W	161.56'
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REGISTERED
PROFESSIONAL
LAND SURVEYOR
Michael R. Gates
OREGON
JULY 25, 1990
MICHAEL R. GATES
2449

VALID UNTIL 6-30-05

I HEREBY CERTIFY THAT THIS TRACING IS A TRUE AND EXACT COPY OF PARTITION PLAT 2003-30 "COPPERGOLD"

Michael R. Gates
MICHAEL R. GATES P.L.S. 2449

THIS PLAT DRAWING WAS PREPARED USING HP PRODUCT NO. 51645A INK, ON CONTINENTAL NO. JPC-4M2 POLYESTER FILM.

Received 12-03-03
County Surveyor

693-001

PARTITION 2003-30

PARTITION PLAT 2003-30

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SURVEYED: NOVEMBER 10, 2003
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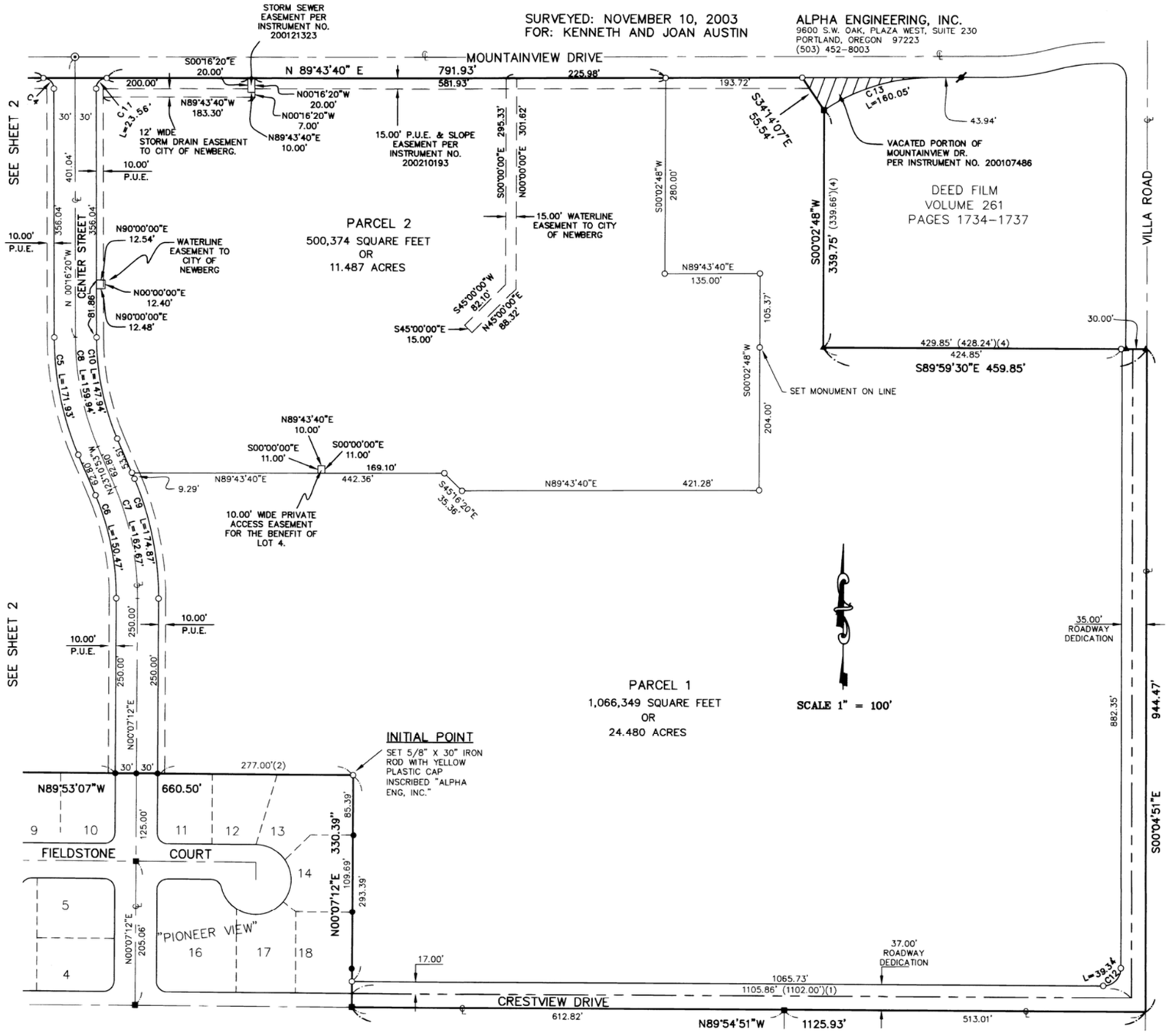

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REGISTERED
PROFESSIONAL
LAND SURVEYOR
Michael Gates
OREGON
JULY 25, 1990
MICHAEL R. GATES
2449

VALID UNTIL 6-30-05

I HEREBY CERTIFY THAT THIS TRACING IS A TRUE AND EXACT COPY OF PARTITION PLAT 2003-30

Michael Gates
MICHAEL R. GATES P.L.S. 2449

THIS PLAT DRAWING WAS PREPARED USING HP PRODUCT NO. 51645A INK, ON CONTINENTAL NO. JPC-4M2 POLYESTER FILM.

SHEET 3 OF 4

Received 12-03-03
County Surveyor

693-001

PARTITION 2003-30

PARTITION PLAT 2003-30

LOCATED IN THE NORTHWEST ONE-QUARTER OF SECTION 17,
AND THE NORTHEAST ONE-QUARTER OF SECTION 18,
TOWNSHIP 3 SOUTH, RANGE 2 WEST, WILLAMETTE MERIDIAN,
CITY OF NEWBERG, YAMHILL COUNTY, OREGON

SURVEYED: NOVEMBER 10, 2003
FOR: KENNETH AND JOAN AUSTIN

ALPHA ENGINEERING, INC.
9600 S.W. OAK, PLAZA WEST, SUITE 230
PORTLAND, OREGON 97223
(503) 452-8003

PARTITION 2003-30

DECLARATION

KNOW ALL PEOPLE BY THESE PRESENTS: THAT GEORGE KENNETH AUSTIN, JR. AND JOAN D. AUSTIN, AS INDIVIDUALS, ARE THE OWNERS OF THE PROPERTY AND DO HEREBY MAKE, ESTABLISH, AND DECLARE THE ANNEXED PARTITION PLAT, AS DESCRIBED IN THE ACCOMPANYING SURVEYOR'S CERTIFICATE, TO BE A TRUE AND CORRECT PLAT THEREOF, ALL PARCEL LINES BEING OF THE DIMENSIONS SHOWN AND ALL STREETS AND EASEMENTS OF THE WIDTHS THEREIN SET FORTH AND DO HEREBY DEDICATE TO THE PUBLIC AS PUBLICWAYS FOREVER ALL STREETS AND HEREBY GRANT ALL EASEMENTS AS SHOWN OR NOTED HEREON.

George Kenneth Austin
GEORGE KENNETH AUSTIN, JR.

Joan D. Austin
JOAN D. AUSTIN

ACKNOWLEDGMENT

STATE OF OREGON)
YAMHILL COUNTY) SS

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON 18 NOV., 2003
BY GEORGE KENNETH AUSTIN, AND JOAN D. AUSTIN.

Glenda L. Wade
NOTARY SIGNATURE
Glenda L. Wade
NOTARY PUBLIC - OREGON
COMMISSION NO. 33212
MY COMMISSION EXPIRES 6-28-04

OFFICIAL SEAL
GLENDA L. WADE
NOTARY PUBLIC-OREGON
COMMISSION NO. 33212
MY COMMISSION EXPIRES JUN 28, 2004

NOTE

THIS PLAT IS SUBJECT TO THE CONDITIONS IMPOSED BY THE CITY OF NEWBERG IN PLANNING FILE S-33-03.

SURVEYOR'S CERTIFICATE

I, MICHAEL R. GATES, HEREBY CERTIFY THAT I HAVE CORRECTLY SURVEYED AND MARKED WITH PROPER MONUMENTS THE LANDS REPRESENTED ON THE ANNEXED PARTITION PLAT; LOCATED IN THE NORTHWEST ONE-QUARTER OF SECTION 17, AND THE NORTHEAST ONE-QUARTER OF SECTION 18, TOWNSHIP 3 SOUTH, RANGE 2 WEST, OF THE WILLAMETTE MERIDIAN, CITY OF NEWBERG, YAMHILL COUNTY, OREGON; THAT AS THE INITIAL POINT OF SAID SURVEY I SET A 5/8" IRON ROD WITH A YELLOW PLASTIC CAP INSCRIBED "ALPHA ENG. INC." MARKING THE NORTHEAST CORNER OF LOT 13, "PIONEER VIEW"; THENCE ALONG THE NORTH LINE OF SAID SUBDIVISION NORTH 89°53'07" WEST 660.50 FEET TO THE NORTHWEST CORNER OF LOT 7; THENCE SOUTH 00°01'04" EAST 0.46 FEET ALONG THE WEST LINE OF SAID LOT 7; THENCE LEAVING SAID LINE NORTH 89°52'00" WEST 631.68 FEET TO THE EAST RIGHT-OF-WAY LINE OF STATE HIGHWAY 219 (NORTH COLLEGE STREET); THENCE ALONG SAID LINE NORTH 00°19'40" WEST 342.29 FEET; THENCE NORTH 89°40'20" EAST 5.00 FEET; THENCE NORTH 00°19'40" WEST 500.00 FEET; THENCE SOUTH 89°40'20" WEST 5.00 FEET; THENCE NORTH 00°19'40" WEST 47.46 FEET; THENCE NORTH 00°12'10" WEST 36.96 FEET; THENCE NORTH 89°47'50" EAST 5.00 FEET; THENCE ON A CURVE CONCAVE TO THE SOUTHEAST, HAVING A RADIUS OF 50.00 FEET, THROUGH A CENTRAL ANGLE OF 89°55'31", AN ARC LENGTH OF 78.47 FEET (CHORD BEARS NORTH 44°45'55" EAST 70.66 FEET) TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF MOUNTAINVIEW DRIVE; THENCE ALONG SAID LINE NORTH 89°43'40" EAST 328.86 FEET; THENCE ON A CURVE TO THE LEFT, HAVING A RADIUS OF 251.90 FEET, THROUGH A CENTRAL ANGLE OF 11°26'08", AN ARC LENGTH OF 50.28 FEET (CHORD BEARS NORTH 84°00'36" EAST 50.19 FEET) TO A POINT OF REVERSE CURATURE; THENCE ON A CURVE CONCAVE TO THE SOUTH HAVING A RADIUS OF 251.90 FEET, THROUGH A CENTRAL ANGLE OF 11°26'08", AN ARC LENGTH OF 50.28 FEET (CHORD BEARS NORTH 84°00'36" EAST 50.19 FEET); THENCE NORTH 89°43'40" EAST 1447.05 FEET TO THE NORTHWEST CORNER OF THAT PORTION OF THE VACATED RIGHT-OF-WAY OF MOUNTAINVIEW DRIVE WHICH INURED TO THE PROPERTY DESCRIBED IN DEED FILM VOLUME 261 PAGES 1734-1737 AS A RESULT OF VACATION ORDINANCE NO. 2001-2544; THENCE ALONG THE WEST LINE OF SAID VACATED RIGHT-OF-WAY SOUTH 34°14'07" EAST 55.54 FEET TO THE NORTHWEST CORNER OF SAID PROPERTY; THENCE ALONG THE WEST LINE OF SAID PROPERTY SOUTH 00°02'48" WEST 339.75 FEET TO THE SOUTHWEST CORNER; THENCE ALONG THE SOUTH LINE AND ITS EASTERLY EXTENSION SOUTH 89°59'30" EAST 459.85 FEET TO A POINT ON THE CENTERLINE OF VILLA ROAD; THENCE SOUTH 00°04'51" EAST 944.47' TO THE INTERSECTION WITH THE CENTERLINE OF CRESTVIEW DRIVE; THENCE ALONG THE CENTERLINE OF CRESTVIEW DRIVE NORTH 89°54'51" WEST 1125.93 FEET TO A POINT ON THE SOUTHERLY EXTENSION OF THE EAST LINE OF SAID "PIONEER VIEW"; THENCE ALONG THE EAST LINE OF SAID SUBDIVISION AND ITS SOUTHERLY EXTENSION NORTH 00°07'12" EAST 330.39 FEET TO THE INITIAL POINT.

CONTAINING 59.492 ACRES.

REGISTERED
PROFESSIONAL
LAND SURVEYOR
Michael R. Gates
OREGON
JULY 25, 1990
MICHAEL R. GATES
2449

VALID UNTIL 6-30-05

I HEREBY CERTIFY THAT THIS TRACING IS A TRUE AND EXACT COPY OF PARTITION PLAT 2003-30.

Michael R. Gates
MICHAEL R. GATES P.L.S. 2449

THIS PLAT DRAWING WAS PREPARED USING HP PRODUCT NO. 51645A INK, ON CONTINENTAL NO. JPC-4M2 POLYESTER FILM.

YAMHILL COUNTY APPROVALS

APPROVED THIS 26th DAY OF November, 2003.

Mark C. Grenbeth
YAMHILL COUNTY SURVEYOR — 11/26/2003 DATE

ALL TAXES, FEES, ASSESSMENTS OR OTHER CHARGES AS PROVIDED BY O.R.S 92.095 HAVE BEEN PAID. 6-30-04

David Jaxson
YAMHILL COUNTY TAX COLLECTOR — 12/2/03 DATE

CITY OF NEWBERG APPROVALS

[signature]
NEWBERG COMMUNITY DEVELOPMENT DIRECTOR — 11-29-03 DATE

J. Bennett
CITY OF NEWBERG RECORDER — 11/25/03 DATE

OFFICIAL YAMHILL COUNTY RECORDS
CHARLES STERN, COUNTY CLERK
00150695200300305110040041 $66.00
200330511 11:13:24 AM 12/03/2003
PR-PARPR Cnt=1 Stn=1 KAREN
$45.00 $10.00 $11.00

Received 12-03-03
County Surveyor

693-001

3.1.1.2. Pervious Pavement

Note: If this is a proprietary system, the O&M requirements for the system supersede this plan.

Structural components, including surface materials, must evenly infiltrate stormwater.		
	MAINTENANCE INDICATOR	**CORRECTIVE ACTION**
	Clogged surface	Vacuum or dry sweep at least once a year.
	Unraveling or settled pavement	Repair as per manufacturer specification. Do not apply sealants to pervious pavement.
Vegetation must be managed to reduce impacts to pervious pavement.		
	MAINTENANCE INDICATOR	**CORRECTIVE ACTION**
	Leaf debris	Sweep leaf litter and sediment to prevent surface clogging and ponding.
	Vegetation encroachment	Prevent large root systems from damaging subsurface structural components.
	Weeds	Manually remove, mow, or torch weeds.
Filter medium must be maintained to preserve infiltration capacity.		
	MAINTENANCE INDICATOR	**CORRECTIVE ACTION**
	Aggregate loss	Replace paver pore space with aggregate per original design.

Annual Maintenance Schedule

Summer	Make structural repairs.
Fall	Vacuum sweep.
Winter	Monitor infiltration rates.
Spring	Vacuum sweep.
All seasons	Weed as necessary.

Maintenance Records: All facility operators are required to keep an inspection and maintenance log. Record date, description, and contractor (if applicable) for all repairs, landscape maintenance, and facility cleanout activities. Keep work orders and invoices on file and make available upon request of the City inspector.

Access: Maintain ingress/egress per design standards.

Infiltration/Flow Control: All facilities must drain within 48 hours. Record time/date, weather, and site conditions when ponding occurs.

Pollution Prevention: All sites must implement Best Management Practices to prevent the introduction of pollutants into stormwater. Record the time/date, weather, and site conditions when site activities contaminate stormwater. Record the time/date and description of corrective action taken.

Vectors (Mosquitoes and Rats): Stormwater facilities must not harbor mosquito larvae or rodents that pose a threat to public health or that undermine the facility structure. Record the time/date, weather, and site conditions when vector activity observed. Record when vector abatement started and ended.

Operations and Maintenance Log

Date	Work Performed By	Type of Work Performed	Notes	Initials

3.1.1.6. Swales

Structural components must be operated and maintained in accordance with the design specifications.		
	MAINTENANCE INDICATOR	**CORRECTIVE ACTION**
	Clogged inlets or outlets	Remove sediment and debris from catch basins, trench drains, curb inlets, and pipes; maintain at least 50% conveyance at all times.
	Broken inlets or outlets	Repair or replace broken downspouts, curb cuts, standpipes, and screens as needed.
	Cracked or exposed drain pipes	Repair or seal cracks. Replace when repair is insufficient. Cover with 6 inches of growing medium to prevent freeze/thaw and UV damage.
	Check dams missing or with gaps	Maintain or replace check dams as per design specifications.
	Perforated liner	Repair or replace as necessary.
Vegetation must cover at least 90% of the facility at maturity.		
	MAINTENANCE INDICATOR	**CORRECTIVE ACTION**
	Dead or stressed vegetation	Replant per planting plan or substitute from the plant list in Section 2.4.1.
	Dry grass or other plants	Irrigate and mulch. Maintain grass height at 6”-9”.
	Tall grass and vegetation	Prune to allow sight lines and foot traffic. Prune to ensure inlets and outlets freely convey stormwater into and/or out of facility.
	Weeds	Manually remove weeds.
Growing medium must sustain healthy plant cover and infiltrate within 48 hours.		
	MAINTENANCE INDICATOR	**CORRECTIVE ACTION**
	Erosion and sediment accumulation	Fill in and lightly compact areas of erosion with City-approved soil mix (see Section 2.3.6); replant according to planting plan or substitute from the plant list in Section 2.4.1. Erosion deeper than 2 inches must be addressed. Sediment more than 4 inches deep must be removed.
	Scouring at the inlet(s)	Ensure splash blocks or inlet gravel/rock are adequate.
	Slope slippage	Stabilize 3:1 slopes/banks with plantings from the original planting plan or from the plant list in Section 2.4.1.
	Ponding	Rake, till, or amend soil surface with City-approved soil mix to restore infiltration rate.

Annual Maintenance Schedule

Summer	Make structural repairs; clean gutters and downspouts; remove any build-up of weeds or organic debris.
Fall	Replant exposed soil and replace dead plants. Remove sediment and plant debris.
Winter	Clear gutters and downspouts.
Spring	Remove sediment and plant debris. Replant exposed soil and replace dead plants.
All seasons	Weed as necessary.

Maintenance Records: All facility operators are required to keep an inspection and maintenance log. Record date, description, and contractor (if applicable) for all repairs, landscape maintenance, and facility cleanout activities. Keep work orders and invoices on file and make available upon request of the City inspector.

Fertilizers/Pesticides/Herbicides. Their use is strongly discouraged because of the potential for damage to downstream systems. If pesticides or herbicides are required, use the services of a licensed applicator and products approved for aquatic use.

Access: Maintain ingress/egress per design standards.

Infiltration/Flow Control: All facilities must drain within 48 hours. Record time/date, weather, and site conditions when ponding occurs.

Pollution Prevention: All sites must implement Best Management Practices to prevent contamination of stormwater. Call 503-823-7180 to report spills. Never wash spills into a stormwater facility. If contamination occurs, document the circumstances and the corrective action taken; include the time/date, weather, and site conditions.

Vectors (Mosquitoes and Rats): Stormwater facilities must not harbor mosquito larvae or rodents that pose a threat to public health or that undermine the facility structure. Record the time/date, weather, and site conditions when vector activity observed. Record when vector abatement started and ended.

Operations and Maintenance Log

Date	Work Performed By	Type of Work Performed					Notes	Initials
		Clean inlets and Outlets	Sediment and Trash Removal	Plant Replacement type, location	Structural Repairs – type, location	Other		

3.1.1.8. Planters

Structural components must be operated and maintained in accordance with the design specifications.		
	MAINTENANCE INDICATOR	**CORRECTIVE ACTION**
	Clogged inlets or outlets	Remove sediment and debris from catch basins, trench drains, curb inlets, and pipes; maintain at least 50% conveyance at all times.
	Broken inlets or outlets	Repair/replace broken downspouts, curb cuts, standpipes, and screens.
	Damaged liners and walls	Extend and secure liner to planter walls above the high water mark. The facility must be water tight to protect abutting foundations from moisture damage.
	Cracked or exposed drain pipes	Repair or seal cracks. Replace when repair is insufficient. Cover with 6 inches of growing medium to prevent freeze/thaw and UV damage
Vegetation must cover at least 90% of the facility at maturity.		
	MAINTENANCE INDICATOR	**CORRECTIVE ACTION**
	Dead or stressed vegetation	Replant per original planting plan, or substitute from the plant list in Section 2.4.1. Irrigate and mulch as needed; prune tall, dry grasses and remove clippings.
	Tall grass and vegetation	Maintain grass height at 6”-9”. Trim to allow sight lines and foot traffic, also to ensure inlets and outlets freely convey stormwater into and/or out of facility.
	Weeds	Manually remove weeds.
Growing medium must sustain healthy plant cover and infiltrate within 48 hours.		
	MAINTENANCE INDICATOR	**CORRECTIVE ACTION**
	Gullies, erosion, exposed soils, sediment accumulations	Fill in and lightly compact areas of erosion with City-approved soil mix (see Section 2.3.6) and replant according to planting plan or substitute from the plant list in Section 2.4.1. Sediment more than 4 inches deep must be removed.
	Scouring at the inlet(s)	Ensure splash blocks or inlet gravel/rock are adequate.
	Ponding	Rake, till, or amend soil surface with City-approved soil mix to restore infiltration rate. Remove and replace sediment at entrances.

Annual Maintenance Schedule

Summer	Make structural repairs; clean gutters and downspouts; remove any build-up of weeds or organic debris.
Fall	Replant exposed soil and replace dead plants. Remove sediment and plant debris.
Winter	Clear gutters and downspouts.
Spring	Remove sediment and plant debris. Replant exposed soil and replace dead plants.
All seasons	Weed as necessary.

Maintenance Records: All facility operators are required to keep an inspection and maintenance log. Record date, description, and contractor (if applicable) for all repairs, landscape maintenance, and facility cleanout activities. Keep work orders and invoices on file and make available upon request of the City inspector.

Fertilizers/Pesticides/Herbicides: Their use is strongly discouraged because of the potential for damage to downstream systems. If pesticides or herbicides are required, use the services of a licensed applicator and products approved for aquatic use.

Access: Maintain ingress/egress per design standards.

Infiltration/Flow Control: All facilities must drain within 48 hours. Record time/date, weather, and conditions when ponding occurs.

Pollution Prevention: All sites must implement Best Management Practices to prevent contamination of stormwater. Call 503-823-7180 to report spills. Never wash spills into a stormwater facility. If contamination occurs, document the circumstances and the corrective action taken; include the time/date, weather, and site conditions.

Vectors (Mosquitoes and Rats): Stormwater facilities must not harbor mosquito larvae or rodents that pose a threat to public health or that undermine facility structures. Record the time/date, weather, and site conditions when vector activity observed. Record when vector abatement started and ended.

Operations and Maintenance Log

Date	Work Performed By	Type of Work Performed					Notes	Initials
		Clean inlets and Outlets	Sediment and Trash Removal	Plant Replacement type, location	Structural Repairs – type, location	Other		

Exhibit G: General Engineering Construction Inspection Report (Added March 2023)

General Engineering Construction Inspection Report

AKS Engineering & Forestry, LLC
Offices in: Bend, OR - Keizer, OR - Tualatin, OR - Vancouver, WA

Project Number, Name, & Phase:	8583 Crestview Townhomes	Date:	March 7, 2023
Contractor:	AKS Post Construction Review	Time:	9:15 AM
Crew Size:	0	Weather Details:	Overcast
Inspector:	Jacob Secor	Temperature:	42°
Engineer:	Darko Simic	Reviewed By:	Darko Simic

Summary:

I arrived at George Fox University Austin Sports Complex at 9:15 A.M. to record the current site conditions post construction. During my site visit, I used approved AKS Plans for job number 5809 bearing a date of 07/14/2017. I observed the parking lot to be a permeable asphalt section. An outfall is located off the northeast corner of the parking lot and outfalls into a neighboring field.

I entered the gated portion of the facility and found a +/- 2' section of 1-1/2" clean rock directly next to the exterior wall of the structure. The 2' rock section appeared to slope away from the structure and into the water quality swale. The water quality swale appeared to be constructed per the Water Quality Swale detail found on sheet C502 on the approved plans. The water quality swale was constructed along the north, east and south perimeters of the building. On the east side of the building, I observed the swale overflow/flow control structure was installed. The structure was observed to have a flow control box installed within the structure. The dimensions appeared to be consistent with the requirements outlined within the approved plans. I observed a clean out was installed downstream from the swale overflow/flow control structure just before the downslope along the east side of the tennis building. Downstream from the clean out, a level flow spreader was installed to the east of the building in a vacant field as a discharge location for the water quality swale.

During my site visit and after reviewing the approved plans, it appears the project was constructed in accordance with the approved plans.

Photos

Description: Water quality swale along the south side of the building.

Description: The swale overflow/flow control structure installed on the east side of the building.

Description: Interior flow control box for the swale overflow/flow control structure.

Description: Water quality swale along the north side of the building.

Photos

Description: 2’ section of 1-1/2” clean drain rock sloping away from the building and into the water quality swale.

Description: A storm clean out installed between the swale overflow/flow control structure and the level flow spreader.

Description: A level flow spreader installed in the field to the east of the building.

Description: The outfall pipe for the permeable asphalt pavement section installed northeast form the asphalt section and outfalls in the field east of the project.