

SUNCREST DRIVE PUD SUBDIVISION
FOR
SIX LOTS AND TWO TRACTS

I. PROPOSAL SUMMARY

GENERAL INFORMATION

Property Owner/Applicant	Icon Construction 1980 Willamette Falls Dr., Ste. 200 West Linn, OR 97068 [T] 503.657.0406
Applicant's Representative	Emerio Design Kirsten Van Loo 6107 SW Murray Blvd., Ste. 147 Beaverton, OR 97008 [T] 503.956.4180
Map and Tax Lot	TL 2S 1E 23BD #6700
Site Location	19650 Suncrest Drive
Size	3.75 acres
Comprehensive Plan Designation	Residential
Zoning	R-10
Pre-Application Meeting Date	July 17, 2008
Neighborhood Meeting Dates	August 19, 2008, August 26, 2008

EXECUTIVE SUMMARY

This project is designed as a six-lot Planned Development on 3.8 acres in the City of West Linn, Oregon. The site contains land with significant slope, with a drainage course traversing the property on the eastern section. Based on development code requirements for protection of the drainage course and the adjacent lands providing water quality filtration to that drainage, the project is planned with six single family lots on the western portion of the site. While the property has a base zone of R-10, requiring one single family dwelling on each 10,000 square foot (minimum) lot, the Planned Development provision of the Development Code allow for reductions in base zone standards if the requirements for that provision are met.

The six lots range from 7600 square feet to over 11,000 square feet, while accommodating a private easement access to four of the six homesites. The private access easement will have a paved two-way drive for access to lots 3, 4, 5, and 6. Lot 1 and 2 will take vehicular access from Suncrest Drive. A small detention/water quality facility has been designed for location on Tract A, providing required storm water management of the waters draining through the site. Tract B is 103,793 square feet of land that is set out as an open space tract. That tract will remain in the ownership of the project, but will have required open space easements applied to protect it as vegetated corridor for the associated drainage.

There are numerous trees on the total property, as well as a small home and detached garage. These two buildings will be removed as part of the construction process for the infrastructure. Included with this application is a list of the trees slated for removal, as well as the species and quantity of trees planned for mitigation planting. Mitigation planting for removal of on-site trees will be accomplished on the upper reaches of Tract B, currently an open meadow.

SURROUNDING AREA

As evidenced by reviewing the aerial photograph, the surrounding area is comprised of single family development on both subdivision lots (Ridgebrook Park Estates) and large lots remaining from earlier rural and ex-urban homesites. Suncrest Drive is a collector street, as classified by the City of West Linn Transportation Plan. Property to the south has been divided into four lots, along Carriage Way. The drainage that travels north through the subject property originates from the south, at or near Carriage Way, and travels north to the Wildwood Open Space Tracts after crossing open space tracts associated with Ridgebrook Park Estates. Currently the closest public elementary school is CedarOak Park Elementary, and the closest middle school is at the intersection of Rosemont and Salamo. West Linn School District is applying for annexation of the Erickson Parcel to the City in order to build a new elementary school near Hidden Springs, between Rosemont and Santa Anita.

II. COMPLIANCE WITH THE CITY OF WEST LINN DEVELOPMENT CODE

LOW DENSITY

11.000 SINGLE-FAMILY RESIDENTIAL DETACHED, R-10

11.010 PURPOSE

The purpose of this zone is to provide for urban development at levels which relate to the site development limitations, proximity to commercial development and to public facilities and public transportation. This zone is intended to implement the Comprehensive Plan policies and locational criteria, and is applicable to areas designated as Low Density Residential on the Comprehensive Plan Map and Type I and Type II lands identified under the Buildable Lands Policy.

11.030 PERMITTED USES

The following are uses permitted outright in this zone:

1. Single-family detached residential unit.

RESPONSE: The application for a six lot PD subdivision is for a use allowed in the R-10 zoning district as reviewed under the applicable criteria.

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

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

1. The minimum lot size shall be 10,000 square feet for a single-family detached unit.
2. The minimum front lot line length or the minimum lot width at the front lot line shall be 35 feet.
3. The average minimum lot width shall be 50 feet.
4. The lot depth comprising non-Type I and II lands shall be less than two and one-half times the width, and more than an average depth of 90 feet.
5. The minimum yard dimensions or minimum building setback area from the lot line shall be:
 - a. For the front yard, 20 feet; except for steeply sloped lots where the provisions of Section 41.010 shall apply; and as specified in Section 26.040(D) for the Willamette Historic District. (ORD. 1175)
 - b. For an interior side yard, 7-1/2 feet; except as specified in Section 26.040(D) for the Willamette Historic District.
 - c. For a side yard abutting a street, 15 feet.
 - d. For a rear yard, 20 feet.
6. The maximum building height shall 35 feet, except for steeply sloped lots in which case the provisions of Section 41.000 shall apply.
7. The maximum lot coverage shall be 35 percent.
8. The minimum width of an accessway to a lot which does not abut a street or a flag lot, shall be 15 feet.
9. The floor area ratio shall be .45.
10. The sidewall provisions of CDC Chapter 43 shall apply.

RESPONSE: The six proposed lots do not meet the standard R-10 district requirements for area, and length dimensions, however, they do meet the approval criteria for a planned development as demonstrated further in this document.

All six lots are a minimum of 50 feet wide. All lots are a minimum of 90 feet deep. R-10 zoning setbacks for dwellings require 20 foot front yards, 7 and 1/2 foot side yards, 15 foot street (or private accessway) side yards, and 20 foot rear yards. These setbacks may be adjusted through the Planned Development provisions. The developer requests reductions in the setbacks for the homes as detailed in the PUD section of this document.

The private accessway easement is 24 feet wide at its intersection with Suncrest Drive and widens to 30 feet as it serves the eastern three lots, to accommodate vehicular movement and utility installation.

Lot coverage, sidewall provisions as described in Chapter 43, and FAR requirements will be addressed in detail and met at the time of issuance of building permits.

24.000 PLANNED UNIT DEVELOPMENT

24.010 PURPOSE

The purpose of the Planned Unit Development overlay zone is to provide a means for creating planned environments:

RESPONSE: The application for a six lot PD subdivision is submitted with findings demonstrating compliance to this section of the West Linn CDC in order to preserve a significant open space tract associated with a drainage traversing through the eastern portion of the site. The flexibility afforded through these provisions allows development of six single family homesites compatible with the surrounding development neighborhood while preserving an important vegetated corridor.

24.020 ADMINISTRATION AND APPROVAL PROCESS

A. The Planned Unit Development (PUD) zone is an overlay zone and a preapplication conference is a precondition to the filing of an application.

B. The application shall be filed by the owner of record or authorized agent.

C. Action on the application shall be as provided by Chapter 99, Procedures for Decision-Making: Quasi-Judicial.

RESPONSE: The application for a six lot PD subdivision was preceded by a pre-submittal application conference as documented by the pre-app notes. The application is filed by the property owner. It is understood that the action taken on this application is in compliance with the applicable procedures set forth in CDC Chapter 99.

24.060 AREA OF APPLICATION

A. Planned Unit Developments (PUDs) may be established in all residential, commercial, and industrial districts

B. All qualifying non-residential, all mixed use developments, and all qualifying residential developments

1. Any development site composed of more than 25 percent of Type I or Type II lands, as defined by Section 24.060(C), shall be developed as a PUD.

RESPONSE: The application for a six lot PD subdivision includes land that is Type I and Type II land because it is steeply sloped and adjacent to a drainage way.

24.070 EXEMPTIONS FROM PLANNED UNIT DEVELOPMENT REQUIREMENTS

A Planned Unit Development (PUD) shall not apply in cases where all the following conditions exist:

1. No density transfer is proposed pursuant to provisions of this Chapter.

2. No development, construction, or grading will take place on Type I and II lands.

3. All the Type I and II lands shall be dedicated to the City as open space, or protected by easement with appropriate delineation.

RESPONSE: The application for a six lot PD subdivision is not exempt from the requirements of the PUD because of the above requirement and finding related to Type I and Type II lands.

24.080 SUBMITTAL REQUIREMENTS

The submittal requirements shall apply to non-exempt projects as identified in Section 55.025, and shall include the following:

1. Narrative discussing proposal and applicability of the PUD and addressing approval criteria of this chapter and Design Review Section 55.100.

55.025 EXEMPTIONS

The provisions of this chapter exempt individual single-family residential houses construction, single-family detached housing subdivisions,

2. Narrative and table showing applicable density calculations.

RESPONSE: Density calculations for the site are as follows:

Site – 3.80 acres or 165,528 square feet.

Maximum density for the site – 16 dwelling units (one dwelling unit per 10,000 square feet).

Land area set aside in Open Space Tract – 103,793 square feet (exempt from min. density req).

Net developable area – 61,735 square feet.

Maximum density of developable area – 6 dwelling units.

Minimum density of developable area – 4 dwelling units (70% of maximum density).

3. Map showing how the densities will be distributed within the project site.
4. Compliance with submittal requirements of Chapter 55, Design Review, including full response to approval criteria for Chapter 55, Design Review, and Chapter 85, if it is a single-family PUD.

55.025 EXEMPTIONS

The provisions of this chapter exempt individual single-family residential houses construction, single-family detached housing subdivisions,

~~7. Narrative, tables, and showing all density transfers.~~

6. Tables and maps identifying all Type I, II, III and IV lands by acreage, location and type

Type I lands. Lands that have severe constraints that preclude the use of standard development techniques and technical criteria. Type I lands exist in the following areas:

Slope: All lands with 35 percent or more slopes.

Drainage: All lands within the 100 year flood plain.

Geological Hazard: All existing or known landslide areas.

Type II lands. Lands which have constraints that are sufficient to preclude most standard types of development.

Constraints in these areas generally do not constitute a health or safety hazard, but require the use of non-standard technical design criteria. Type II lands exist in the following areas:

Slope: All lands with slopes between 25 and 35 percent.

Drainage: All drainage courses.

Geology: All known mineral and aggregate deposits.

RESPONSE: The site contains approximately 100,000 square feet of type I and type II land as defined by the CDC. All of the type I and type II lands are contained in Tract B.

Type III lands. These lands are considered within the major portion of the City's developable lands. Standard development criteria can be applied through normal implementation measures. Type III lands have slopes between 15 and 25 percent.

Type IV lands. These lands are considered to have few, if any, constraints to development and are within the major portion of the City's developable lands. Normal development standards will apply in these areas. Type IV lands have slopes between 0 and 15 percent.

RESPONSE: The site contains approximately 65,735 square feet of type III and type IV land as defined by the CDC.

7. Other material as required by the Planning Director.

RESPONSE: The application package for a six lot PD subdivision contains all of the applicable materials necessary for review and approval as required by the CDC. The only portion of Chapter 55.100 that is applicable to this small residential PUD project is the review of the existing trees on the property. Similar criteria are found in Chapter 85 relating to land divisions. The criteria relating to existing trees on the property are thus addressed under Chapter 85.

24.090 APPLICABILITY AND ALLOWED USES

Subject to the provisions of Sections 24.080, 24.070 and 24.090, the PUD Overlay Zone may be applied to all residential, commercial, and industrial zones.

A. In addition to the uses allowed outright in the underlying zone the following uses shall be allowed outright where all other applicable standards are met.

1. Single-family, duplex, attached housing and multiple family housing.

RESPONSE: The application for a six lot PD subdivision is for single family development.

24.100 APPROVAL CRITERIA

A. The approval criteria of Section 55.100, Design Review, shall apply to non-exempted projects per Section 55.025. Single-family detached, single family attached, and duplex residential units proposed shall comply with the provisions of Chapter 43 at time of building permit application.

55.025 EXEMPTIONS

The provisions of this chapter exempt individual single-family residential houses construction, single-family detached housing subdivisions,

RESPONSE: The application for a six lot PD subdivision for single family detached dwelling units and as such, is exempt from the requirements of Chapter 55.

B. The application shall also demonstrate compliance with the following criteria:

1. The proposal shall preserve the existing amenities of the site to the greatest extent possible by relating the type and design of the development to the topography, landscape features, and natural amenities existing on the site and in the vicinity.

RESPONSE: The application for a six lot PD subdivision preserves over 100,000 square feet of land as an open space tract to protect the steep slopes and the vegetated corridor associated with the drainage.

2. The proposed PUD shall provide a desirable, attractive, and stable environment in harmony with that of the surrounding area through thorough, well developed, detailed planning and by comprehensively correlating the provisions of this Code and all applicable adopted plans.

RESPONSE: The application for a six lot PD subdivision is designed for homes of equal size and construction quality to promote compatibility with the existing subdivision and single family houses on individual lots in the neighborhood. The proposed infrastructure will be constructed to integrate with the existing facilities in the neighborhood.

3. The placement and design of buildings, use of open spaces, circulation facilities, off-street parking areas, and landscaping shall be designed to best utilize the potentials of the site characterized by special features of geography, topography, size, and shape.

RESPONSE: The project is designed to accommodate six new single family homes with architectural design common to the northwest. Individual landscaping will complement the surrounding neighborhood. Street trees are proposed to enhance the Suncrest Drive streetscape as required by the development code.

4. The PUD shall be developed so that it is compatible with neighboring development in terms of architecture, massing, and scale. Where that cannot be accomplished, appropriate transitions shall be provided that are deferential or sympathetic to existing development.

RESPONSE: The project is designed to accommodate six new single family homes with architectural design common to the northwest. The current CDC regulates setbacks, building scale and size, and maximum building footprint to ensure the development will be of similar size and scope to the existing homes in the neighborhood.

C. All densities, density transfers, transitions, density bonuses, and proposed setbacks shall conform to provisions of this chapter as required by Sections 24.080, 24.110 to 24.170 inclusive.

RESPONSE: The application for a six lot PD subdivision does not require any density transfers, bonuses or transitions. The project is designed to adhere to the standards of the underlying zoning district, with modification to the setback standards as allowed by the PUD approval.

24.110 RESIDENTIAL DENSITY CALCULATIONS

RESPONSE: Density calculations for the site are as follows:

Site – 3.80 acres or 165,528 square feet.

Maximum density for the site – 16 dwelling units (one dwelling unit per 10,000 square feet).

Land area set aside in Open Space Tract – 103,793 square feet (exempt from min. density req).

Net developable area – 61,735 square feet.

Maximum density of developable area – 6 dwelling units.

Minimum density of developable area – 4 dwelling units (70% of maximum density).

24.170 USABLE OPEN SPACE REQUIRED

Residential planned unit developments (PUDs) shall comply with the following usable open space requirements:

1. PUDs that contain multi-family units shall comply with the requirements of Section 55.100(F).
2. PUDs that contain 10 or more single-family detached, single-family attached, or duplex residential units shall comply with the following usable open space requirements.

RESPONSE: The application for a six lot PD subdivision is not required to set aside usable open space.

24.180 APPLICABILITY OF THE BASE ZONE PROVISIONS

The provisions of the base zone are applicable as follows:

- A. Lot dimensional standards. The minimum lot size and lot depth and lot width standards do not apply except as related to the density computation under Chapter 24.
- B. Lot coverage. The lot coverage provisions of the base zone shall apply for detached single-family units.
- C. Building height. The building height provisions of the underlying zone shall apply.

RESPONSE: The application for a six lot PD subdivision will comply with the lot coverage and building height provisions, as determined at the time of issuance of building permits for each individual platted lot.

D. Structure setback provisions.

1. Setback areas contiguous to the perimeter of the project shall be the same as those required by the base zone unless otherwise provided by the base zone or Chapter 55.
2. The side yard setback provisions shall not apply except that all detached structures shall maintain a **minimum side yard setback of five feet**, or meet the Uniform Building Code requirement for fire walls.
3. The **side street setback shall be 10 feet**.
4. The **front yard and rear yard setbacks shall be 15 feet. Porches may encroach forward another five feet**. Additional encroachments, such as porches, are allowed per CDC Chapter 38.
5. The setback **for a garage in the front yard that opens onto the street shall be 20 feet** unless the provisions of Section 41.010 apply. Garages in the rear yard may meet the standards of Section 34.050.
6. The applicant may propose alternative setbacks. The proposed setbacks must be approved by the decision-making body and established as conditions of approval, or by amendment to conditions of approval. The decision-making body will consider among other things maintenance of privacy, adequate light, defensible space, traffic safety, etc.

RESPONSE: The application for a six lot PD subdivision requests modification of the R-10 zoning district yard setbacks as allowed above. Front and Rear yards will be a minimum of 15 feet, Side Yards will be a minimum of five feet, the street Side Yard will be a minimum of 10 feet, and the garage vehicle door setback will be a minimum of 20 feet. These adjustments apply to the interior yards of the project, with the understanding that the perimeter yards (the side yards of lot 1 and lot 6) will meet the requirements of the underlying base zone standard.

E. All other provisions of the base zone shall apply except as modified by this chapter.

RESPONSE: The application for a six lot PD subdivision will comply with base zone provisions, with modifications approved through this review process for a PUD, as determined at the time of issuance of building permits for each individual platted lot.

LAND DIVISION

85.000 GENERAL PROVISIONS

85.010 PURPOSE

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

85.130 LAND DIVISION APPLICATION IN CONJUNCTION WITH OTHER LAND USE APPLICATIONS

As provided by Section 99.070, a land division application filed under this Code may be heard concurrently with another application, upon applicant's request.

RESPONSE: The application for a six lot PD subdivision is reviewed in conjunction with the PUD application.

85.140 PRE-APPLICATION CONFERENCE REQUIRED

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

RESPONSE: The application for a six lot PD subdivision was preceded by a pre-submittal application conference as documented by the pre-app notes. The application is filed by the property owner. It is understood that the action taken on this application is in compliance with the applicable procedures set forth in CDC Chapter 99.

85.150 THE APPLICATION - THE TENTATIVE PLAN

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

1. The completed application form(s).
 2. Copies of the tentative plan and supplemental drawings shall include three copies at the original scale plus three copies reduced in paper size not greater than 11 X 17 inches. When the application submittal is determined to be complete, additional copies may be required as determined by the Planning Department.
 3. A narrative explaining all aspects of land division per Section 85.200.
 4. A pre-requisite to the filing of an application for development proposals that include greater than 10 multi-family units or commercial/industrial buildings greater than 1500 square feet in size, a 4-lot or more planned unit development, a 10-lot or greater subdivision, or a zone change that requires a Comprehensive Plan amendment, is a meeting with the respective City recognized neighborhood association, per CDC Section 99.038, at which time the applicant will present their proposal and receive comments.
- B. The applicant shall pay the requisite fee.

RESPONSE: The application for a six lot PD subdivision contains the required application form, the application fee, copies of the required drawings as stipulated on the application form, a narrative addressing the approval criteria demonstrating compliance therewith, and evidence that the necessary pre-submittal meeting was conducted with the neighborhood group (actually two meetings with two neighborhood groups).

85.160 SUBMITTAL REQUIREMENTS FOR THE TENTATIVE PLAN

- A. A city-wide map shall identify the site. A vicinity map covering 1/4-mile radius from the development site shall be provided in the application showing existing subdivisions, streets, and unsubdivided land ownerships adjacent to the proposed subdivision and showing how proposed streets and utilities may be extended to connect to existing streets and utilities.
- B. The tentative subdivision plan shall be prepared by a registered civil engineer and/or a licensed land surveyor. A stamp and signature of the engineer or surveyor shall be included on the tentative subdivision plan. A tentative minor partition plan (3 lots or less) is only required to be drawn to scale and does not have to be prepared by an engineer or surveyor.
- C. The tentative plan of a subdivision or partition shall be drawn at a scale not smaller than one inch equals 100 feet, or for areas over 100 acres, one inch equals 200 feet.
- D. The following general information shall be shown on the tentative plan of subdivision or partition:
1. Proposed name of the subdivision and streets
 2. Date, north arrow, scale of drawing, and graphic bar scale.
 3. Appropriate identification clearly stating the drawing as a tentative plan.
 4. Location of the proposed division of land, with a tie to the City coordinate system,
 5. Names and addresses of the owner, developer, and engineer or surveyor.
- E. The following existing conditions shall be shown on the tentative plan of a subdivision or partition:
1. The location, widths, and names of all existing or platted streets and right-of-ways within
 2. Contour lines related to the U.S. Geological Survey datum or some other established benchmark
 - a. Two-foot contour intervals for ground slopes less than 20 percent.
 - b. Five-foot contour intervals for ground slopes exceeding 20 percent.
 3. The location of any control points that are the basis for the applicant's mapping.
 4. The location, by survey, and direction of all watercourses and areas subject to periodic inundation
 5. Natural features such as rock outcroppings, wetlands tied by survey, wooded areas, heritage trees, and isolated trees (six-inch diameter at five feet above grade) identified by size, type, and location. All significant trees and tree clusters identified by the City Arborist using the criteria of CDC Section 55.100(B)(2) and all heritage trees, shall be delineated. Trees on non-Type I and II lands shall have their "dripline plus 10 feet" protected area calculated per CDC Section 55.100(B)(2) and expressed in square feet, and also as a percentage of total non-Type I and II area.

6. Existing uses of the property, including location of all existing structures.
7. Identify the size and location of existing sewers, water mains, culverts, drain pipes, gas, electric, and other utility lines within the site, and in the adjoining streets and property.
8. Zoning on and adjacent to the tract.
9. Existing uses to remain on the adjoining property and their scaled location.
10. The location of any existing bicycle or pedestrian ways.
11. The location of adjacent transit stops.

RESPONSE: The drawing set for the six lot PD subdivision includes the necessary and required information for review of the project.

F. The following proposed improvements shall be shown on the tentative plan or supplemental drawings:

1. The street - street location, proposed name, right-of-way width, and approximate radius of curves of each proposed street and street grades. Proposed street names shall comply with the street naming method explained in Section 85.200(A)(12).

RESPONSE: The drawing set for the six lot PD subdivision includes the necessary and required information for review of the proposed private accessway.

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

- a. Deposition of soil, sand, dirt, dust, mud, rock, gravel, refuse, or any other organic or inorganic material exceeding one cubic foot in volume in a public right-of-way or public property, or into the City surface water management system either by direct deposit, dropping, discharge, or as a result of erosion; or,
 - b. Flow of water over bare soils, turbid or sediment laden flows, or evidence of on-site erosion such as rivulets or bare soil slopes, where the flow of water is not filtered or captured on the development site; or,
 - c. Earth slides, mud flows, land slumping, slope failure, or other earth movement that is likely to leave the property of origin.
- Additional on-site measures may later be required if original measures prove to be inadequate in meeting these attainment standards. For the purposes of this Code, "one cubic foot in volume" is defined to include the volume of material, wet or dry, at the time of deposition and includes any water of a discolored or turbid nature.

RESPONSE: The drawing set for the six lot PD subdivision includes the necessary and required information for review of the proposed grading and erosion control measures necessary..

3. Any proposed infrastructure improvements that address those identified in the City Transportation System Plan.

RESPONSE: The drawing set for the six lot PD subdivision includes the necessary and required information for review of the proposed public street improvements on the adjacent public ROW.

4. Any proposed bicycle or pedestrian paths. The location of proposed transit stops.

RESPONSE: The application for a six lot PD subdivision contains no requirement for a bicycle or pedestrian path, or any transit stops.

5. Any easement(s) - location, width, and purpose of the easement(s).

RESPONSE: The required easements are shown on the plans.

6. The lot configuration including location and approximate dimensions and lot area of each parcel, and in the case of a subdivision, the proposed lot and block number.

RESPONSE: The proposed plat includes all of the identified required information.

7. A street tree planting plan and schedule approved by the Parks Department.

RESPONSE: The proposed street trees are indicated on the plans.

8. Any land area to be dedicated to the City or put in common ownership.

RESPONSE: The application for a six lot PD subdivision contains no requirement for any land to be conveyed to the City, or to public or common ownership at this time.

9. Phase boundaries shall be shown.

RESPONSE: The application for a six lot PD subdivision does not include any phases.

85.170 SUPPLEMENTAL SUBMITTAL REQUIREMENTS FOR A TENTATIVE SUBDIVISION OR PARTITION PLAN

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

A. General.

1. Narrative stating how the plan meets each of the applicable approval criteria and each subsection below.
2. Statement or affidavit of ownership of the tract (County Assessor's map and tax lot number).
3. A legal description of the tract.
4. If the project is intended to be phased
5. Where the land to be subdivided or partitioned contains only a part of the contiguous land owned
6. Where the proposed subdivision site includes hillsides or where erosion hazard potential exists, including Type I and II lands as defined in Section 24.060(C), and any lands identified as a hazard site in the West Linn Comprehensive Inventory Plan Report, the standards and requirements of Chapter 24, Planned Unit Development, as well as the requirements for erosion control as described in Section 85.170(C), shall be addressed in a narrative.

RESPONSE: The application for a six lot PD subdivision contains the required narrative as addressed above, the project will not be phased, and will be developed in one project. The project is a planned development due to the presence of Type I and Type II lands as required.

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

RESPONSE: Density calculations for the site are as follows:

Site – 3.80 acres or 165,528 square feet.

Maximum density for the site – 16 dwelling units (one dwelling unit per 10,000 square feet).

Land area set aside in Open Space Tract – 103,793 square feet (exempt from min. density req).

Net developable area – 61,735 square feet.

Maximum density of developable area – 6 dwelling units.

Minimum density of developable area – 4 dwelling units (70% of maximum density).

8. Map and table showing square footage of site comprising slopes by various classifications as identified in Section 55.110(B)(3).

Type I lands. Lands that have severe constraints that preclude the use of standard development techniques and technical criteria. Type I lands exist in the following areas:

Slope: All lands with 35 percent or more slopes.

Drainage: All lands within the 100 year flood plain.

Geological Hazard: All existing or known landslide areas.

Type II lands. Lands which have constraints that are sufficient to preclude most standard types of development.

Constraints in these areas generally do not constitute a health or safety hazard, but require the use of non-standard technical design criteria. Type II lands exist in the following areas:

Slope: All lands with slopes between 25 and 35 percent.

Drainage: All drainage courses.

Geology: All known mineral and aggregate deposits.

RESPONSE: The site contains approximately 100,000 square feet of type I and type II land as defined by the CDC. All of the type I and type II lands are contained in Tract B.

Type III lands. These lands are considered within the major portion of the City's developable lands. Standard development criteria can be applied through normal implementation measures. Type III lands have slopes between 15 and 25 percent.

Type IV lands. These lands are considered to have few, if any, constraints to development and are within the major portion of the City's developable lands. Normal development standards will apply in these areas. Type IV lands have slopes between 0 and 15 percent.

RESPONSE: The site contains approximately 65,735 square feet of type III and type IV land as defined by the CDC.

B. Transportation.

1. Centerline profiles with extensions shall be provided beyond the limits of the proposed subdivision to the point where grades meet, showing the finished grade of streets and the nature and extent of street construction.

RESPONSE: The drawings include centerline profiles for the public street.

2. A If the City Engineer determines that the proposed development may have off-site traffic impacts, the city shall commission a traffic analysis.....

RESPONSE: The application for a six lot PD subdivision does not require a traffic analysis as determined by the City staff at the pre-app conference.

C. Grading.

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

RESPONSE: The drawings include a grading and erosion control plan.

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

RESPONSE: The drawings include a grading and erosion control plan.

D. Water.

1. A plan for domestic potable water supply lines and related water service facilities, such as reservoirs, etc., shall be prepared by a licensed engineer consistent with the adopted Comprehensive Water System Plan and most recently adopted updates and amendments.

RESPONSE: The drawings include a utility plan with proposed water service to each of the six new lots.

2. Location and sizing of the water lines within the development and off-site extensions. Show on-site water line extensions in street stubouts to the edge of the site, or as needed to complete a loop in the system.

RESPONSE: The drawings include a utility plan with proposed water service to each of the six new lots.

3. Adequate looping system of water lines to enhance water quality.

RESPONSE: The drawings include a utility plan with proposed water service to each of the six new lots.

4. For all non single-family developments, calculate fire flow demand of the site and demonstrate to the Fire Chief. Demonstrate to the City Engineer how the system can meet the demand.

RESPONSE: The application for a six lot PD subdivision is for single family development and no fire flow calculations are required.

E. Sewer.

1. A plan prepared by a licensed engineer shall show how the proposal is consistent with the Sanitary Sewer Master Plan and subsequent updates and amendments. Agreement with that plan must demonstrate how the sanitary sewer proposal will be accomplished and how it is efficient. The sewer system must be in the correct zone.

2. Sanitary sewer information will include plan view of the sanitary sewer lines, including manhole locations and depths. Show how each lot would be sewerred.

3. Sanitary sewer lines shall be located in the public right-of-way, particularly the street, unless the applicant can demonstrate why the alternative location is necessary and meets accepted engineering standards.

4. Sanitary sewer line should be at a depth that can facilitate connection with down system properties in an efficient manner.

5. The sanitary sewer line should be designed to minimize the amount of lineal feet in the system.

6. The sanitary sewer line shall minimize disturbance of natural areas and, in those cases where that is unavoidable, disturbance shall be mitigated pursuant to the appropriate chapters (e.g., Chapter 30, Wetland and Natural Drainageway).

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

8. The sanitary sewer system shall be built pursuant to Department of Environmental Quality (DEQ), City, and Tri-City Service District sewer standards. This report should be prepared by a licensed engineer, and the applicant must be able to demonstrate the ability to satisfy these submittal requirements or standards at the preconstruction phase.

RESPONSE: The drawings include a utility plan with proposed sanitary sewer service to each of the six new lots.

F. Storm.

1. A proposal shall be submitted for storm drainage and flood control including profiles of proposed drainageways with reference to the most recently adopted Storm Drainage Master Plan.

2. Storm treatment and detention facilities shall be sized to accommodate a 25-year storm incident. A registered civil engineer shall prepare a plan and statement which shall be supported by factual data that clearly shows that there will be no adverse impacts from increased intensity of runoff downstream or constriction created upstream impacts. The plan and statement shall identify all on- or off-site impacts and measures to mitigate those impacts. The plan and statement shall, at a minimum, determine the off-site impacts from a 25-year storm.

3. Plans shall demonstrate how storm drainage will be collected from all impervious surfaces including roof drains. Storm drainage connections shall be provided to each dwelling unit/lot. The location, size, and type of material selected for the system shall correlate with the 10-year storm incident and agree with the factual information provided in response to F(2) above.

4. The detention facilities shall be designed by a licensed engineer to meet City standards. The detention facilities should include a vegetation plan for the facility and environs, if applicable.

RESPONSE: The drawings include a utility plan with the proposed storm water management design.

85.190 ADDITIONAL INFORMATION REQUIRED AND WAIVER OF REQUIREMENTS

A. The Planning Director may require additional information as part of the application subject to the provisions of Section 99.035(A).

B. The applicant may request a waiver of any requirements for the application subject to the provisions of Section 99.035(B) and (C).

85.200 APPROVAL CRITERIA

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

A. Streets

RESPONSE: The application for a six lot PD subdivision does not include any new public streets. The private accessway meets all of the applicable standards for the project. The proposed public street improvements to the adjacent street – Suncrest Drive – will meet all of the applicable standards. Due to the fact that Suncrest Drive is a collector street, it is appropriate that SDC credits be granted to the developer for a portion of the cost of the public frontage improvements made to that street – in compliance with the West Linn Transportation Plan and applicable capital improvements plans.

B. Blocks and Lots

RESPONSE: The application for a six lot PD subdivision has no blocks.

C. Pedestrian and Bicycle Trails

1. Trails or multi-use pathways shall be installed, consistent and compatible with federal ADA requirements and with the Oregon Transportation Planning Rule, between subdivisions, cul-de-sacs, and streets that would otherwise not be connected by streets due to excessive grades, significant tree(s), and other constraints natural or man-made. Trails shall also accommodate bicycle or pedestrian traffic between neighborhoods and activity areas such as schools, libraries, parks, or commercial districts. Trails shall also be required where designated by the Parks Master Plan.

2. The all-weather surface (asphalt, etc.) trail should be eight feet wide at minimum for bicycle use and six feet wide at minimum for pedestrian use. Trails within 10 feet of a wetland or natural drainageway shall not have an all-weather surface, but shall have a soft surface as approved by the Parks Director. These trails shall be contained within a corridor dedicated to the City that is wide enough to provide trail users with a sense of defensible space. Corridors that are too narrow, confined, or with vegetative cover may be threatening and discourage use. Consequently, the minimum corridor width shall be 20 feet. Sharp curves, twists, and blind corners on the trail are to be avoided as much as possible to enhance defensible space. Deviations from the corridor and trail width are permitted only where topographic and ownership constraints require it.

3. Defensible space shall also be enhanced by the provision of a 3-4 foot high matte black chain link fence or acceptable alternative along the edge of the corridor. The fence shall help delineate the public and private spaces.

4. The bicycle or pedestrian trails that traverse multi-family and commercial sites should follow the same defensible space standards but do not need to be defined by a fence unless required by the decision-making authority.
5. Except for trails within 10 feet of a wetland or natural drainageway, soft surface or gravel trails may only be used in place of a paved, all-weather surface where it can be shown to the
6. Planning Director that the principal users of the path will be recreational, non-destination oriented foot traffic, and that alternate paved routes are nearby and accessible.
7. The trail grade shall not exceed 12% except in areas of unavoidable topography, where the trail may be up to a 15% grade for short sections no longer than 50 feet. In any location where topography requires steeper trail grades than permitted by this section, the trail shall incorporate a short stair section to traverse the area of steep grades.

D. Transit Facilities.

RESPONSE: The application for a six lot PD subdivision includes no trails or requirement for trails.

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

RESPONSE: The drawings include a grading and erosion control plan.

F. Water

RESPONSE: The drawings include a water service plan.

G. Sewer

RESPONSE: The drawings include a sewer service plan.

H. Storm

RESPONSE: The drawings include a storm water control plan.

Utility Easements.

RESPONSE: The drawings include required and desired easements.

J. Supplemental Provisions

1. Wetland and Natural Drainageways. Wetlands and natural drainageways shall be protected as required by Chapter 30, Wetland and Riparian Area Protection, and Chapter 32, Natural Drainageway Areas. Utilities may be routed through the protected corridor as a last resort, but impact mitigation is required.

RESPONSE: The application for a six lot PD subdivision includes a 200 foot wide vegetated corridor protecting the drainage on the property. No utilities are routed through the vegetated corridor. Please note on sheet three of the drawings – there is a 569 square foot encroachment into the required vegetated corridor. There is also a 1013 square foot mitigation allowance (additional land included in Tract B) to ensure that the project has no impact on the drainage way or the vegetated corridor protecting that drainage.

2. Willamette and Tualatin Greenways.

RESPONSE: The application for a six lot PD subdivision does impact the Willamette or Tualatin Greenways.

3. Street Trees.

RESPONSE: The application for a six lot PD subdivision includes street trees on the plans.

4. Lighting. To reduce ambient light and glare, high or low pressure sodium light bulbs shall be required for all subdivision street or alley lights. The light shall be shielded so that the light is directed downwards rather than omni-directional.

RESPONSE: The application for a six lot PD subdivision does not include street lights, since there are already streetlights on Suncrest Drive.

5. Dedications and Exactions. The City may require an applicant to dedicate land and/or construct a public improvement that provides a benefit to property or persons outside the property that is the subject of the application when the exaction is roughly

proportional. No exaction shall be imposed unless supported by a determination that the exaction is roughly proportional to the impact of development.

RESPONSE: The application for a six lot PD subdivision includes dedication of required ROW on Suncrest Drive.

6. Underground Utilities. All utilities, such as electrical, telephone, and television cable, that may at times be above ground or "overhead" shall be buried underground in the case of new development.

RESPONSE: The application for a six lot PD subdivision proposes underground utilities as possible within the project.

7. Density Requirement.

RESPONSE: Density calculations have been included in several responses earlier in this document.

8. Mix Requirement.

RESPONSE: The application for a six lot PD subdivision has no mix of uses.

9. Heritage Trees/Significant Tree and Tree Cluster Protection. All heritage trees, as defined in the Municipal Code, shall be saved. Diseased heritage trees, as determined by the City Arborist, may be removed at his/her direction. All non-heritage trees and clusters of trees (three or more trees with overlapping dripline; however, native oaks need not have an overlapping dripline) that are considered significant by virtue of their size, type, location, health, or numbers, shall be saved pursuant to CDC Section 55.100(B)(2). Trees are defined per the Municipal Code as having a trunk 6" in diameter or 19" in circumference at a point five feet above the mean ground level at the base of the trunk.

RESPONSE: The application for a six lot PD subdivision includes a survey of all trees within the 65,000 square feet of developable area of the site. No heritage trees are located on the property. Because this project is protecting approximately 3/5 of the site as open space with all of the trees located within that Tract B, it is appropriate to permit the developer to remove the trees on the 40% of the site that is being used for development. Open portions (the meadow) directly to the east of the proposed platted lots can be planted with a variety of native trees to mitigate for the removal of the trees on the developed portion of the site. Approximately 74 identified trees are scheduled for removal totaling approximately 1100 caliper inches. Obviously it is not feasible or prudent to replant the available open areas of the site with 1100 caliper inches of young trees. They would not survive to mature growth, and would further change the character of the open space by eventually eliminating all of the open meadow areas that are equally necessary for bio-filtration, wildlife habitat and species/ecosystem diversity. The City arborist should work with the developer to evaluate the trees scheduled for removal and determine an appropriate mitigation ratio, as well as native tree/shrub species that will complement the existing eco-system of the 100,000 square foot open space associated with the project.

10. Annexation and street lights. Developer and/or homeowners' association shall, as a condition of approval, pay for all expenses related to street light energy and maintenance costs until annexed into the City,....

RESPONSE: The application for a six lot PD subdivision does not include any new street lights that will be added into the City's lighting system. The property is already annexed into the City.

III. CONCLUSION

The application for a six lot PD subdivision complies with all of the applicable approval criteria and can be approved by the City of West Linn.

January 30, 2009

City of West Linn - Engineering Department
22500 Salamo Road, #800
West Linn, OR 97068

RE: Suncrest Drive, 6-Lot Subdivision - Conveyance, Water Quality and Detention Analysis

To Whom It May Concern:

I have attached the supportive calculations for the Conveyance, Water Quality and Detention Analysis for the 6-lot Subdivision on the east side of Suncrest Drive, opposite the Gallery Way intersection. This analysis takes into account the entire property including the proposed offsite improvements.

The development area with dedications and vacations is 1.56 acres having 0.16 acres of existing impervious surface as a result of the drives, homes and concrete walks. The proposed development will create 0.76 acres of impervious surface to be treated for water quality within the water quality/detention pond.

Due to the increase in impervious surface and per the City of West Linn's storm code, we propose to provide detention for the additional runoff on site. We will be releasing the developed runoff at the pre-developed flow rates for the 2, 5, 10 and 25 year storm events. The required detention volume for a 2 foot deep pond with 3:1 side slopes at the 25 year event is 1,162 cubic feet. The required detention volume is stored in the pond from elevation 666.00 to 667.4.

Sincerely,



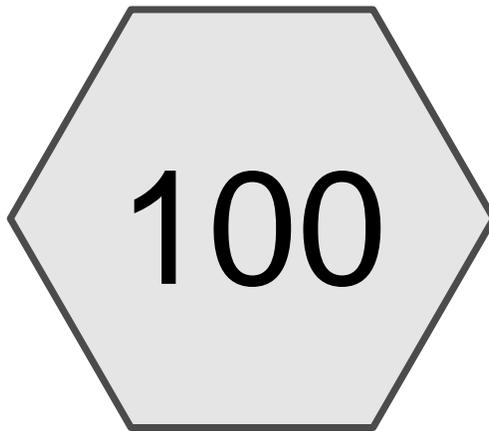
Ryan Walker
Project Designer

Reviewed By.

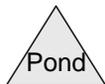
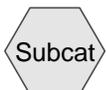
Eric Evans, P.E.
Project Manager



EXPIRES: 12/31/2009



Pre-Developed



Suncrest Prelim Storm Calc 012609

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Pre-Developed

Type IA 24-hr 2-year Rainfall=2.40"

Page 2

1/30/2009

Subcatchment 100: Pre-Developed

Runoff = 0.45 cfs @ 8.02 hrs, Volume= 0.159 af, Depth= 1.23"

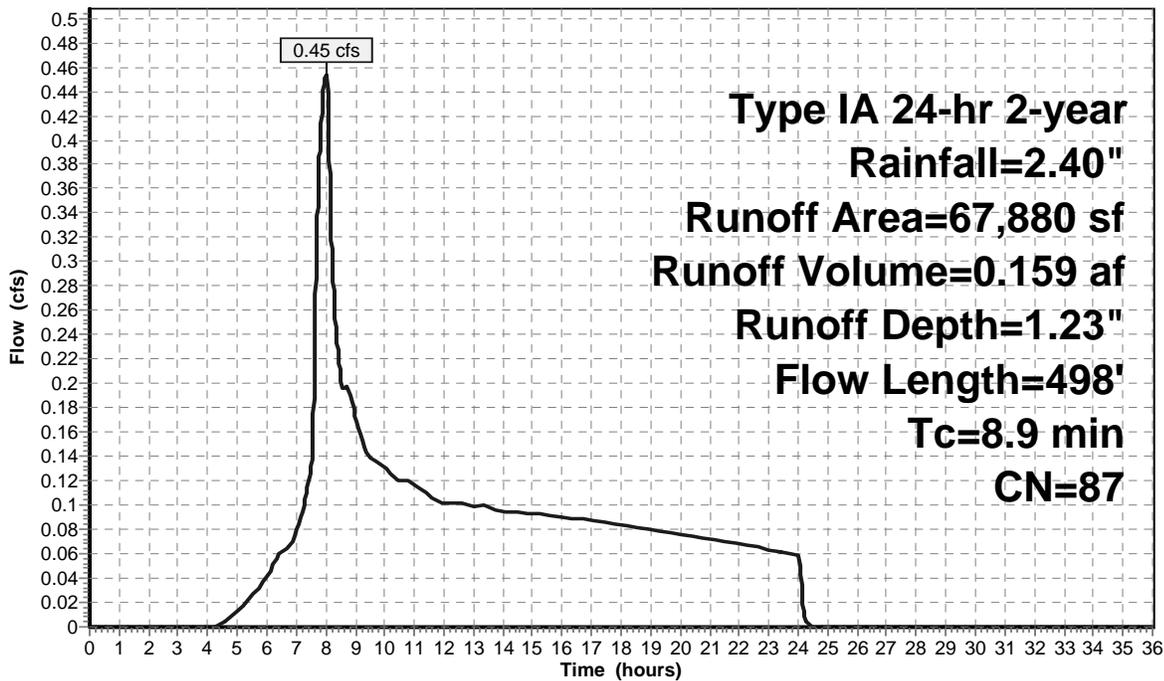
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-year Rainfall=2.40"

Area (sf)	CN	Description
4,100	98	Existing Frontage
2,327	98	Existing Home
400	98	Driveway
61,053	86	Lawns Etc. (check cn)
67,880	87	Weighted Average
61,053		Pervious Area
6,827		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	100	0.0730	0.25		Sheet Flow, 1st 100 Grass: Short n= 0.150 P2= 2.50"
2.3	398	0.1660	2.85		Shallow Concentrated Flow, Next 400 Short Grass Pasture Kv= 7.0 fps
8.9	498	Total			

Subcatchment 100: Pre-Developed

Hydrograph



Suncrest Prelim Storm Calc 012609

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Pre-Developed

Type IA 24-hr 5-year Rainfall=2.90"

Page 3

1/30/2009

Subcatchment 100: Pre-Developed

Runoff = 0.63 cfs @ 8.00 hrs, Volume= 0.215 af, Depth= 1.65"

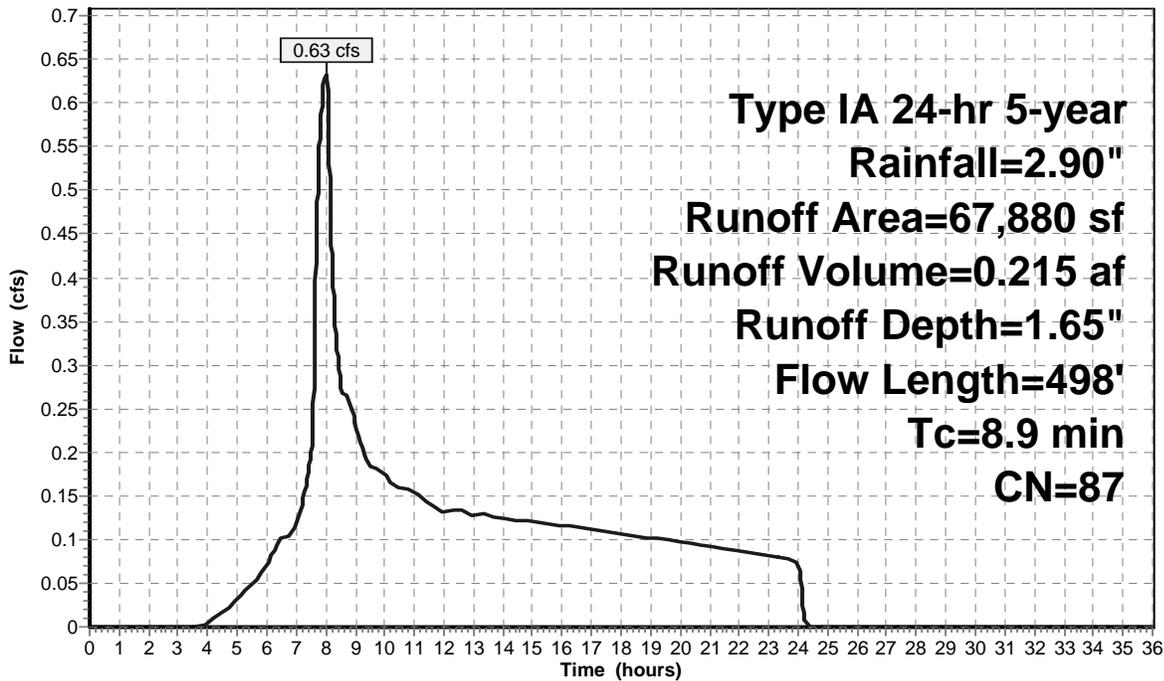
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5-year Rainfall=2.90"

Area (sf)	CN	Description
4,100	98	Existing Frontage
2,327	98	Existing Home
400	98	Driveway
61,053	86	Lawns Etc. (check cn)
67,880	87	Weighted Average
61,053		Pervious Area
6,827		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	100	0.0730	0.25		Sheet Flow, 1st 100 Grass: Short n= 0.150 P2= 2.50"
2.3	398	0.1660	2.85		Shallow Concentrated Flow, Next 400 Short Grass Pasture Kv= 7.0 fps
8.9	498	Total			

Subcatchment 100: Pre-Developed

Hydrograph



Suncrest Prelim Storm Calc 012609

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Type IA 24-hr 10-year Rainfall=3.40"

Page 4

1/30/2009

Subcatchment 100: Pre-Developed

Runoff = 0.82 cfs @ 7.98 hrs, Volume= 0.272 af, Depth= 2.09"

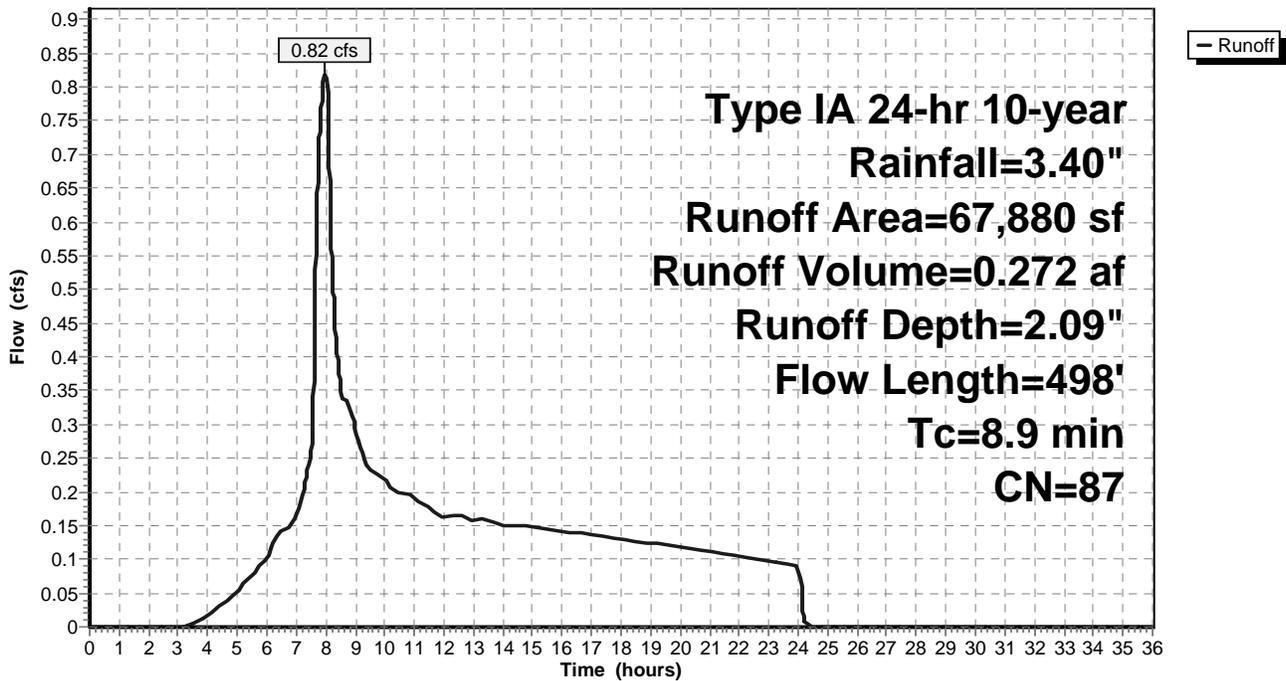
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-year Rainfall=3.40"

Area (sf)	CN	Description
4,100	98	Existing Frontage
2,327	98	Existing Home
400	98	Driveway
61,053	86	Lawns Etc. (check cn)
67,880	87	Weighted Average
61,053		Pervious Area
6,827		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	100	0.0730	0.25		Sheet Flow, 1st 100
					Grass: Short n= 0.150 P2= 2.50"
2.3	398	0.1660	2.85		Shallow Concentrated Flow, Next 400
					Short Grass Pasture Kv= 7.0 fps
8.9	498	Total			

Subcatchment 100: Pre-Developed

Hydrograph



Suncrest Prelim Storm Calc 012609

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Type IA 24-hr 25-year Rainfall=3.90"

Page 5

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Subcatchment 100: Pre-Developed

Runoff = 1.01 cfs @ 7.98 hrs, Volume= 0.331 af, Depth= 2.55"

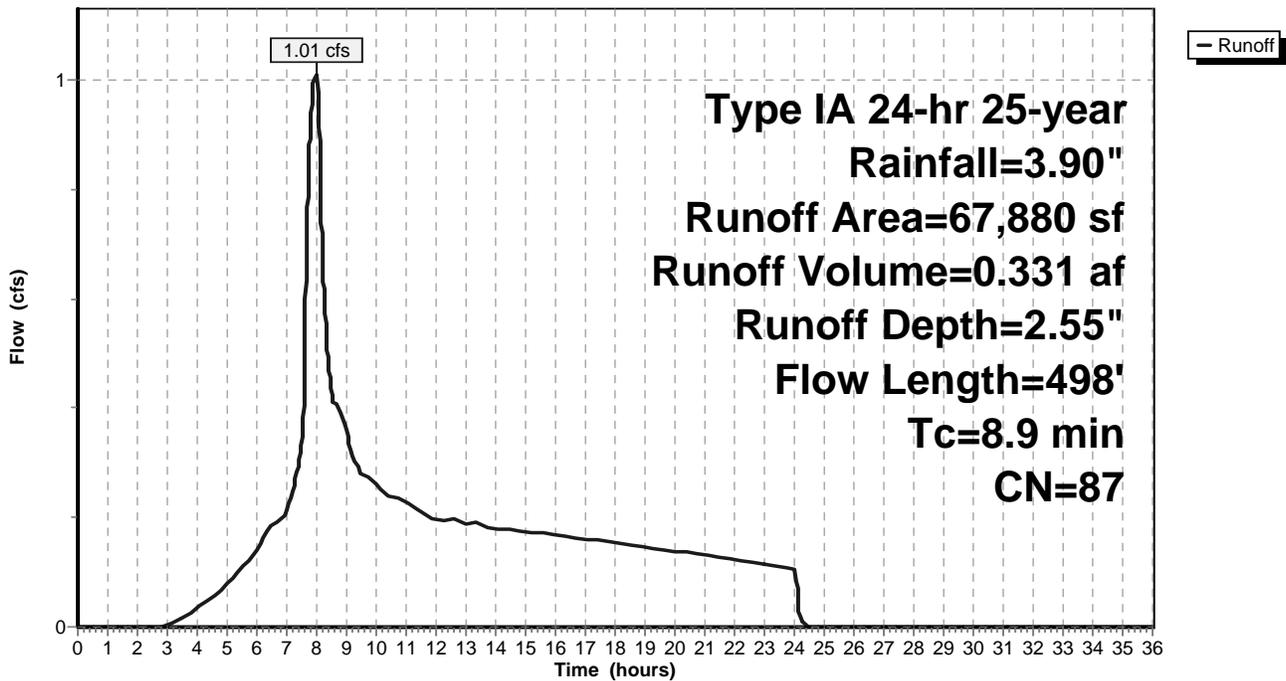
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-year Rainfall=3.90"

Area (sf)	CN	Description
4,100	98	Existing Frontage
2,327	98	Existing Home
400	98	Driveway
61,053	86	Lawns Etc. (check cn)
67,880	87	Weighted Average
61,053		Pervious Area
6,827		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	100	0.0730	0.25		Sheet Flow, 1st 100
					Grass: Short n= 0.150 P2= 2.50"
2.3	398	0.1660	2.85		Shallow Concentrated Flow, Next 400
					Short Grass Pasture Kv= 7.0 fps
8.9	498	Total			

Subcatchment 100: Pre-Developed

Hydrograph



Suncrest Prelim Storm Calc 012609

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Pre-Developed

Type IA 24-hr 100-year Rainfall=4.40"

Page 6

1/30/2009

Subcatchment 100: Pre-Developed

Runoff = 1.20 cfs @ 7.98 hrs, Volume= 0.390 af, Depth= 3.01"

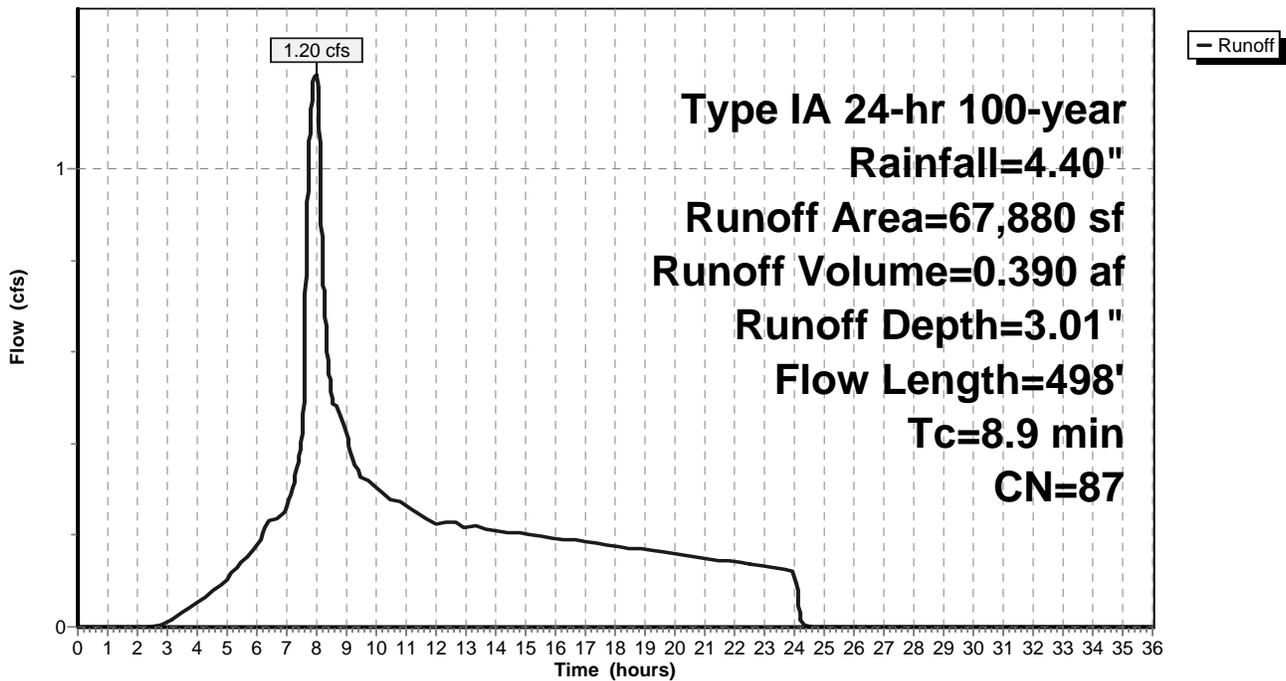
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Type IA 24-hr 100-year Rainfall=4.40"

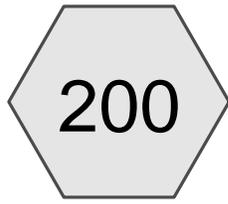
Area (sf)	CN	Description
4,100	98	Existing Frontage
2,327	98	Existing Home
400	98	Driveway
61,053	86	Lawns Etc. (check cn)
67,880	87	Weighted Average
61,053		Pervious Area
6,827		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.6	100	0.0730	0.25		Sheet Flow, 1st 100 Grass: Short n= 0.150 P2= 2.50"
2.3	398	0.1660	2.85		Shallow Concentrated Flow, Next 400 Short Grass Pasture Kv= 7.0 fps
8.9	498	Total			

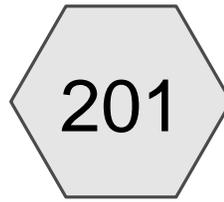
Subcatchment 100: Pre-Developed

Hydrograph

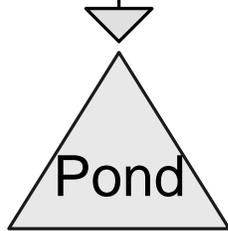




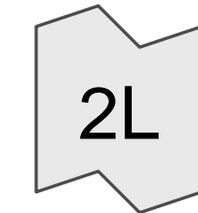
Post-Developed



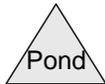
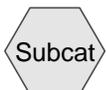
Backyards



Pond



Outfall to Creek



Drainage Diagram for Suncrest Prelim Storm Calc 012609

Prepared by Emerio Design, LLC 1/30/2009

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Suncrest Prelim Storm Calc 012609

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Post-Development
Type IA 24-hr 2-year Rainfall=2.40"

Page 2

1/30/2009

Subcatchment 200: Post-Developed

Runoff = 0.64 cfs @ 7.92 hrs, Volume= 0.208 af, Depth= 1.60"

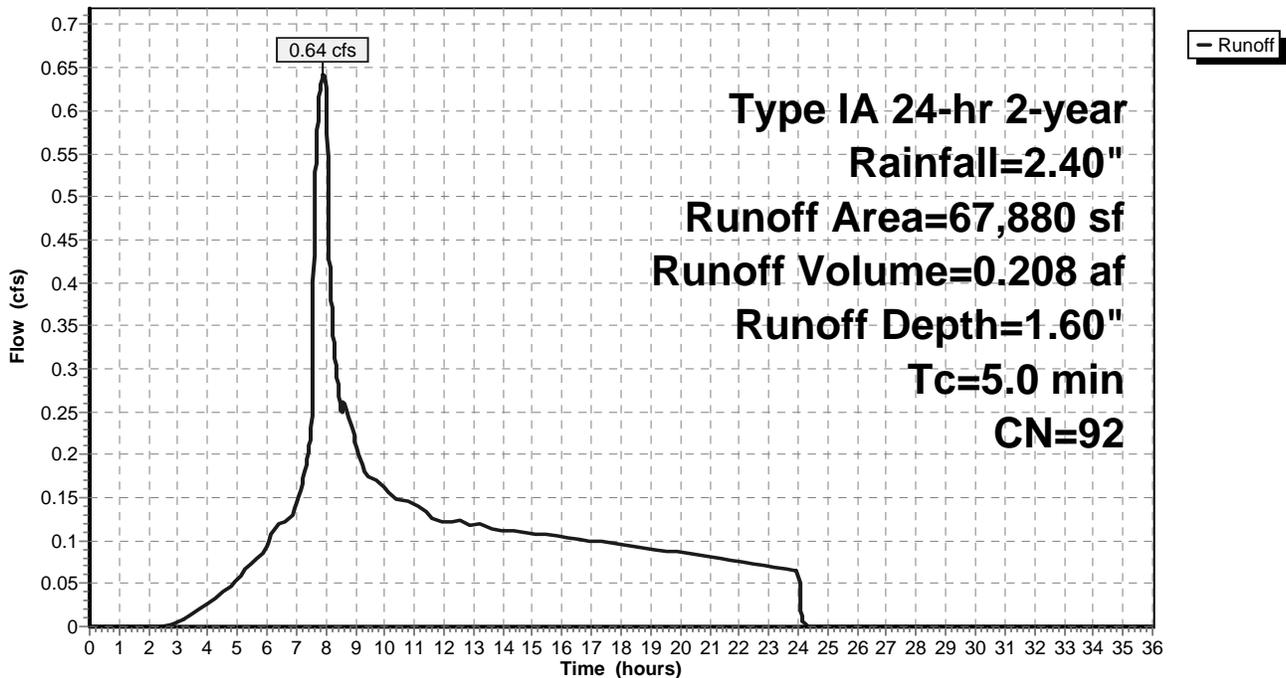
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-year Rainfall=2.40"

Area (sf)	CN	Description
8,776	98	Private Roadway
22,510	98	Lot Area
2,053	98	Frontage
34,541	86	Lawns Etc.
67,880	92	Weighted Average
34,541		Pervious Area
33,339		Impervious Area

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

Subcatchment 200: Post-Developed

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development

Type IA 24-hr 2-year Rainfall=2.40"

Page 3

1/30/2009

Subcatchment 201: Backyards

Runoff = 0.03 cfs @ 7.97 hrs, Volume= 0.009 af, Depth= 1.16"

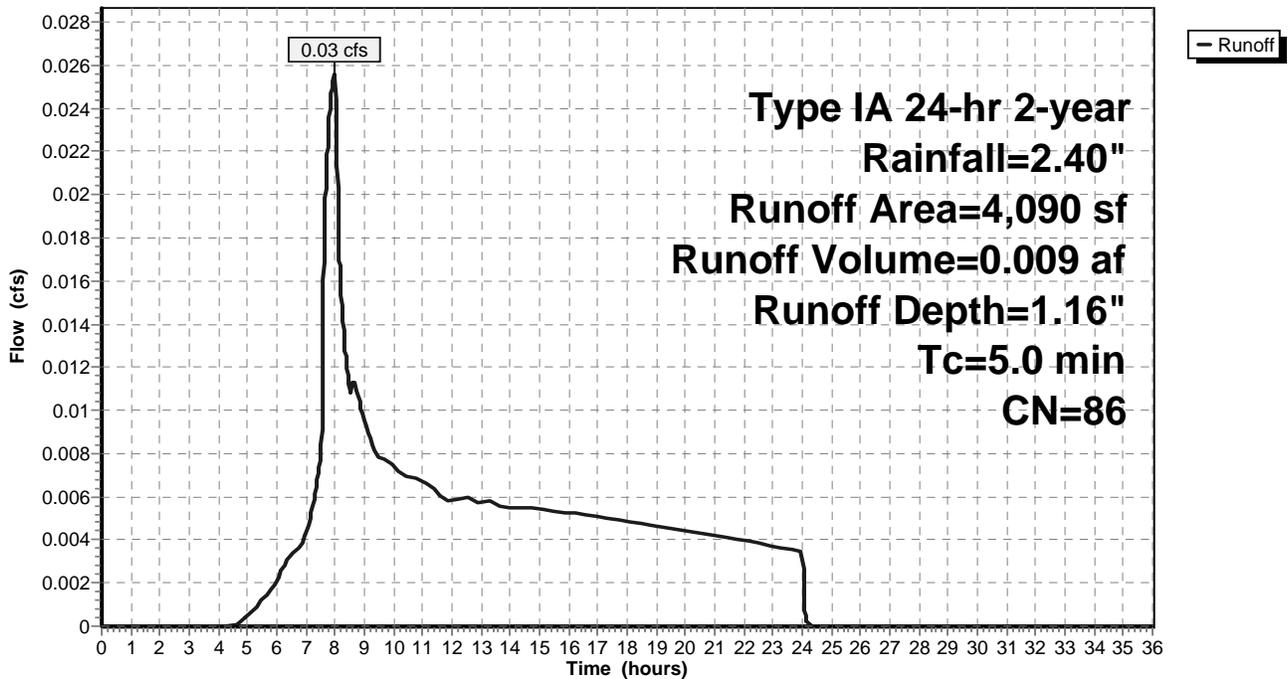
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-year Rainfall=2.40"

Area (sf)	CN	Description
4,090	86	Backyards
4,090		Pervious Area

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

Subcatchment 201: Backyards

Hydrograph



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Post-Development
Type IA 24-hr 2-year Rainfall=2.40"

Page 4

1/30/2009

Pond Pond: Pond

Inflow Area = 1.558 ac, Inflow Depth = 1.60" for 2-year event
 Inflow = 0.64 cfs @ 7.92 hrs, Volume= 0.208 af
 Outflow = 0.50 cfs @ 8.08 hrs, Volume= 0.208 af, Atten= 22%, Lag= 9.8 min
 Primary = 0.50 cfs @ 8.08 hrs, Volume= 0.208 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 100.31' @ 8.08 hrs Surf.Area= 804 sf Storage= 248 cf

Plug-Flow detention time= 1.8 min calculated for 0.208 af (100% of inflow)
 Center-of-Mass det. time= 1.8 min (751.4 - 749.6)

Volume	Invert	Avail.Storage	Storage Description		
#1	100.00'	3,706 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
100.00	773	112.0	0	0	773
101.00	872	120.0	822	822	961
102.00	959	128.0	915	1,737	1,162
104.00	1,010	136.0	1,969	3,706	1,475

Device	Routing	Invert	Outlet Devices
#1	Primary	98.00'	12.0" Vert. Orifice/Grate C= 0.620
#2	Device 1	99.00'	4.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620
#3	Device 1	103.00'	12.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620

Primary OutFlow Max=0.50 cfs @ 8.08 hrs HW=100.31' (Free Discharge)
 1=Orifice/Grate (Passes 0.50 cfs of 5.26 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.50 cfs @ 5.71 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Suncrest Prelim Storm Calc 012609

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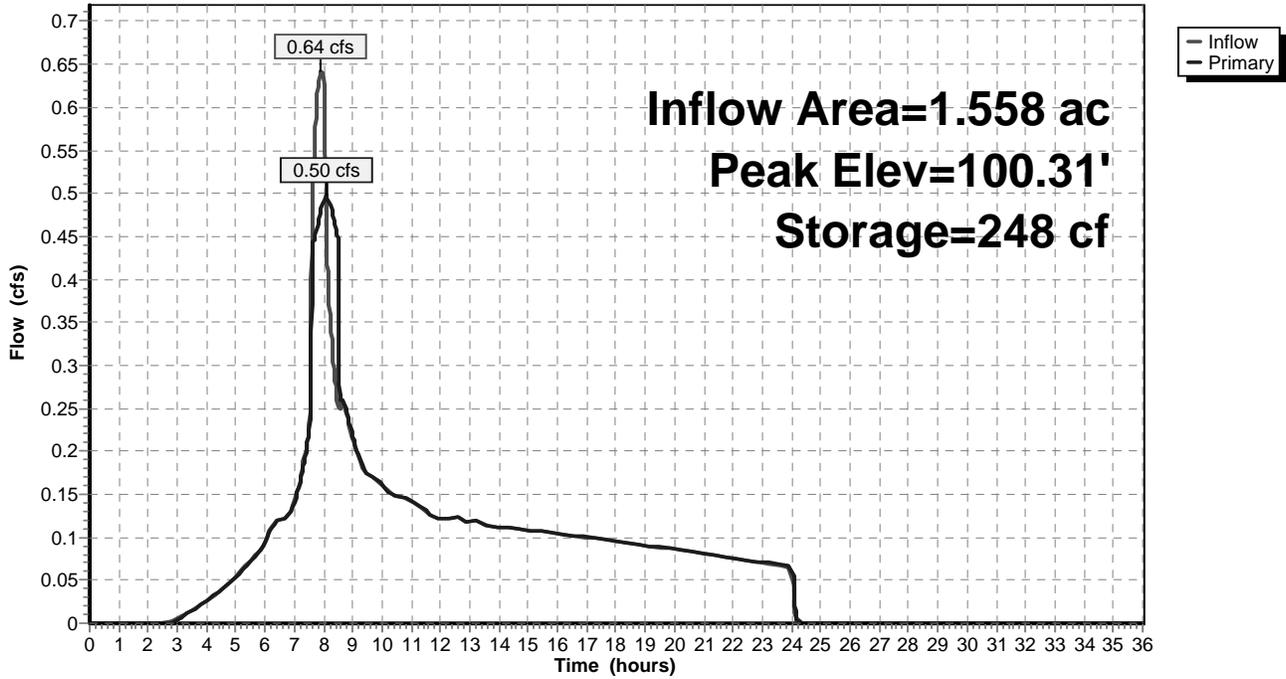
Post-Development
Type IA 24-hr 2-year Rainfall=2.40"

Page 5

1/30/2009

Pond Pond: Pond

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development
Type IA 24-hr 2-year Rainfall=2.40"

Page 6

1/30/2009

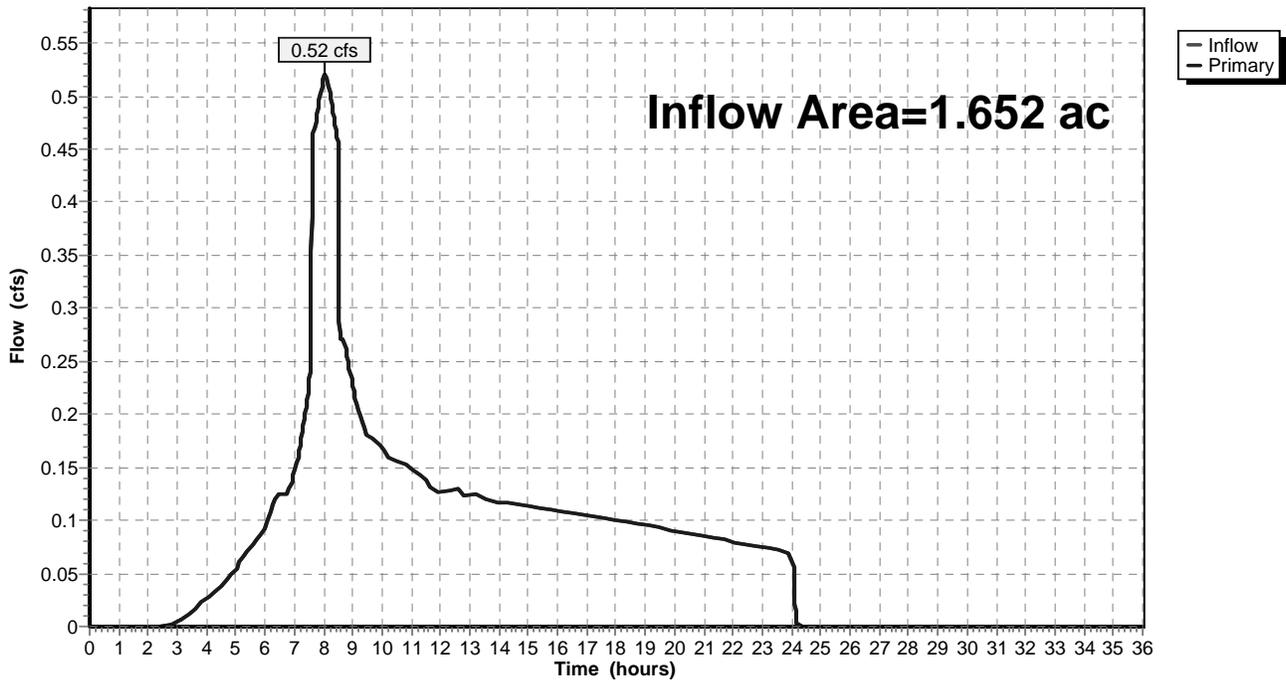
Link 2L: Outfall to Creek

Inflow Area = 1.652 ac, Inflow Depth = 1.58" for 2-year event
Inflow = 0.52 cfs @ 8.04 hrs, Volume= 0.217 af
Primary = 0.52 cfs @ 8.04 hrs, Volume= 0.217 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 2L: Outfall to Creek

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development
Type IA 24-hr 5-year Rainfall=2.90"

Page 7

1/30/2009

Subcatchment 200: Post-Developed

Runoff = 0.84 cfs @ 7.90 hrs, Volume= 0.268 af, Depth= 2.07"

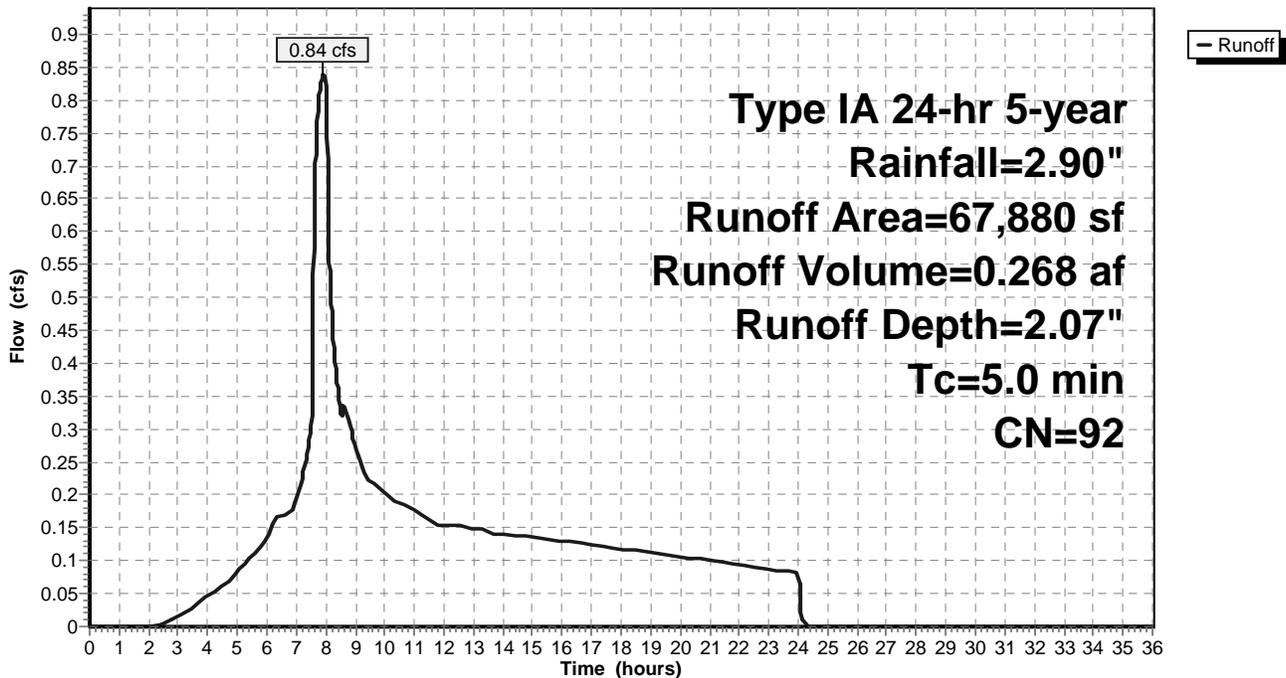
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5-year Rainfall=2.90"

Area (sf)	CN	Description
8,776	98	Private Roadway
22,510	98	Lot Area
2,053	98	Frontage
34,541	86	Lawns Etc.
67,880	92	Weighted Average
34,541		Pervious Area
33,339		Impervious Area

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

Subcatchment 200: Post-Developed

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development
Type IA 24-hr 5-year Rainfall=2.90"

Page 8

1/30/2009

Subcatchment 201: Backyards

Runoff = 0.04 cfs @ 7.95 hrs, Volume= 0.012 af, Depth= 1.58"

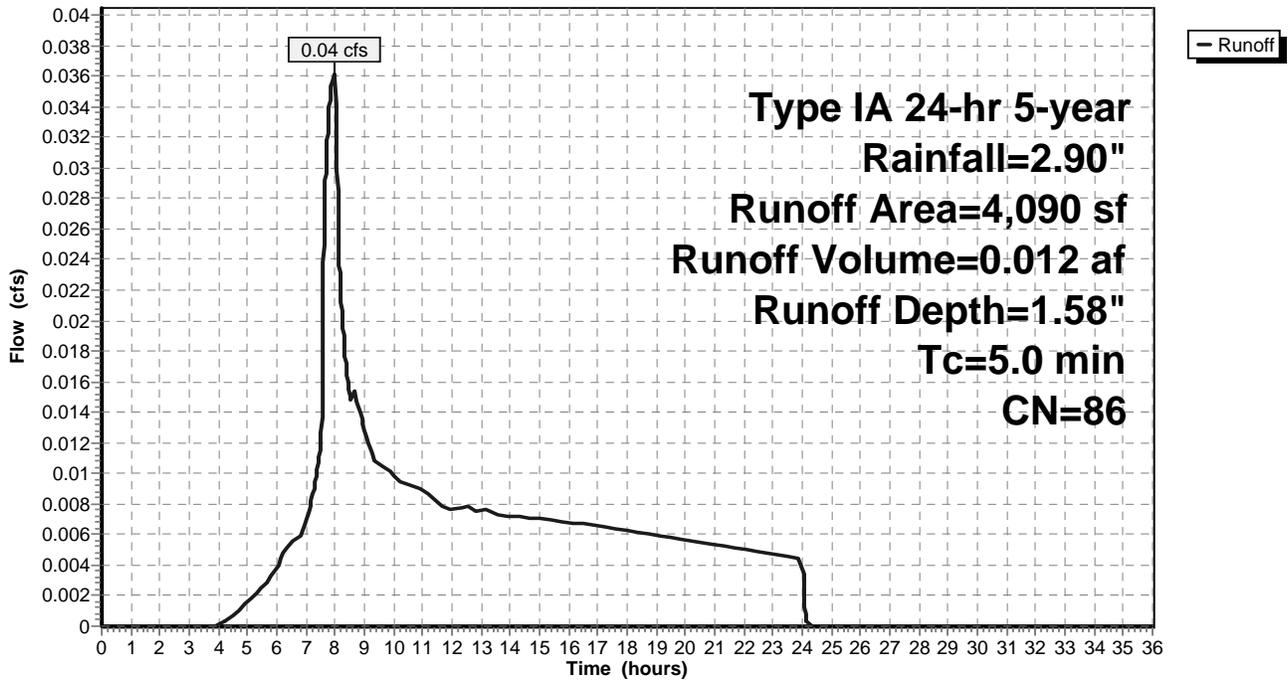
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5-year Rainfall=2.90"

Area (sf)	CN	Description
4,090	86	Backyards
4,090		Pervious Area

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

Subcatchment 201: Backyards

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development
Type IA 24-hr 5-year Rainfall=2.90"

Page 9

1/30/2009

Pond Pond: Pond

Inflow Area = 1.558 ac, Inflow Depth = 2.07" for 5-year event
 Inflow = 0.84 cfs @ 7.90 hrs, Volume= 0.268 af
 Outflow = 0.56 cfs @ 8.12 hrs, Volume= 0.268 af, Atten= 33%, Lag= 12.9 min
 Primary = 0.56 cfs @ 8.12 hrs, Volume= 0.268 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 100.65' @ 8.12 hrs Surf.Area= 837 sf Storage= 526 cf

Plug-Flow detention time= 3.1 min calculated for 0.268 af (100% of inflow)
 Center-of-Mass det. time= 3.1 min (739.1 - 736.0)

Volume	Invert	Avail.Storage	Storage Description		
#1	100.00'	3,706 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
100.00	773	112.0	0	0	773
101.00	872	120.0	822	822	961
102.00	959	128.0	915	1,737	1,162
104.00	1,010	136.0	1,969	3,706	1,475

Device	Routing	Invert	Outlet Devices
#1	Primary	98.00'	12.0" Vert. Orifice/Grate C= 0.620
#2	Device 1	99.00'	4.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620
#3	Device 1	103.00'	12.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620

Primary OutFlow Max=0.56 cfs @ 8.12 hrs HW=100.65' (Free Discharge)
 1=Orifice/Grate (Passes 0.56 cfs of 5.73 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.56 cfs @ 6.40 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Suncrest Prelim Storm Calc 012609

Prepared by Emerio Design, LLC

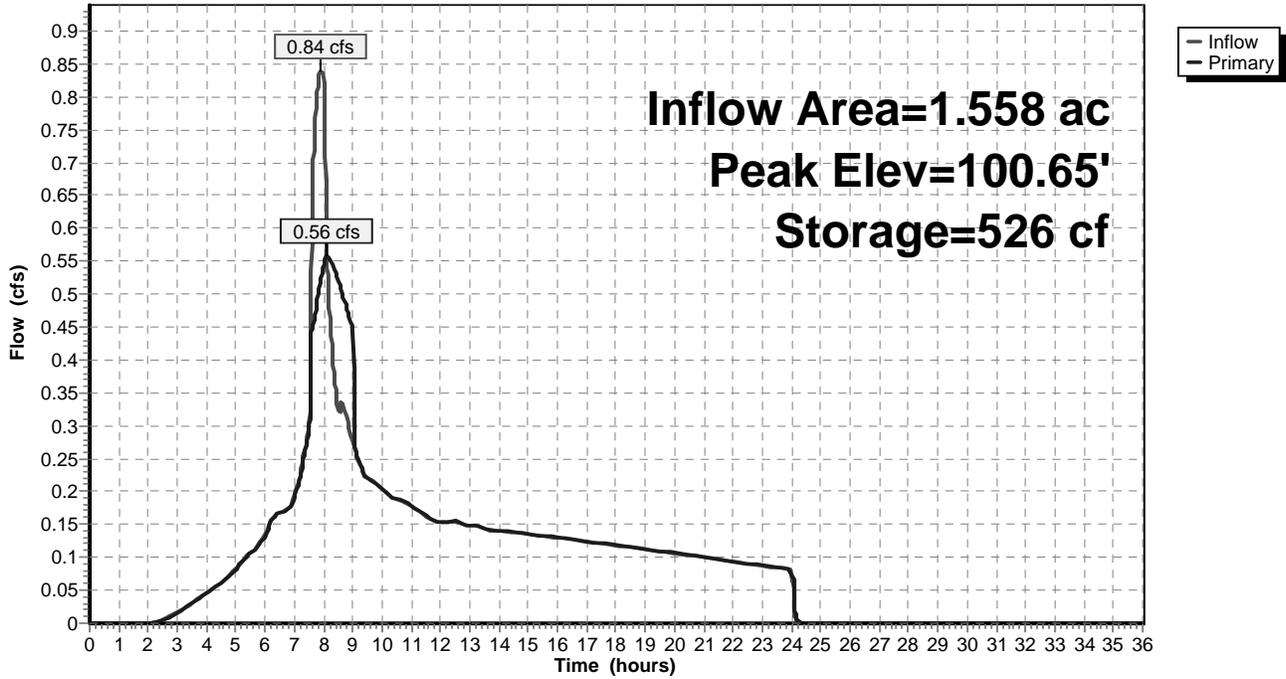
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Post-Development
Type IA 24-hr 5-year Rainfall=2.90"

Page 10
1/30/2009

Pond Pond: Pond

Hydrograph



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Post-Development
Type IA 24-hr 5-year Rainfall=2.90"

Page 11
1/30/2009

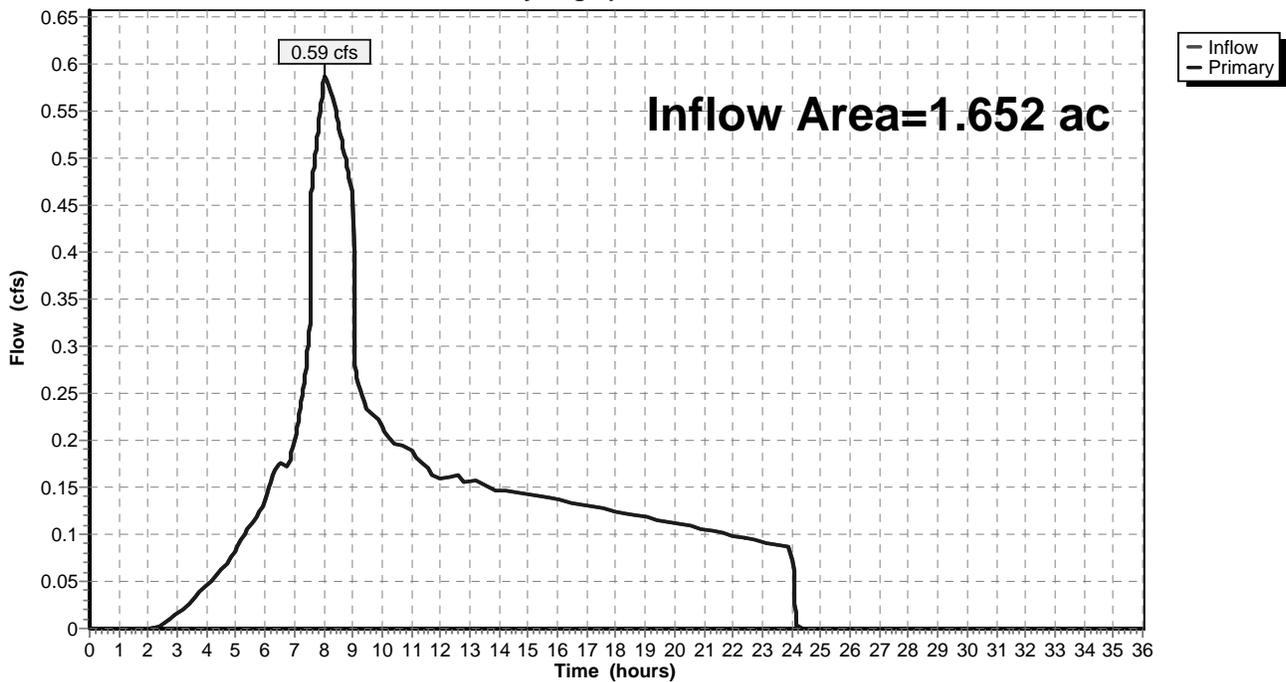
Link 2L: Outfall to Creek

Inflow Area = 1.652 ac, Inflow Depth = 2.04" for 5-year event
Inflow = 0.59 cfs @ 8.05 hrs, Volume= 0.281 af
Primary = 0.59 cfs @ 8.05 hrs, Volume= 0.281 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 2L: Outfall to Creek

Hydrograph



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Post-Development

Type IA 24-hr 10-year Rainfall=3.40"

Page 12

1/30/2009

Subcatchment 200: Post-Developed

Runoff = 1.04 cfs @ 7.89 hrs, Volume= 0.330 af, Depth= 2.54"

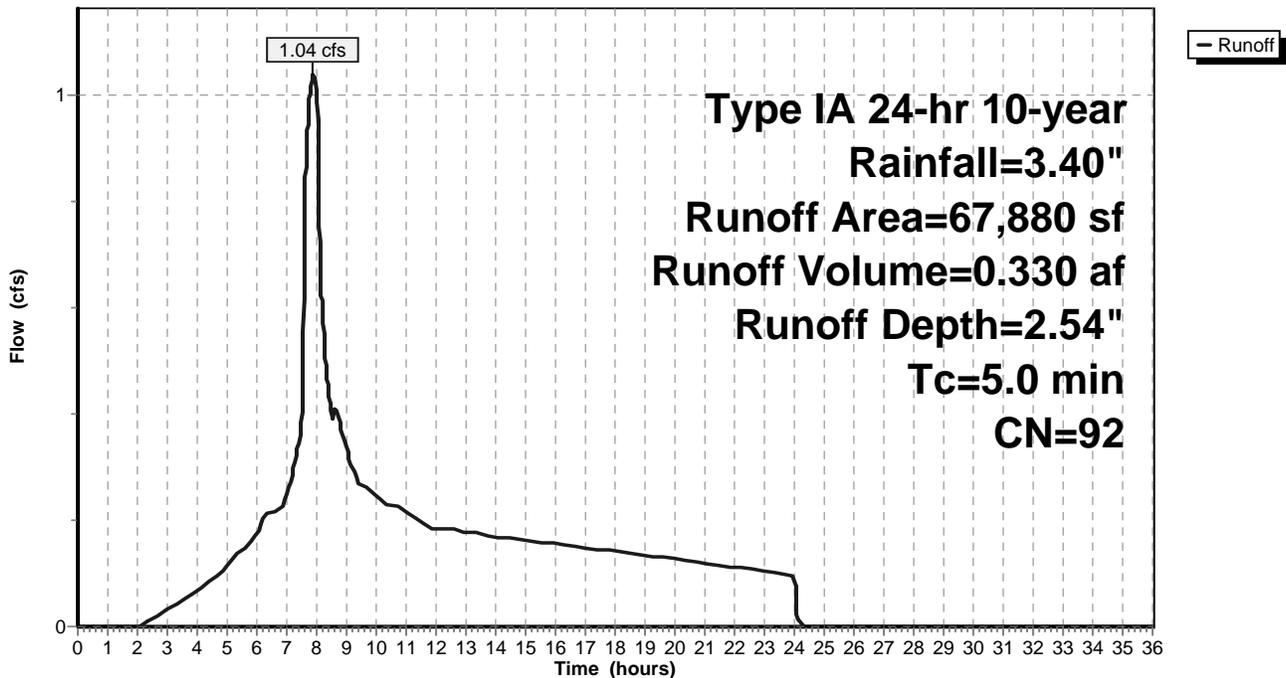
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-year Rainfall=3.40"

Area (sf)	CN	Description
8,776	98	Private Roadway
22,510	98	Lot Area
2,053	98	Frontage
34,541	86	Lawns Etc.
67,880	92	Weighted Average
34,541		Pervious Area
33,339		Impervious Area

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

Subcatchment 200: Post-Developed

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development

Type IA 24-hr 10-year Rainfall=3.40"

Page 13

1/30/2009

Subcatchment 201: Backyards

Runoff = 0.05 cfs @ 7.94 hrs, Volume= 0.016 af, Depth= 2.01"

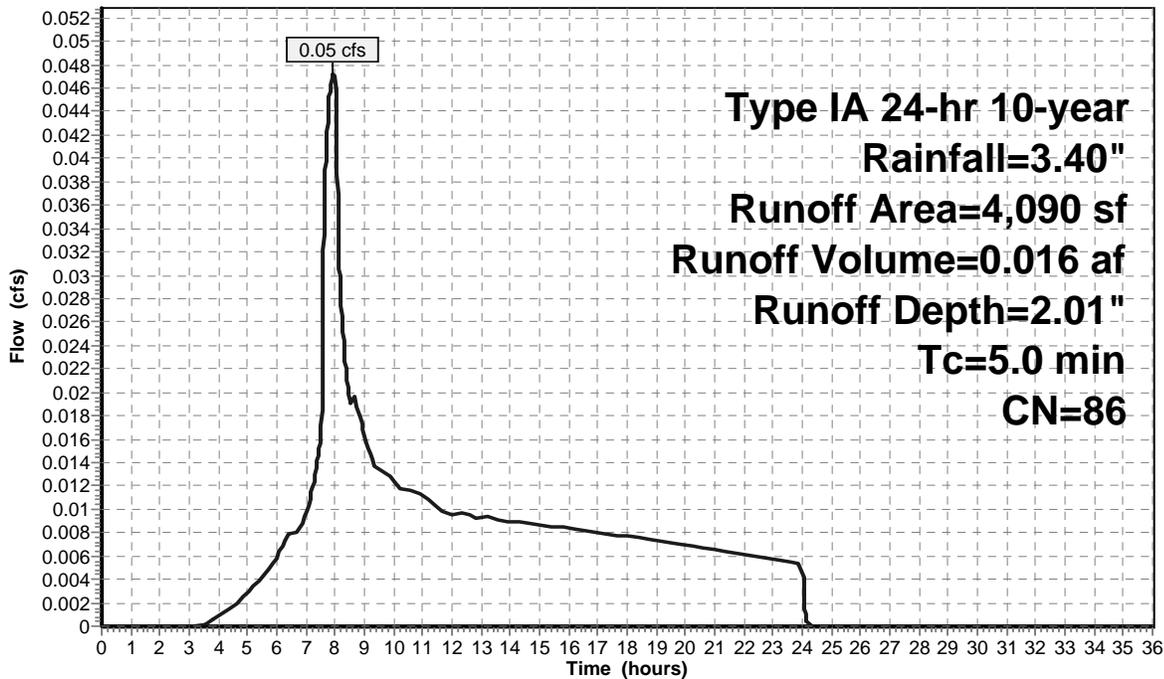
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-year Rainfall=3.40"

Area (sf)	CN	Description
4,090	86	Backyards
4,090		Pervious Area

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

Subcatchment 201: Backyards

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development
Type IA 24-hr 10-year Rainfall=3.40"

Page 14
1/30/2009

Pond Pond: Pond

Inflow Area = 1.558 ac, Inflow Depth = 2.54" for 10-year event
 Inflow = 1.04 cfs @ 7.89 hrs, Volume= 0.330 af
 Outflow = 0.62 cfs @ 8.17 hrs, Volume= 0.330 af, Atten= 41%, Lag= 16.3 min
 Primary = 0.62 cfs @ 8.17 hrs, Volume= 0.330 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 101.01' @ 8.17 hrs Surf.Area= 873 sf Storage= 832 cf

Plug-Flow detention time= 4.7 min calculated for 0.330 af (100% of inflow)
 Center-of-Mass det. time= 4.7 min (730.1 - 725.5)

Volume	Invert	Avail.Storage	Storage Description		
#1	100.00'	3,706 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
100.00	773	112.0	0	0	773
101.00	872	120.0	822	822	961
102.00	959	128.0	915	1,737	1,162
104.00	1,010	136.0	1,969	3,706	1,475

Device	Routing	Invert	Outlet Devices
#1	Primary	98.00'	12.0" Vert. Orifice/Grate C= 0.620
#2	Device 1	99.00'	4.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620
#3	Device 1	103.00'	12.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620

Primary OutFlow Max=0.62 cfs @ 8.17 hrs HW=101.01' (Free Discharge)
 1=Orifice/Grate (Passes 0.62 cfs of 6.19 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.62 cfs @ 7.06 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

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Post-Development

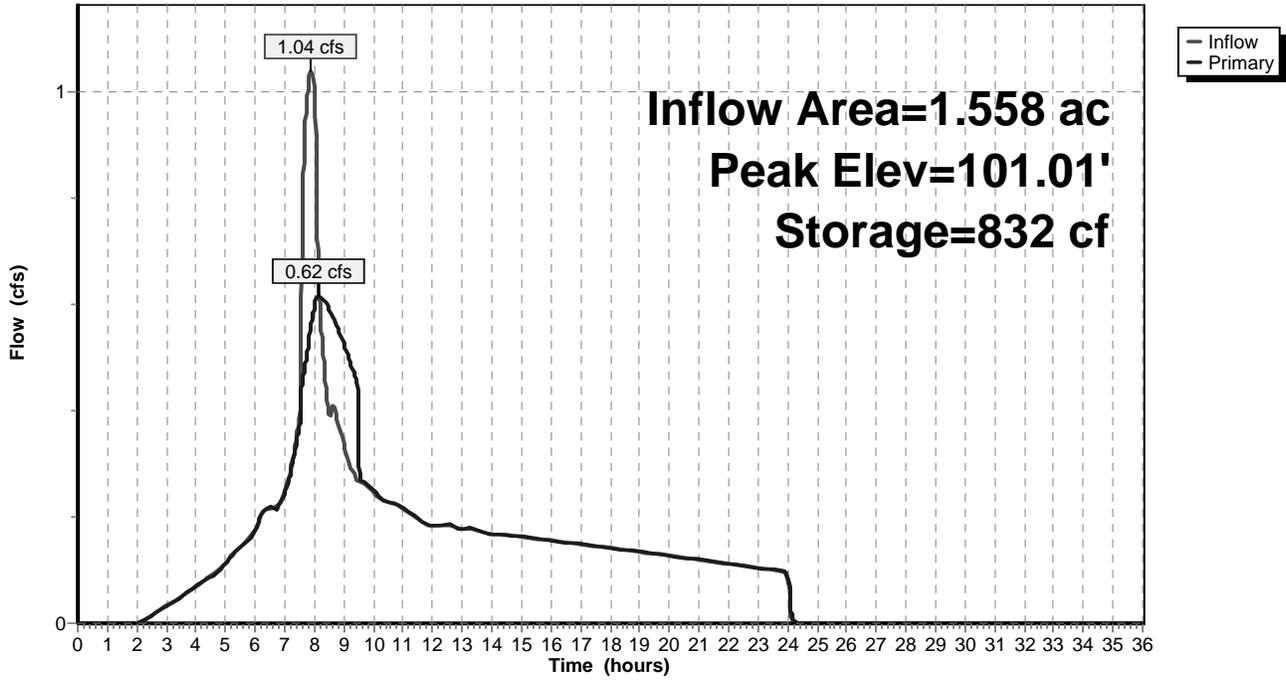
Type IA 24-hr 10-year Rainfall=3.40"

Page 15

1/30/2009

Pond Pond: Pond

Hydrograph



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Type IA 24-hr 10-year Rainfall=3.40"

Page 16

1/30/2009

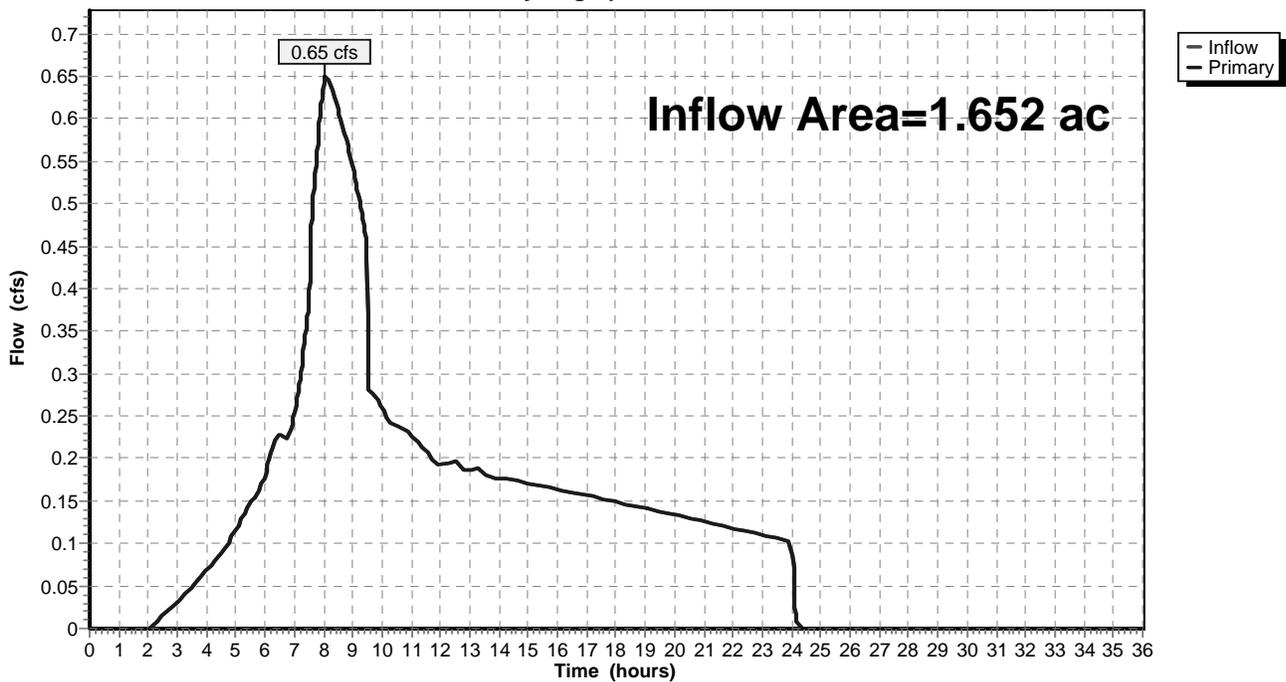
Link 2L: Outfall to Creek

Inflow Area = 1.652 ac, Inflow Depth = 2.51" for 10-year event
Inflow = 0.65 cfs @ 8.05 hrs, Volume= 0.346 af
Primary = 0.65 cfs @ 8.05 hrs, Volume= 0.346 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 2L: Outfall to Creek

Hydrograph



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Post-Development

Type IA 24-hr 25-year Rainfall=3.90"

Page 17

1/30/2009

Subcatchment 200: Post-Developed

Runoff = 1.24 cfs @ 7.89 hrs, Volume= 0.392 af, Depth= 3.02"

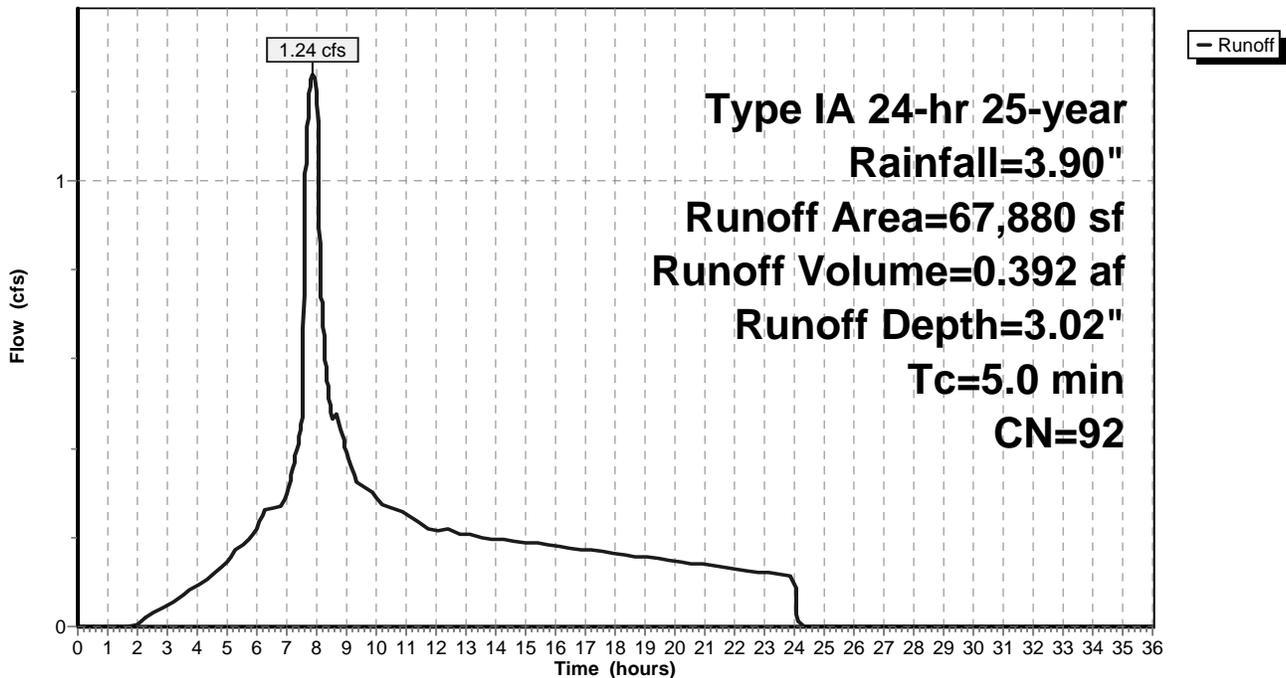
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-year Rainfall=3.90"

Area (sf)	CN	Description
8,776	98	Private Roadway
22,510	98	Lot Area
2,053	98	Frontage
34,541	86	Lawns Etc.
67,880	92	Weighted Average
34,541		Pervious Area
33,339		Impervious Area

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

Subcatchment 200: Post-Developed

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development

Type IA 24-hr 25-year Rainfall=3.90"

Page 18

1/30/2009

Subcatchment 201: Backyards

Runoff = 0.06 cfs @ 7.93 hrs, Volume= 0.019 af, Depth= 2.46"

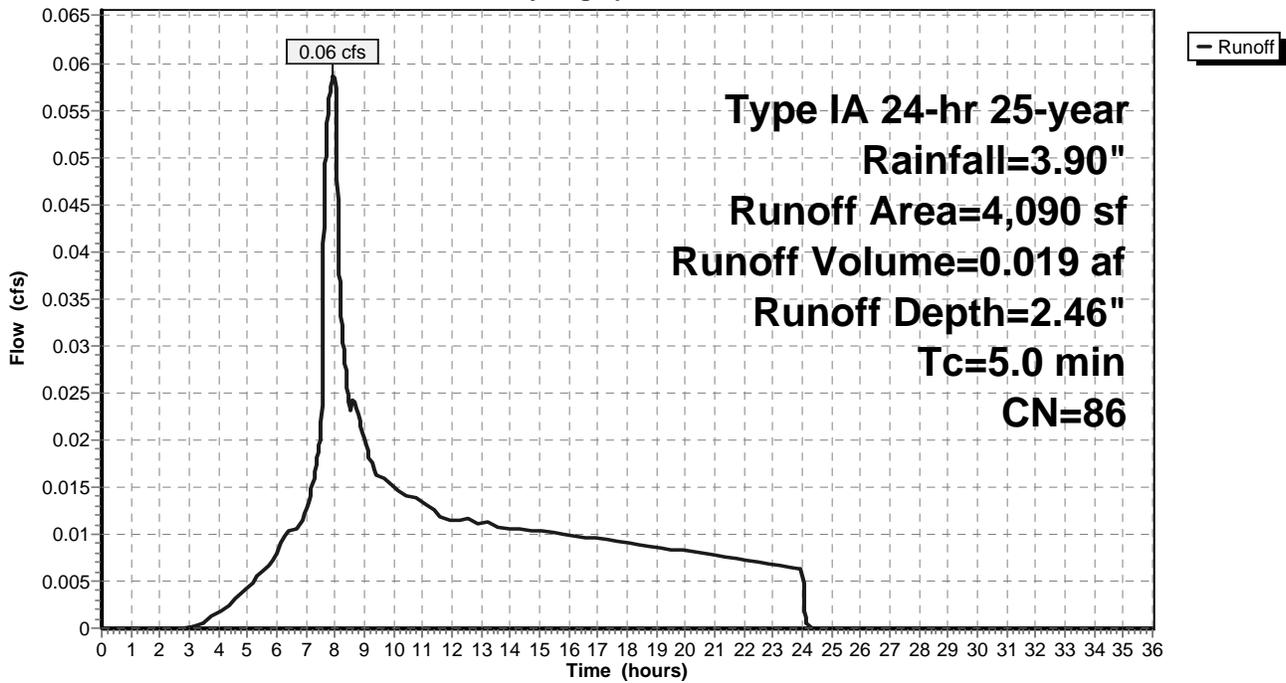
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-year Rainfall=3.90"

Area (sf)	CN	Description
4,090	86	Backyards
4,090		Pervious Area

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

Subcatchment 201: Backyards

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development
Type IA 24-hr 25-year Rainfall=3.90"

Page 19
1/30/2009

Pond Pond: Pond

Inflow Area = 1.558 ac, Inflow Depth = 3.02" for 25-year event
 Inflow = 1.24 cfs @ 7.89 hrs, Volume= 0.392 af
 Outflow = 0.67 cfs @ 8.22 hrs, Volume= 0.392 af, Atten= 46%, Lag= 19.8 min
 Primary = 0.67 cfs @ 8.22 hrs, Volume= 0.392 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 101.38' @ 8.22 hrs Surf.Area= 905 sf Storage= 1,163 cf

Plug-Flow detention time= 6.4 min calculated for 0.392 af (100% of inflow)
 Center-of-Mass det. time= 6.4 min (723.4 - 717.1)

Volume	Invert	Avail.Storage	Storage Description		
#1	100.00'	3,706 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
100.00	773	112.0	0	0	773
101.00	872	120.0	822	822	961
102.00	959	128.0	915	1,737	1,162
104.00	1,010	136.0	1,969	3,706	1,475

Device	Routing	Invert	Outlet Devices
#1	Primary	98.00'	12.0" Vert. Orifice/Grate C= 0.620
#2	Device 1	99.00'	4.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620
#3	Device 1	103.00'	12.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620

Primary OutFlow Max=0.67 cfs @ 8.22 hrs HW=101.38' (Free Discharge)
 1=Orifice/Grate (Passes 0.67 cfs of 6.64 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.67 cfs @ 7.68 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Suncrest Prelim Storm Calc 012609

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Post-Development

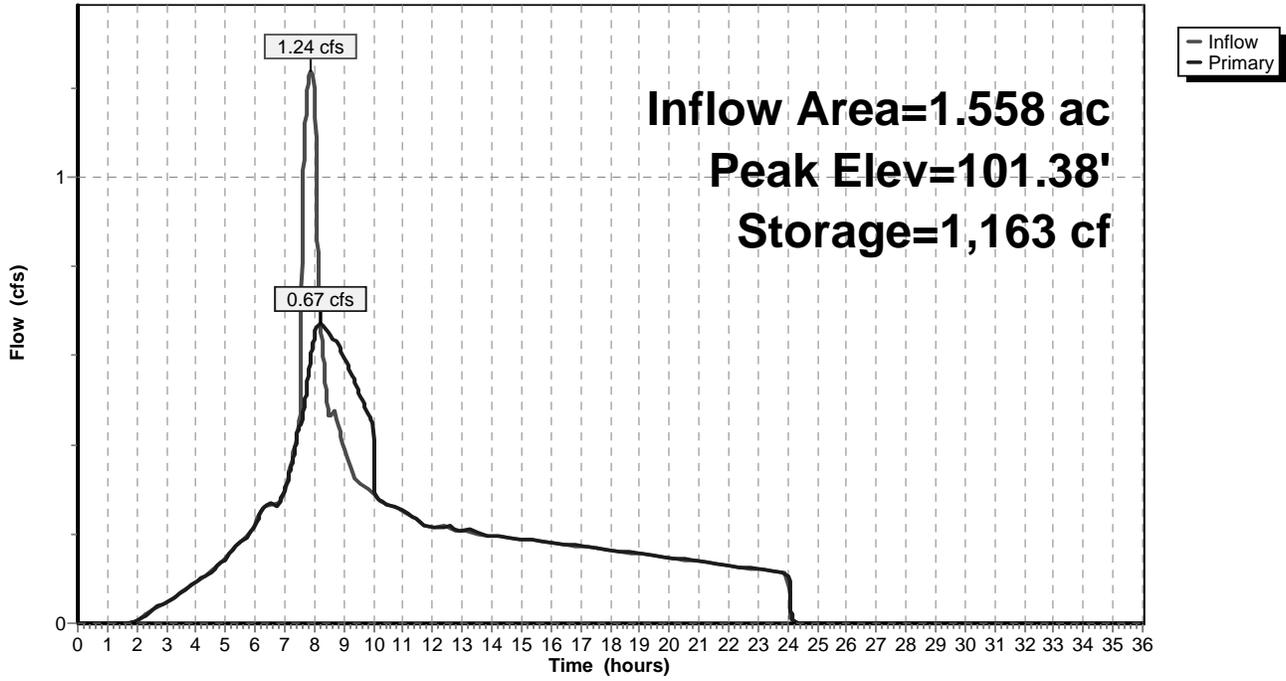
Type IA 24-hr 25-year Rainfall=3.90"

Page 20

1/30/2009

Pond Pond: Pond

Hydrograph



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Type IA 24-hr 25-year Rainfall=3.90"

Page 21

1/30/2009

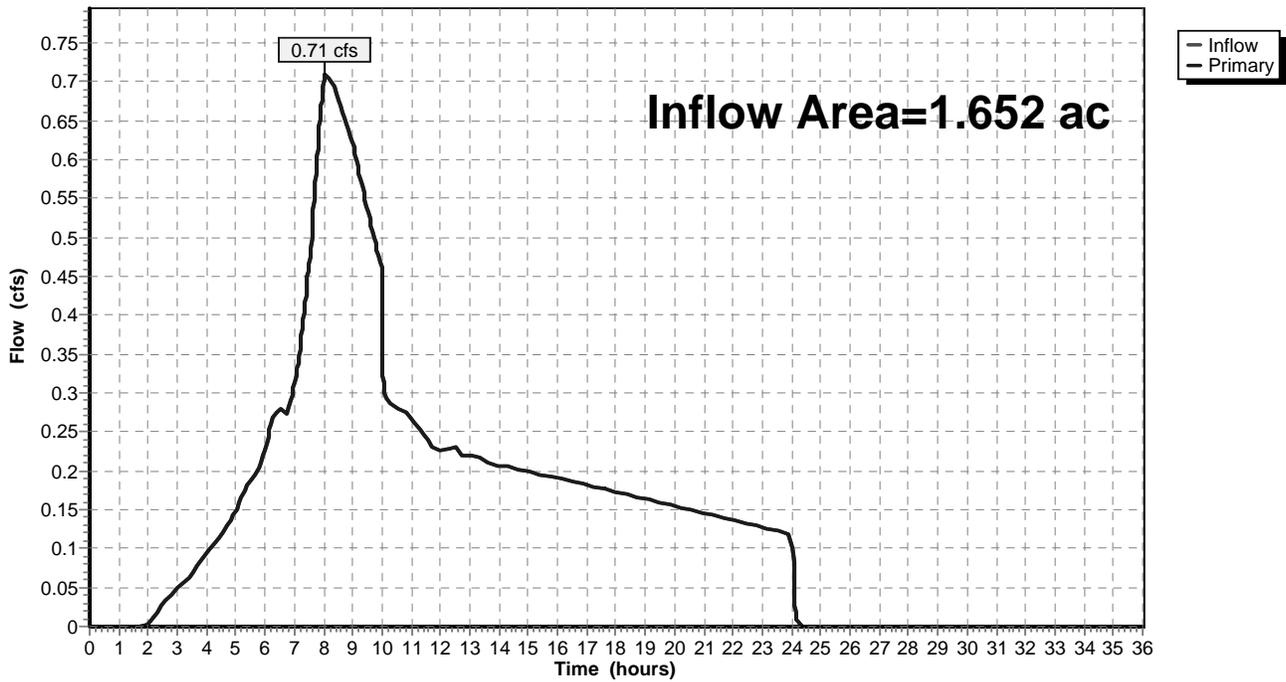
Link 2L: Outfall to Creek

Inflow Area = 1.652 ac, Inflow Depth = 2.99" for 25-year event
Inflow = 0.71 cfs @ 8.05 hrs, Volume= 0.412 af
Primary = 0.71 cfs @ 8.05 hrs, Volume= 0.412 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 2L: Outfall to Creek

Hydrograph



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Post-Development

Type IA 24-hr 100-year Rainfall=4.40"

Page 22

1/30/2009

Subcatchment 200: Post-Developed

Runoff = 1.44 cfs @ 7.88 hrs, Volume= 0.455 af, Depth= 3.50"

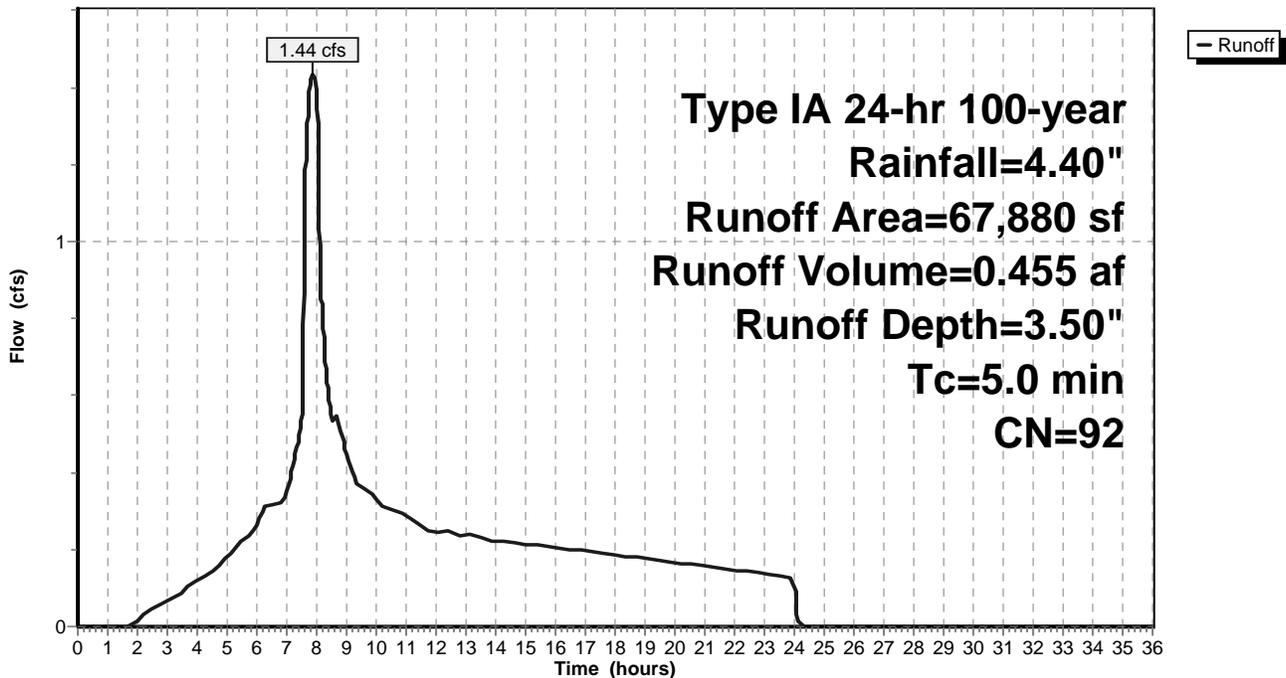
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 100-year Rainfall=4.40"

Area (sf)	CN	Description
8,776	98	Private Roadway
22,510	98	Lot Area
2,053	98	Frontage
34,541	86	Lawns Etc.
67,880	92	Weighted Average
34,541		Pervious Area
33,339		Impervious Area

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

Subcatchment 200: Post-Developed

Hydrograph



Suncrest Prelim Storm Calc 012609

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Post-Development

Type IA 24-hr 100-year Rainfall=4.40"

Page 23

1/30/2009

Subcatchment 201: Backyards

Runoff = 0.07 cfs @ 7.92 hrs, Volume= 0.023 af, Depth= 2.91"

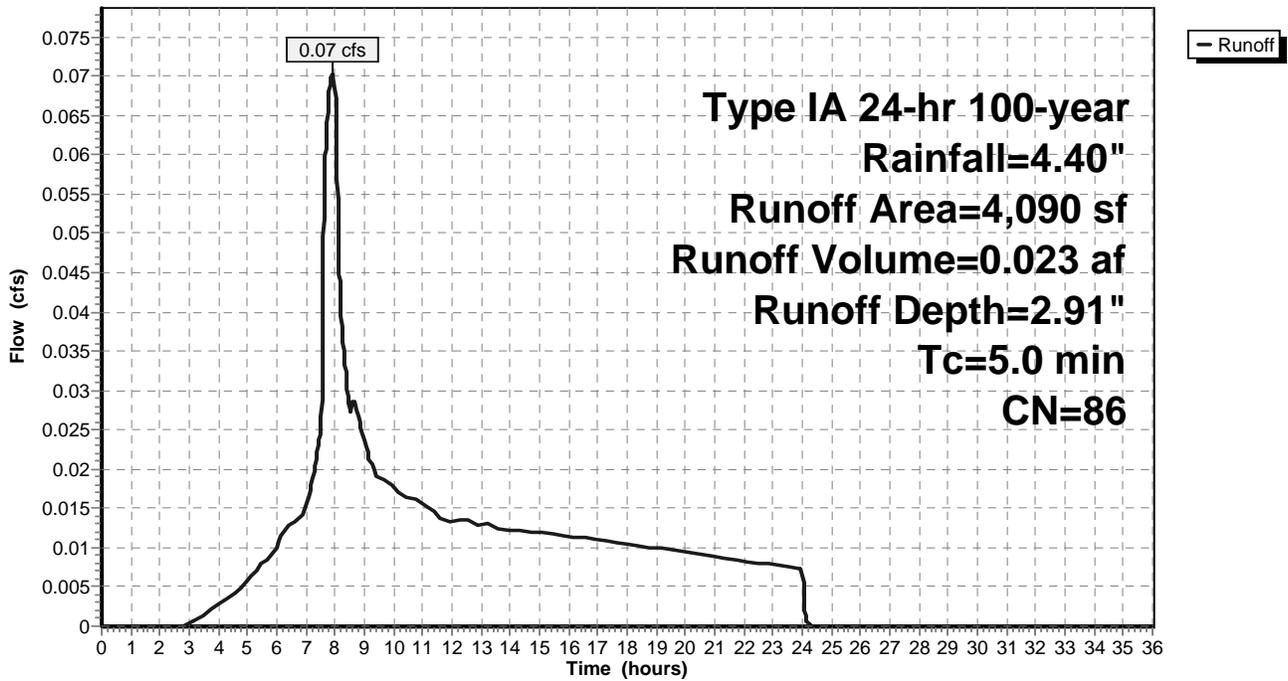
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 100-year Rainfall=4.40"

Area (sf)	CN	Description
4,090	86	Backyards
4,090		Pervious Area

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

Subcatchment 201: Backyards

Hydrograph



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Post-Development
Type IA 24-hr 100-year Rainfall=4.40"

Page 24
1/30/2009

Pond Pond: Pond

Inflow Area = 1.558 ac, Inflow Depth = 3.50" for 100-year event
 Inflow = 1.44 cfs @ 7.88 hrs, Volume= 0.455 af
 Outflow = 0.72 cfs @ 8.26 hrs, Volume= 0.455 af, Atten= 50%, Lag= 22.8 min
 Primary = 0.72 cfs @ 8.26 hrs, Volume= 0.455 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 101.78' @ 8.26 hrs Surf.Area= 940 sf Storage= 1,531 cf

Plug-Flow detention time= 8.3 min calculated for 0.455 af (100% of inflow)
 Center-of-Mass det. time= 8.3 min (718.5 - 710.2)

Volume	Invert	Avail.Storage	Storage Description		
#1	100.00'	3,706 cf	Custom Stage Data (Irregular) Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
100.00	773	112.0	0	0	773
101.00	872	120.0	822	822	961
102.00	959	128.0	915	1,737	1,162
104.00	1,010	136.0	1,969	3,706	1,475

Device	Routing	Invert	Outlet Devices
#1	Primary	98.00'	12.0" Vert. Orifice/Grate C= 0.620
#2	Device 1	99.00'	4.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620
#3	Device 1	103.00'	12.0" Horiz. Orifice/Grate Limited to weir flow C= 0.620

Primary OutFlow Max=0.72 cfs @ 8.26 hrs HW=101.78' (Free Discharge)
 1=Orifice/Grate (Passes 0.72 cfs of 7.08 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.72 cfs @ 8.30 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Suncrest Prelim Storm Calc 012609

Prepared by Emerio Design, LLC

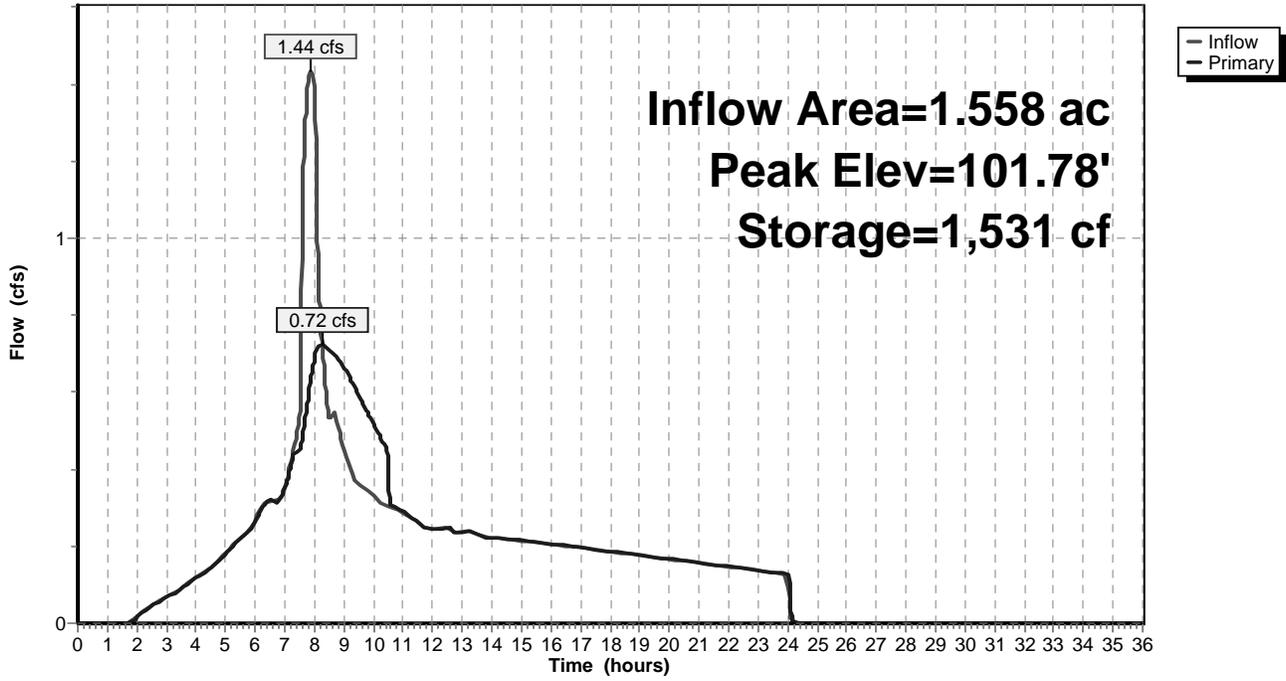
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Post-Development
Type IA 24-hr 100-year Rainfall=4.40"

Page 25
1/30/2009

Pond Pond: Pond

Hydrograph



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Post-Development

Type IA 24-hr 100-year Rainfall=4.40"

Page 26

1/30/2009

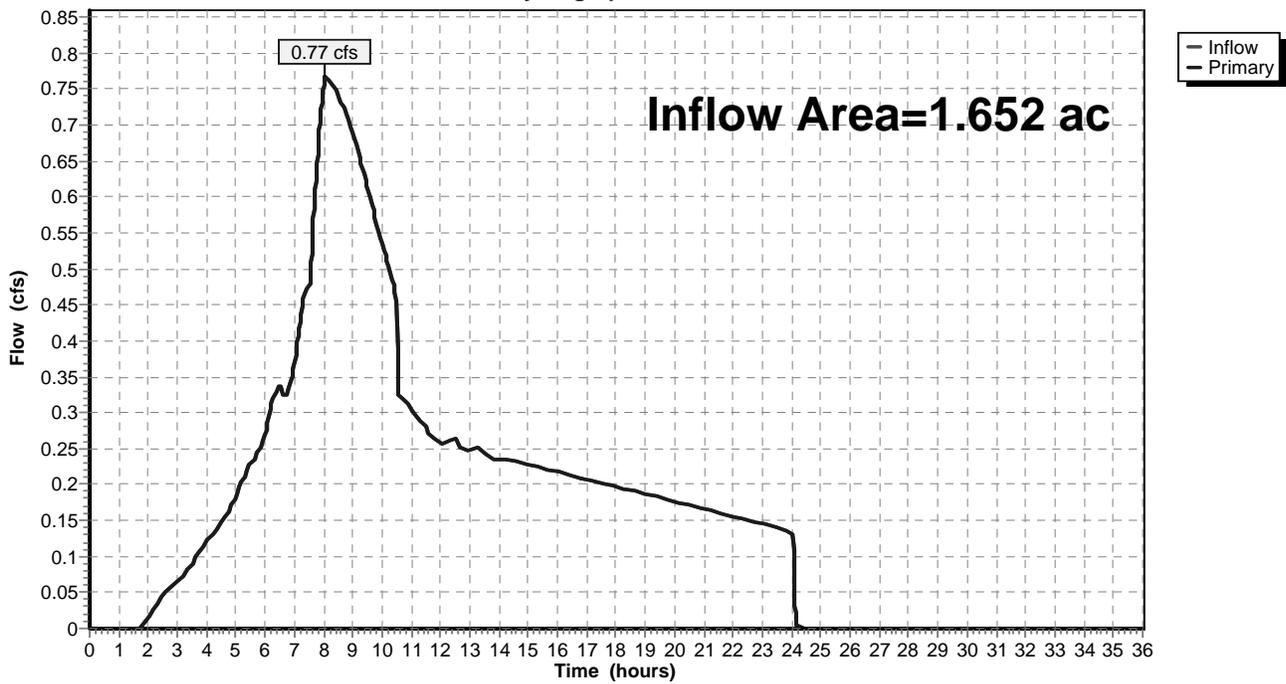
Link 2L: Outfall to Creek

Inflow Area = 1.652 ac, Inflow Depth = 3.47" for 100-year event
Inflow = 0.77 cfs @ 8.05 hrs, Volume= 0.478 af
Primary = 0.77 cfs @ 8.05 hrs, Volume= 0.478 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 2L: Outfall to Creek

Hydrograph

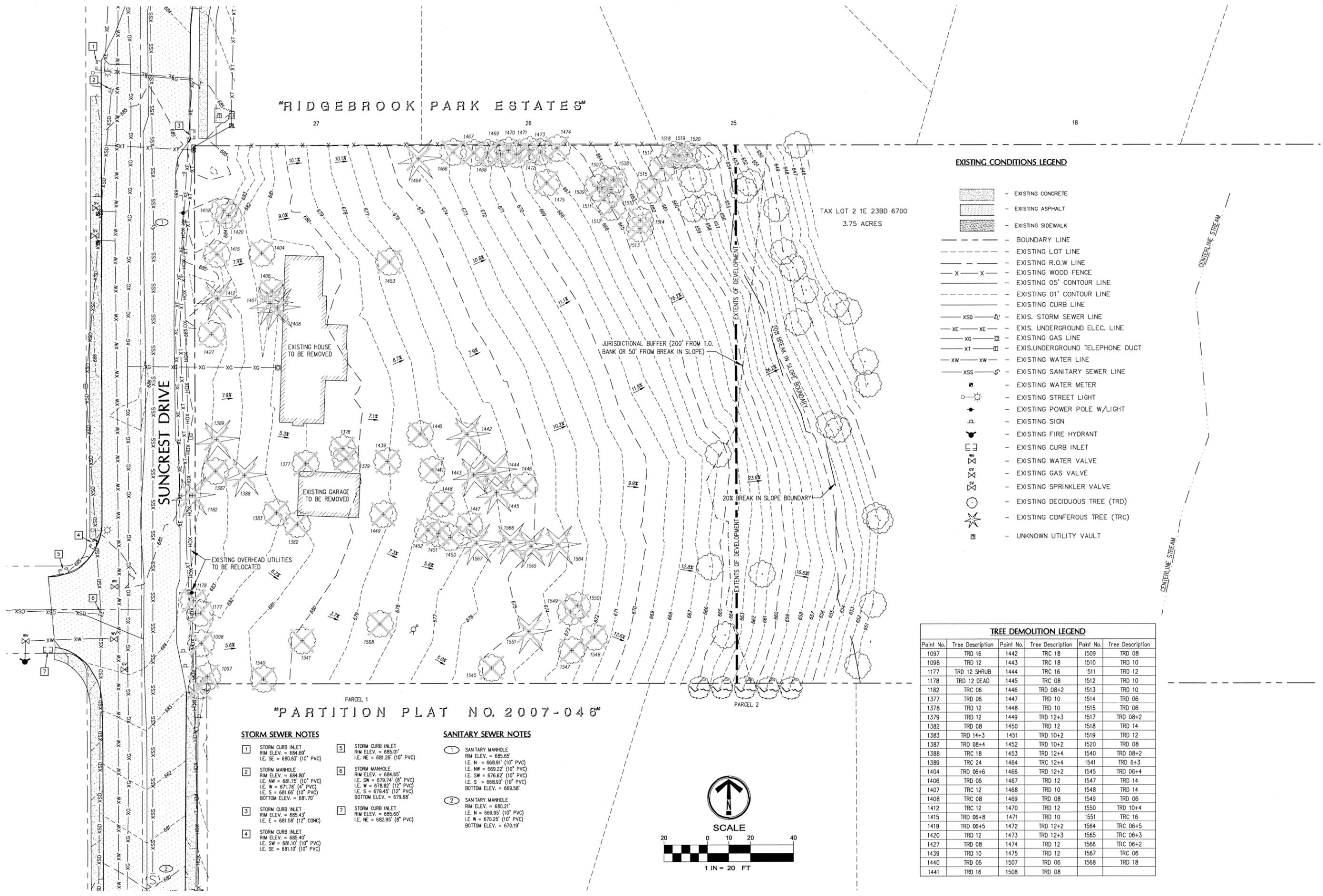


EXISTING CONDITIONS
PLAN

NO.	DATE	DESCRIPTION

EMERIO
Design
6107 SW MURRAY BLVD. SUITE 147
BEAVERTON, OREGON 97008
PH: (503) 515-5528
FAX: (503) 639-9592

REGISTERED PROFESSIONAL
ENGINEER
54665
MAY 11 2005
ERIC DANIEL EVANS
EXPIRES: 12/31/09



EXISTING CONDITIONS LEGEND

- EXISTING CONCRETE
- EXISTING ASPHALT
- EXISTING SIDEWALK
- BOUNDARY LINE
- EXISTING LOT LINE
- EXISTING R.O.W LINE
- EXISTING WOOD FENCE
- EXISTING 05' CONTOUR LINE
- EXISTING 01' CONTOUR LINE
- EXISTING CURB LINE
- EXIS. STORM SEWER LINE
- EXIS. UNDERGROUND ELEC. LINE
- EXISTING GAS LINE
- EXIS. UNDERGROUND TELEPHONE DUCT
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING WATER METER
- EXISTING STREET LIGHT
- EXISTING POWER POLE W/LIGHT
- EXISTING SIGN
- EXISTING FIRE HYDRANT
- EXISTING CURB INLET
- EXISTING WATER VALVE
- EXISTING GAS VALVE
- EXISTING SPRINKLER VALVE
- EXISTING DECIDUOUS TREE (TRD)
- EXISTING CONIFEROUS TREE (TRC)
- UNKNOWN UTILITY VAULT

TREE DEMOLITION LEGEND

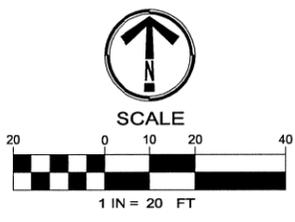
Point No.	Tree Description	Point No.	Tree Description	Point No.	Tree Description
1097	TRD 16	1442	TRC 18	1509	TRD 08
1098	TRD 12	1443	TRC 18	1510	TRD 10
1177	TRD 12 SHRUB	1444	TRC 16	1511	TRD 12
1178	TRD 12 DEAD	1445	TRC 08	1512	TRD 10
1182	TRC 06	1446	TRD 08+2	1513	TRD 10
1377	TRD 06	1447	TRD 10	1514	TRD 06
1378	TRD 12	1448	TRD 10	1515	TRD 06
1379	TRD 12	1449	TRD 12+3	1517	TRD 08+2
1382	TRD 08	1450	TRD 12	1518	TRD 14
1383	TRD 14+3	1451	TRD 10+2	1519	TRD 12
1387	TRD 08+4	1452	TRD 10+2	1520	TRD 08
1388	TRC 18	1453	TRD 12+4	1540	TRD 08+2
1389	TRC 24	1464	TRC 12+4	1541	TRD 6+3
1404	TRD 06+6	1466	TRD 12+2	1545	TRD 06+4
1406	TRD 06	1467	TRD 12	1547	TRD 14
1407	TRC 12	1468	TRD 10	1548	TRD 14
1408	TRC 08	1469	TRD 08	1549	TRD 06
1412	TRC 12	1470	TRD 12	1550	TRD 10+4
1415	TRD 06+8	1471	TRD 10	1551	TRC 16
1419	TRD 06+5	1472	TRD 12+2	1564	TRC 06+5
1420	TRD 12	1473	TRD 12+3	1565	TRC 06+3
1427	TRD 08	1474	TRD 12	1566	TRC 06+2
1439	TRD 10	1475	TRD 12	1567	TRC 06
1440	TRD 06	1507	TRD 06	1568	TRD 18
1441	TRD 16	1508	TRD 08		

STORM SEWER NOTES

- 1 STORM CURB INLET
RIM ELEV. = 684.69'
I.E. SE = 680.83' (10" PVC)
- 2 STORM MANHOLE
RIM ELEV. = 684.80'
I.E. NW = 681.75' (10" PVC)
I.E. W = 671.78' (4" PVC)
I.E. S = 681.66' (10" PVC)
BOTTOM ELEV. = 681.70'
- 3 STORM CURB INLET
RIM ELEV. = 685.43'
I.E. E = 681.58' (12" CONC)
- 4 STORM CURB INLET
RIM ELEV. = 685.40'
I.E. SW = 681.10' (10" PVC)
I.E. SE = 681.10' (10" PVC)

SANITARY SEWER NOTES

- 1 SANITARY MANHOLE
RIM ELEV. = 685.85'
I.E. N = 668.91' (10" PVC)
I.E. NW = 669.22' (10" PVC)
I.E. SW = 676.62' (10" PVC)
I.E. S = 668.93' (10" PVC)
BOTTOM ELEV. = 669.58'
- 2 SANITARY MANHOLE
RIM ELEV. = 680.21'
I.E. N = 669.95' (10" PVC)
I.E. W = 670.25' (10" PVC)
BOTTOM ELEV. = 670.19'

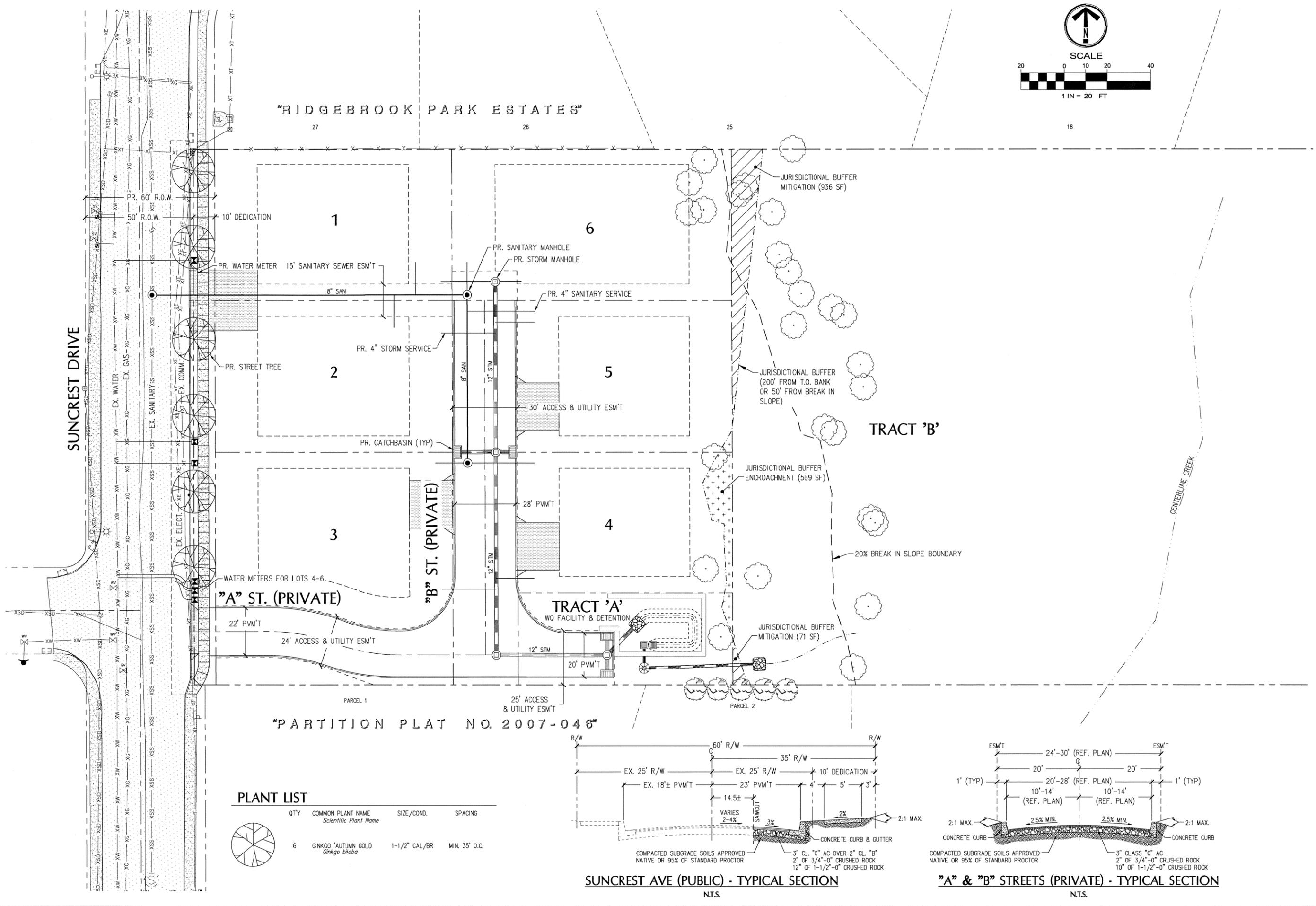
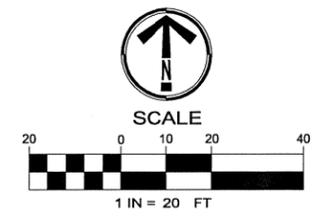
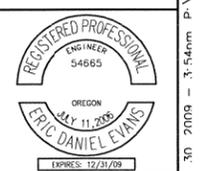


PRELIMINARY STREET
& UTILITY PLAN

NO.	DATE	DESCRIPTION
0	07/23/08	1st SUBMITTAL

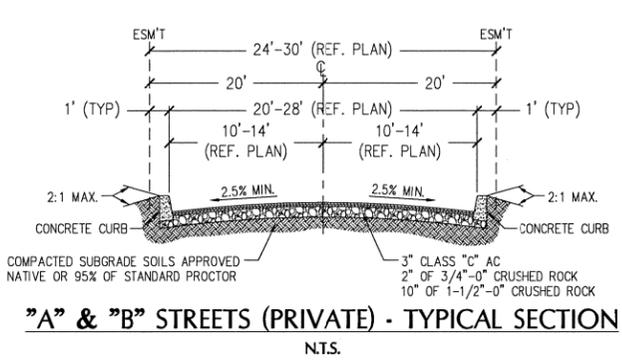
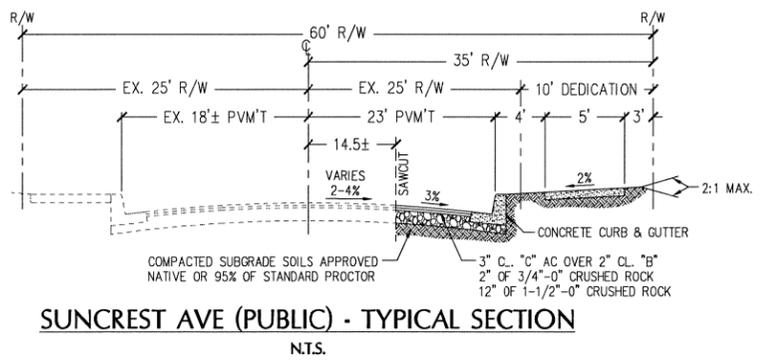
EMERIO
Design

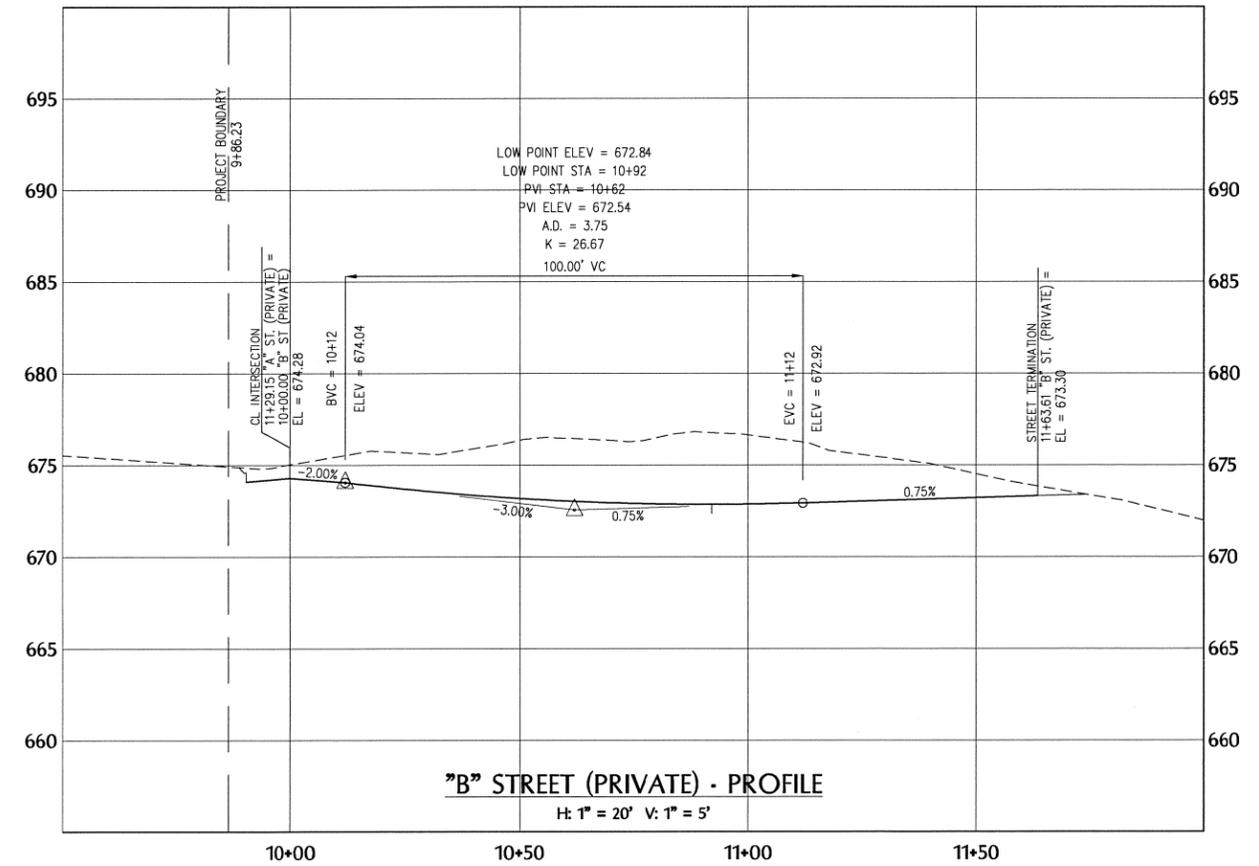
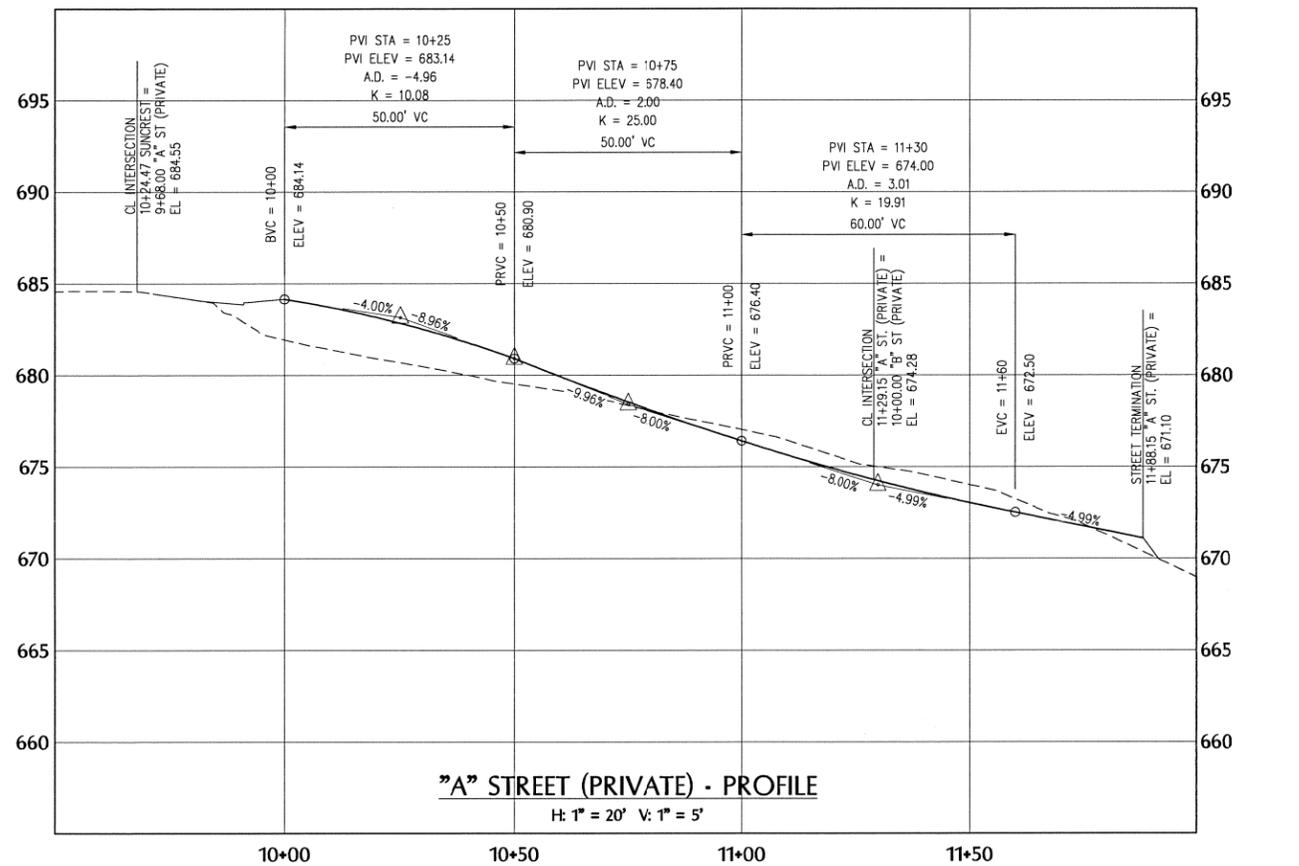
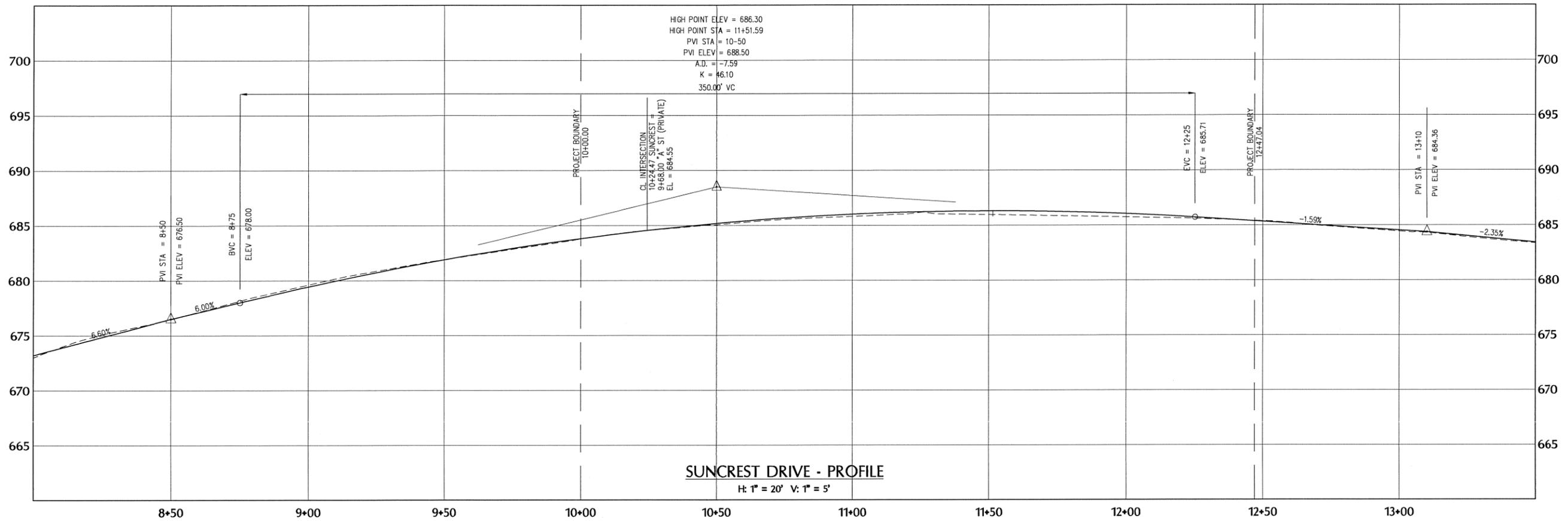
6107 SW MURRAY BLVD. SUITE 147
BEAVERTON, OREGON 97008
PH: (503) 515-5528
FAX: (503) 639-9592



PLANT LIST

QTY	COMMON PLANT NAME <i>Scientific Plant Name</i>	SIZE/COND.	SPACING
6	GINKGO "AUTUMN GOLD" <i>Ginkgo biloba</i>	1-1/2" CAL./BR	MIN. 35' O.C.



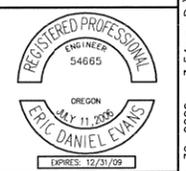


SUNCREST DRIVE
6-LOT SUBDIVISION
TAX LOT 6700
T2S R1E, SECTION 23 BD
WEST LINN, OREGON

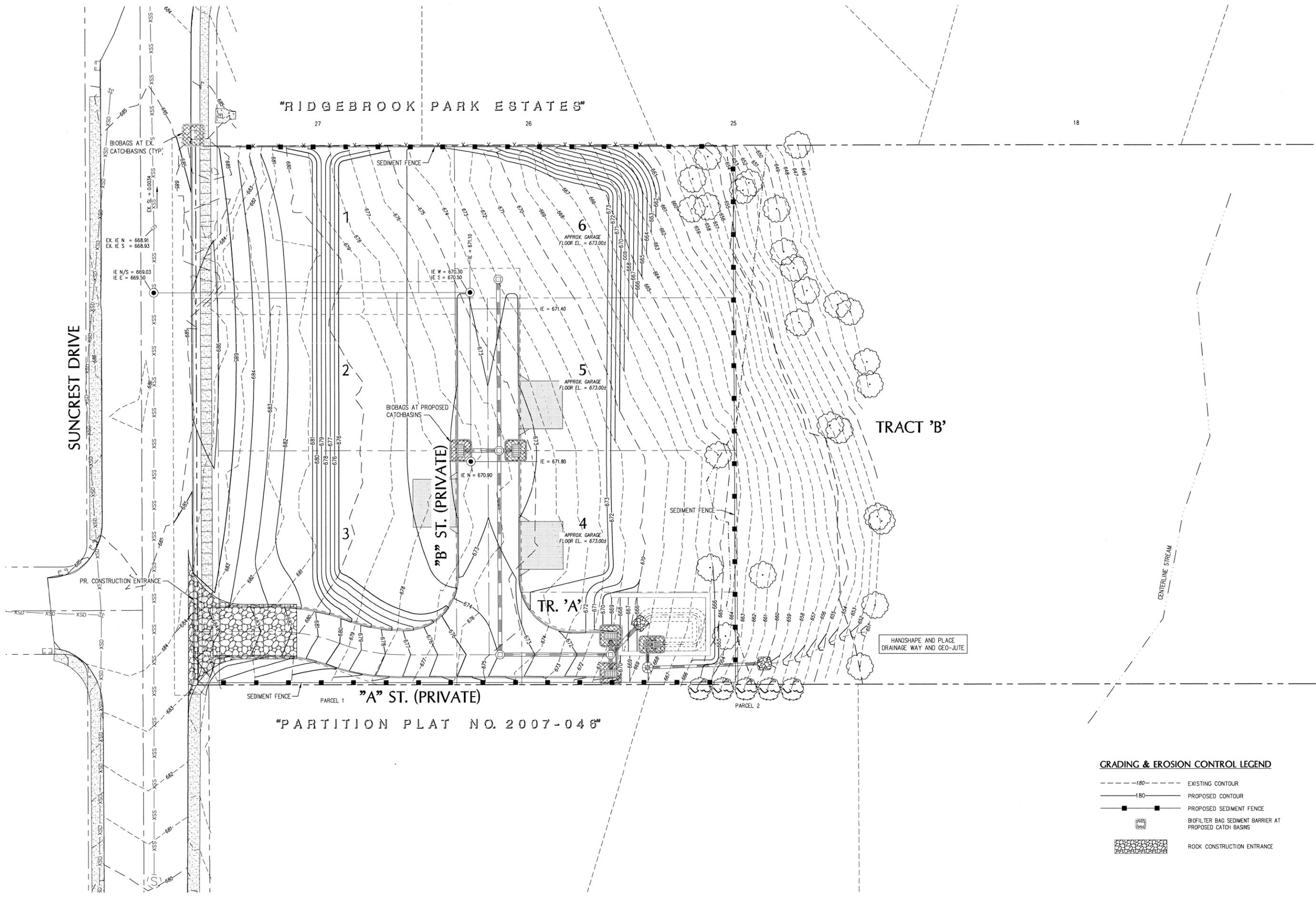
**PRELIMINARY STREET
PROFILES**

NO.	DATE	DESCRIPTION

EMERIO
Design
6107 SW MURRAY BLVD, SUITE 147
BEAVERTON, OREGON 97008
PH: (503) 515-5528
FAX: (503) 639-9592



SHEET
4
OF
6



SUNCREST DRIVE

"RIDGEBROOK PARK ESTATES"

"PARTITION PLAT NO. 2007-046"

"B" ST. (PRIVATE)

"A" ST. (PRIVATE)

TR. 'A'

TRACT 'B'

GRADING & EROSION CONTROL LEGEND

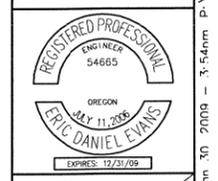
- 180 --- EXISTING CONTOUR
- 180 --- PROPOSED CONTOUR
- ■ --- PROPOSED SEDIMENT FENCE
- BIOFILTER BAG SEDIMENT BARRIER AT PROPOSED CATCH BASINS
- ROCK CONSTRUCTION ENTRANCE

SUNCREST DRIVE
6-LOT SUBDIVISION
TAX LOT 6700
T2S R1E, SECTION 23 BD
WEST LINN, OREGON

**PRELIMINARY GRADING &
EROSION CONTROL PLAN**

NO.	DATE	DESCRIPTION

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SHEET
5
OF
6



SUNCREST DRIVE
 6-LOT SUBDIVISION
 TAX LOT 6700
 T2S R1E, SECTION 23 BD
 WEST LINN, OREGON

**AERIAL PHOTOGRAPH
 & CIRCULATION PLAN**

REVISIONS	
NO.	DATE

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 BEAVERTON, OREGON 97008
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 FAX: (503) 639-9592

SHEET
6 OF **6**

- LEGEND**
- ○ ○ ○ ○ PROPOSED PEDESTRIAN CIRCULATION
 - ← ← ← ← ← PROPOSED VEHICULAR/BICYCLE CIRCULATION
 - ○ ○ ○ ○ EXISTING PEDESTRIAN CIRCULATION
 - ← ← ← ← ← EXISTING VEHICULAR/BICYCLE CIRCULATION

